Introduction: Why linking up with video?

The somewhat enigmatic title of this volume, envisioned as an innovating reader for both interpreting practitioners as well as scholars, serves to capture a duality that is inherent to this endeavor. More specifically, the rapid development of video technology, both in terms of hardware (e.g. wearable cameras, discrete camera systems, automatic systems, etc.) as well as data quality (HD video) and transmission (e.g. high-quality video streaming) has produced (or at least calls for) a Copernican revolution in our everyday and professional communication. Many of us have already adapted to a reality where we communicate with relatives, friends, colleagues, students, public institutions or business partners by means of video call. And although this new communicative reality is very much engrafted on the prototypical setting of face-to-face interaction, the mediated nature of video-based communication does have an impact on routines and strategies that speakers and hearers adopt. What this impact is, and what it means for professional as well as personal communication, is a relevant question for both researchers and professionals dealing with this technology. Not surprisingly, then, various domains have started to inquire into the role of video for their respective fields, like e.g. recruitment (Sellers 2014), medical encounters (Gardner et al. 2015), and business communication (Larsen 2015), to name just a few.

When looking at the impact of video technology on interpreting practice, then it is immediately clear that the field has thoroughly engaged with the pros and cons of video-based interaction for the interpreting profession. Having mediated, screen-based access to an interpreter or to speakers and hearers (from the interpreter's perspective) may have a significant impact on the unfolding interaction. Getting a clear picture of that impact and weighing it against the potential advantages of having remote access is thus one of the key questions for the future of interpreting. Rather than diving into this discussion at this point in the introduction –which would take up a significant amount of space to present a balanced account – we can simply refer to the chapters by Franz Pöchhacker and Sabine Braun in this volume, who as world-leading experts in the field present a valuable state-of-the-art. Suffice it to say at this point that interpreting research and practice have presented in-depth discussions of the implications and applications of "linking up with video" in this sense of the phrase, i.e. interpreters and their clients linking up through video technology.

There is, however, also a second potential reading of the phrase "linking up with video", viz. linking up with current research on the potential of video for research on interpreting. This aspect has received much less attention in interpreting studies, and crucially revolves around the question in which way high-quality video recordings of interpreters in the booth, participants involved in interpreter-mediated talk, etc. may be instrumental in gaining new insights. This line of research strongly builds on a fast-growing field of multimodal (interaction) studies, which makes use of video recordings to study the relationship between verbal and nonverbal resources (such as gestures, postural orientation, gaze and head movements) in the construction of meaning in communication (see e.g. Müller et al. 2013, 2014 for an overview of the field). The body of new insights emanating from this interest in multimodal communication, in fact, may be beneficial to interpreting studies in two ways. First, there is a growing attention in multimodal research for methodological standards (e.g. annotation schemes for gestures), analytical tools (e.g. software tools for video annotation) and data collection techniques (e.g. multi-angle video recording, eye-tracking, etc.). Interpreting studies can – more or less directly – benefit from these efforts for the study of video-recorded interpreting

data. Second, the actual insights from video-based, multimodal studies on single-language spoken communication may serve as an important baseline for interpreting studies. For instance, when studying speakers' gestural or gaze behavior in interpreter-mediated talk, it may be helpful to know how speakers in 'normal' conversation typically behave, so as to be able to pinpoint what can be viewed as setting- or task-specific behavior (e.g. do speakers gesture in a different way in mediated vs. non-mediated encounters?).

What makes the present volume unique, is that it combines the two above-mentioned readings of the phrase "linking up with video", giving a forum to both strategic research on the impact of video technology for interpreting practice and more fundamental, blue-sky research on multimodal behavior in interpreted communication. But there is even a third potential reading, since several chapters in this volume explicitly 'link' these two perspectives (see overview of the chapters below): they either present multimodal video-based analyses of interpreters' behavior in remote/distant settings, or they provide insights from on-site interpreting that may inform the development of remote interpreting technology in the future. In the latter case, systematic empirically based knowledge of the different resources (verbal as well as nonverbal) that people resort to in onsite interpreting, will be of crucial importance, since this knowledge may provide the key for the development of video-based systems that provide a more natural communicative environment. In this sense, the volume aims to provide input for the continuous loop between research and application.

Background of the volume

Before we provide an overview of the different contributions to this volume and explain why every single contribution is a constructive part of the whole, we would like to share with the readers the background of this book project. The reflections expressed in the previous paragraphs were part of various meetings that were organized between different scholars, MA and PhD students of the Antwerp Campus of KU Leuven on the one hand and Franz Pöchhacker, who received the Meerts Chair for Specialized Communication on the other. This chair was installed after the death of Louis Meerts (2007) in order to honor people who in their research introduce themes close to society, ethics, politics, media and communication. Louis Meerts himself was not only a full professor of History, he was also the chief editor of one of Flanders' newspapers for 36 years (*Gazet van Antwerpen*), a newspaper that is published to this day.

There are several reasons why the Meerts Chair was assigned to Franz Pöchhacker. Not only is he an interpreter himself, he also is one of the most internationally renowned scholars in interpreting studies. Fully in line with the legacy of professor Meerts, the academic work of Franz Pöchhacker is characterized by a clear adherence to research themes linked to society as a whole – and more specifically to communication and media. For the purpose of this volume it cannot be stressed enough what is easily neglected by society itself: how could communication in a globalized society be possible without translation and interpreting? This is due to the fact that there are endless ways of practicing translation and that some forms of translation aren't considered as such by the user, as for example in many localized forms of advertising or in literature that isn't perceived by the reader as translation. Interpreting is, as we know, a more immediate form of translation (Kade in Pöchhacker, 2016: 11) and the interpreter is mostly present, although that presence can be semi-

distant (in a booth), truly face-to-face (public services interpreting), or at a real distance when working via telephone, web streaming or videoconferencing. The latter aspect is one of the main topics of the present volume, addressing the potential of video technology for interpreting practice and research.

Franz Pöchhacker has a comprehensive overview of current topics and issues in the interpreting reality as well as in interpreting studies. Sizing up the current and future developments in the field, it was in fact he who suggested the theme "Linking up with Video" for the Meerts Conference celebrating the chair, and this eventually led to the current thematic volume on video in interpreting and interpreting research. This all-round knowledge of the field can be found in his widely recognized *Introducing Interpreting Studies* (2004, 2016 2nd edition), which worldwide is a common resource for interpreting studies scholars and students who want to learn about the concepts and foundations of the discipline, its evolution and its paradigms, about the different approaches to the discipline as well as about the most salient topics that have been treated in interpreting research. His *Encyclopedia of Interpreting Studies* furthermore illustrates this broad interest in and knowledge of what happens in the discipline and, with more than 2000 titles in the bibliography, it shows that interpreting studies is a growing field of research.

Overview of the chapters

The first chapter of this book can be considered as the key chaptes that together with the editors' general introduction, actually sets the agenda of this volume. **Franz Pöchhacker** states in his introductory chapter that interpreting scholars have only just begun to engage with multimodality in interpreting, and he therefore focuses on the concept of "medium", broadly defined as a physical or material resource to convey signs. For interpreters, this is primarily an oral-aural modality, shaped/constituted/formed by the oral production mode and its auditory perception that is typical for interpreting. Adding a visual channel, however, means that speech is embedded in a larger multimodal whole. Any form of interaction, face-to-face as well as mediated, involves forms of non-verbal communication, seen as "the umbrella term used to designate a vast range of communicative phenomena that are not strictly linguistic " (Zagar Galvão, E. & Galhano Rodrigues, 2015: 280). This does not automatically mean that non-verbal communication can or must be experienced "live" or "face-to-face", and this is where communication at a distance comes in. Non-verbal communication is present everywhere: in "live" and "face-to-face" communication but also at a distance, when communication involves a screen, a telephone or another device. The author then states that new technology precisely has an impact on visibility, which leads him to briefly link this to the history of the first simultaneous interpreters (labeled as "les téléphonistes" (Baigorri-Jalón, 2004)) and the origin of the "new" simultaneous mode. What is striking here, is what Pöchhacker describes as the lack of power of the interpreter in the interaction: this "invisibility" of the interpreter was and still is object of fierce debate. Whereas the interpreter was traditionally described metaphorically as the "conduit" in the interaction, empirical research conducted in the last three decades has shown that the interpreter should rather be seen as an "interactive" participant. On the other hand, the visibility of the speaker for the conference interpreter has always been a great concern, because the non-verbal visual signs are important for the interpreter's input. Since conference interpreters consider the impact of an audiovisual medium to be high, this debate mostly ended in reluctance of screens and a strong preference for live presence in the meeting room, without significant research to

support these impressions. Furthermore, Pöchhacker explains that this is less the case in community interpreting, where research on multimodality – and also on the impact of screens on it – is burgeoning.

In the second part of his contribution, Pöchhacker draws on the hierarchical network of modes in print and audiovisual media (adapted from Stöckl 2004) and on Poyatos' matrix model of verbal and nonverbal systems in simultaneous interpreting, to bring together what is of interest to this volume: interpreting and video. The definition of the term "video" and the description of the practice of interpreting supported by the use of technological media - starting in the late 1920s until present, with an always higher pace at which new systems are being introduced in our technological era- makes the author conclude that "video-mediated practices are so difficult to define and classify".

Pöchhacker ends his contribution by highlighting the importance of video not only as a communication medium, but also as a recording device that allows researchers to focus on multimodal practice in communication and more specifically in interpreting. He appropriately concludes by stating that recently researchers try "to understand how mediality of interpreting shapes the multimodality of interpreter-mediated communication", which undoubtedly is a highly promising development in interpreting research.

The following two chapters treat perspectives from interpreting practice and constitute **the second part** of the volume.

As a practicing staff interpreter working for DG Interpretation (hereafter called by its former acronym SCIC of the European Commission), **Roderick Jones** starts by discussing two major strands in video-enabled interpreting, as practiced by SCIC, namely video-conferencing and remote interpreting. He defines these two strands by indicating the different feelings and psychological impact this generates for the interpreters: in the case of video-conferencing they "still feel very much part of the event", whereas remote interpreting may be experienced as "exclusion from the meeting they are interpreting, possibly engendering feelings of alienation and frustration". Figures from practice are significant: while there were around 80.000 video-conferenced meetings in the year 2015, only 160 of them included interpreting (taking into account the broad definition of "meeting" that can also be a one-to-one discussion). After having explained the three basic principles that have been laid down for video-conference with interpretation within SCIC, Jones gives authentic examples of both video-conference and remote interpreting. The first one is the Grange-experience in 2013, which has been important as key-experience for the technology. In this case, it was economically not efficient to have 180 staff members of the DG Health and Food Safety, based in Grange (near Dublin) come over to Brussels to make presentations of half an hour each about their food audits and analyses. This experience was a success because profound debriefing was organized after the event with all parties involved. He then explains how this led not only to the protocols for video-conferences with interpretation, but also to a series of more informal tips for all parties involved in video-conferences with interpretation. He concludes this section by saying that SCIC as a service provider aims at delivering the best possible service to its clients and that its interpreters are willing to do so. The second example is the Hampton Court example where the Council of Ministers of the EU took place (during rotating presidency): it dates from 2005 and was chosen as a location outside central London, mainly for security reasons after the terrorist attacks that took place on July 7 that year. The historical building nevertheless turned out not to be fit for interpreting purposes. That is why 60 interpreters in 20 booths had to resort to remote interpreting, i.e. they were not situated in the

room with the participants and were not visible to the participants, which turned out not to be a satisfying experience. Nevertheless, it also led to a follow-up and a complex agreement of which the author highlights the most important points. Roderick Jones concludes with a few personal comments based on his own experience and states that video-conference interpreting as well as remote interpreting in the end are here to stay and that SCIC must be prepared for it.

Katalin Balogh & Heidi Salaets in their contribution describe their experience as witnesses of a real VC (videoconference) case from the Federal Prosecutor's Office in Brussels. The prosecutor himself had expressed his shock, not understanding how and why, this case between Turkey and Belgium with an interpreter Turkish-French at the Turkish side had ended up in a diplomatic row (as far as he could understand what was being said).
For their methodology, Balogh & Salaets refer to the research that was conducted as part of the Avidicus 1, 2 & 3 projects on video-mediated interpreting in legal settings and aim to assess whether the Turkish interpreter complies with the recommendations formulated in these projects. It soon becomes clear that none of these recommendations were adhered to in this particular case. Neither profound knowledge of the relevant working languages – especially French – nor culture-specific knowledge is present, let alone knowledge of all registers and of specific terminology. Since this is combined with a complete lack of appropriate interpreting skills as well as the incapability of resolving potential misunderstandings, it becomes clear that coordination of the interaction, one of the Avidicus recommendations, is nonexistent. Linguistic problems are severe and together with identified interpreting problems and serious ethical issues, it slowly becomes clear that communication breaks down. But the authors also mention the responsibility of the users of the interpreter: none of the legal actors seems to be aware of the particularities of interpreter-mediated interventions and they thus make fundamental ethical errors. On top of these problematic issues, there is the fact that the encounter takes place via video-conference, which constitutes the central theme of this volume. None of the participants seems to have experience with working through VC, let alone with VCI.
The authors conclude by saying that the unsatisfactory outcome of the encounter is due to the fact that basic skills and knowledge are missing. This lack is – unfortunately – only enlarged by the fact that VCI requires a particular attitude of the participant (like the introduction of the people present in the room, agreements on how to deal with overlap because of the slight time-lapse in the images and sound, etc.). Moreover, the asymmetry of power in this kind of encounters is reinforced in a VC setting where the most important stakeholders are at different places and only one of them (at the Turkish side) have the interpreter close to them. Of course, as the authors state, no general conclusions can be drawn on the basis of one case, but it is clear that emphasis on research, dissemination and training initiatives remains necessary to avoid these possible failures, which undermine the right to equal access to justice.

Part III of the volume presents different analytical frameworks and practices and is composed of three chapters.

Sabine Braun, as one of the core researchers in the above-mentioned Avidicus projects, devotes her contribution for this volume to the voices of the users of video remote interpreting, namely legal interpreters and police officers in simulated video mediated interpreting (VMI) interaction. She deepens an aspect of VMI that has received little attention to date, focusing on VRI (Video remote

interpreting) in contrast to VCI (video conference interpreting), the first of which "concerns the impact of the interpreter's separation from all primary participants". This can be linked to what Jones, in chapter three, states about interpreting at SCIC, when he opposes VCI to VRI. Sabine Braun builds on the Social Construction of Technology (SCOT) as a theoretical framework to design the semi-structured interviews that were conducted immediately after the interpreters had completed their VRI simulated sessions. As a first step, the interpreters were prompted to compare this simulated experience to their real-life experience to check on the degree of reality of the simulated encounters. Police officers were also interviewed after the simulated sessions.
The interviewees answer questions regarding several aspects of the VRI encounter. The first questions are about the overall perception of VRI , the next inquire into the perception of the technological basis (audio and video feed, operating equipment). These are followed by questions that concern directly the interpreter and his performance and that ask about the perception of communication: what about the effort the interpreter has to manage, the turn-taking, fragmentation of input (access to body language) and rapport. Finally, the impact of VRI on the interpreting performance is discussed.
One of the key outcomes of this investigation is that the two social groups – police officers and interpreters – have different views because they are at very different stages in the process of stabilization. The former has accepted VRI as an institutional need and value whereas the latter still sees it more as a challenge in a changing professional landscape, and they often feel dependent on technology, both from the technical side as well as from the side of the interpreter's task, namely ensuring communication.

Ivana Havelka introduces the concept of referential competence as one essential component of the more general interpreting competence. Referential competence is defined as the skill with which interpreters identify and understand the particular communicative setting, including the interpreting task at hand, on the basis of available audio-visual and situational cues in the interactional setting. These c(l)ues may be of importance in correctly interpreting the message at hand, which the interpreter needs to render. Havelka presents an empirical analysis of how this referential competence is employed in video-mediated interpreting, which may pose additional challenges to the interpreter.

The empirical analysis for this study draws on data from an Austrian project on video-mediated interpreting in the healthcare sector (German – Bosnian/Serbian). The particular setup of the project involved interpreters being immediately available for a remote interpreting task, meaning that they would not be provided an opportunity to prepare for the interpreting assignment. The setting was a bidirectional consecutive video-mediated remote interpreting task, with the doctor and patient both present at the same location, and the interpreter working from a distance. The data include video recordings of authentic communicative events, an observational protocol and interviews with participating interpreters. The author opted for a mixed-method approach to analyse and evaluate relevant segments of the collected data, drawing among others on Grounded theory.

Havelka zooms in on particular auditory, visual and situational signals and stimuli that interpreters resort to in construing the interpreting assignment. Sensory awareness is argued to be fundamental to referential competence for the purpose of the process of comprehension and perception. First, as for referential competence based on visual perception, the author draws on insights from neuroscience, linguistics and sociology that show that visual information provides essential cues as to identity, social and emotional status, intended actions, etc. In the particular set-up of this study, a form

of standby interpreting was used, which means that the interpreter's assistance is only used when necessary (e.g. when one of the primary interlocutors has at least passive knowledge of the language but needs an interpreter for specialist topics or for more complex utterances). In this particular setting, the interpreter needs visual access to both the speaker and his/her addressees to be able to assess the need for interpreting (e.g. in cases of hidden incomprehension). An important component of referential competence is thus the capacity to "read" the visual information provided in the interactional setting. Second, as for referential competence based on auditory perception, Havelka discusses two specific issues, viz. pluricentric languages and privacy mode. Pluricentric languages have several interacting standard versions, as is the case for Bosnian, Serbian and Croatian. For interpreters, this means that they have to pay attention to linguistic signal words that help to identify the respective language and use the appropriate terminology in that language. As for the privacy mode, due to the sensitive nature of the health-care interactions in the study (e.g. during physical examination), the doctors had the possibility to switch off the video stream during the consultation, restricting the interpreter's information to the audio path only. This obviously presented additional challenges for the interpreter, as valuable visual information is missing. A third and final aspect pertains to referential competence based on situational perception. A correct understanding of the context and purpose of the communicative situation is of the utmost importance for successful interpreting, as it will help in understanding how a message is to be understood.

In the empirical section of the chapter, Havelka presents four compelling examples that illustrate how perception on different levels (visual, image, auditory, situational) plays a fundamental role in the interpreting process. In the specific setup of video-mediated interpreting, this referential competence is put to the test due to the spatial and situational distance of the interpreter. As a consequence, this metacommunicative competence needs to be trained for in particular interpreting settings.

A specific methodological framework is proposed by **Esther De Boe,** who with her contribution aims to fill the gap that exists in medical interpreting research on interpreter-mediated RI (Remote Interpreting). In combining insights from medical, social and interpreting studies, the author states that it is striking that in social and medical studies there is a lack of evaluation of the interpreting performance itself. In some cases, this performance is seen as part of a broader "quality of communication". In interpreting studies, on the contrary, (some) attention has been paid to remote interpreting, but most of all, the focus has been on quality assessment. After an overview of the literature in medical and interpreting studies research, the author states that we are left with many contradictory answers and open questions. Therefore, she proposes to address a more holistic assessment of RI that is strongly interdisciplinary. Moreover, the author's aim is to compare three different interpreting conditions – namely face-to-face, telephone and video interpreting – to assess the quality but also the individual peculiarities of each condition while keeping other variables (more or less) constant. Therefore, De Boe designed simulations of doctor-patient visits mediated by interpreters in consecutive mode in these three conditions: a face-to-face setting, as well as telephone and video-interpreting. The audiotaped, transcribed and annotated simulations will allow to do a quality assessment of the interpreting task involving five aspects: (1) Discourse framework, (2) Content and style (linguistic and paralinguistic), (3) Interaction management (verbal and non-verbal), (4) Environment and technology, and (5) Satisfaction. These aspects are illustrated by the author and summarized in an annotation framework that builds a common ground between medical,

social and interpreting studies and a thorough multimodal comparison of the series of doctor-patient simulations.

The following chapters by **Robert Lee** and **Isabelle Heyerick** specifically concern signed language interpreting (henceforth SLI) and therefore accounts for **PART IV**. Robert Lee's chapter ties in with the previous section of the volume, in which models and frameworks are presented, since he discusses how the role space model of the interpreter, which he developed in collaboration with Peter Llewellyn-Jones, can be applied to VCI. Isabelle Heyerick, on the other hand, carries out her research on SLI using video recording as a vital resource.

Robert Lee points at the differences between Video Relay Services (VRS) and Video Remote Interpreting (VRI) for Deaf people, which is used to establish remote communication with hearing people through an interpreter. The fact that signed languages use three-dimensional space already poses a problem since video, at least in its most prevalent form, is two-dimensional. Next to that, sign languages produce signs not only with hands but also with facial expressions and body postures. These are all features that are important to keep in mind when considering communication at a distance with Deaf people. Differences between VRS and VRI mainly have to do with the fact that VRS is a type of telephone call and FCC (the US Federal Communications Commission) requires that all participants are in separate locations. This immediately relates to the second difference: the interpreter can only see the Deaf person, not the hearing person. The third major difference is the fact that the interpreter in VRS has no time to establish rapport with the end users since they go from one call to another. Thus, Lee concludes this comparison by confirming that VRS is more strongly aligned to the old telephone relay systems. Next, he applies the role space model, which originally was designed for face-to-face interaction, to remotely interpreted interactions. This model is composed of three axes that represent inter-related dimensions in an interpreted interaction: the Interaction Management axis, the Participant Alignment axis and the Presentation of Self axis. Lee shows how remotely interpreted interactions might be analyzed in terms of role-space, hereby referring to the Avidicus projects and results. It is obvious that, when speaking about technology, visibility of all participants is of paramount importance, just as the robustness of the remote connection. This comprises a specific challenge for Deaf people, because a break in the signal can be easily overlooked. The actions of the interpreter on the Interaction Management axis is under pressure in VRI, which was confirmed by the Avidicus results. This apparently furnishes more overt strategies of interpreters, since covert ones remain largely unnoticed, but this is not without risks (e.g. less natural exchange or less trust in the interpreter's accuracy). Concerning participant alignment, it is obvious that this is easier with participants who are in the same location. Also, the issue of gaze and rapport needs careful consideration. Finally, presentation of self is affected in a remote constellation, especially if the interpreter is alone in a remote location, so potential asymmetry in presentation of self must be avoided. Lee concludes by stating that the role-space model not only allows comparisons with face-to-face interpreted interactions but also highlights areas to be considered in implementing effective VRI situations when interacting with Deaf people through interpreters.

Isabelle Heyerick reflects on the importance of video recordings in signed language interpreting research, which has been largely neglected thus far. Unlike for spoken languages, audio recordings

alone obviously do not suffice.[1] After a brief description of the emergence of signed language corpora, the author describes the challenges she encountered when doing her own data collection in SLI. In this chapter, Heyerick presents the methodology she designed for her case study. This consisted of an interpreting task in signed language of public services information, namely the guidelines for a chair of a traditional voting station, done by four hearing and four deaf interpreters. A first step is the use of video recording as a data collection and elicitation tool, meaning that in a one-hour preparation setting, the eight interpreters of the case study were videotaped by means of TAP (Think Aloud process) while doing this preparation task. They were asked to say whatever came to mind while preparing for the assignment. However, they were discouraged from explaining why they were thinking certain things. The next step was to record the interpreting task itself with or without an audience of two deaf persons – to reinforce ecological validity - the first setting being chosen by the hearing interpreters, the second by the deaf interpreters (because of their familiarity with this kind of setting, which poses fewer challenges). It is explained, however, that for the interpreter as well as for the audience, managing the multimodal nature of the event (showing the video and doing or watching the interpreting) is challenging for several reasons. It is actually the researcher's aim to understand what types of strategies interpreters can and will deploy when confronted with a certain problem disrupting the flow of interpreting.
Next to the data gathered from the TAP session and the actual product of interpretation, Heyerick supplements this data with a simulated recall interview where the interpreter is asked to go into why (s)he made certain linguistic choices. It becomes clear that the researcher wanted to reserve this part as last in the methodology, and not for the TAP-session. It becomes apparent that video in this case is no longer only a tool for data collection but becomes a tool for data elicitation. The author ends her chapter by indicating some issues and possible solutions she encountered during the data sampling, confidentiality (and thus also reluctance of interpreters to participate in research) being one of the most important challenges.

Elena Zagar Galvão starts by confirming a point that was already raised in other chapters, namely that "the advent of affordable digital video-recording technology and freely downloadable specialized software for storing, viewing, editing and annotating video and audio has contributed to a reassessment of the importance of the relation between the body, language and communication in a variety of scientific domains […]". She approaches interpreting with video-recording technology in an innovative way, namely to analyze gestural style and gesture functions in simultaneous interpreting, specifically by filming the interpreter in the booth. Her chapter introduces **part V** of the volume that brings together three chapters dealing with the multimodal analysis of video data. After establishing definitions and categorizations of gesture she enters into the dimensions of gesture use. The author stresses that by replacing the notion of 'type' by 'dimension', she indicates (following Kendon) that gestural action should rather be arranged along a spectrum according to the predominant features observed. She then goes into detail describing gestures with a referential function as opposed to pragmatic gestures, the latter fulfilling modal, performative and parsing functions. Finally, gestures with interactive purposes regulate turn-taking in a conversation. Before presenting the case study, Zagar Galvão explores the structural properties of gesture and describes which systems of annotation

[1] See, however, also De Boe, Krystallidou, Zagar Galvao, Vranjes & Brône (this volume), who have indicated – drawing on recent multimodal research methods and models in interpreting studies– that also for spoken languages, access to all semiotic resources that are employed in interpreter mediated settings is of paramount importance

(e.g. LASG Linguistic Annotation System for Gestures) and professional coding systems (ELAN, EXMARaLDA or ANVIL) allow for a fine-grained empirical analysis of gesture.
The case study includes four professional interpreters (Portuguese A, English B language-combination), who were asked to interpret two different speeches delivered by two very different speakers according to low or high expressiveness in delivery style. The latter was defined as a combination of posture, gesture quality and prosodic variation. The objectives were to explore if the interpreter's gestural behavior in the booth would differ according to the kind of speech they were interpreting (the low or high expressiveness delivery style) and, in addition, if the interpreter's descriptive gestures would be formally and/or functionally similar to the speakers' referential gestures.
Based on a combined quantitative and qualitative analysis of the interpreter's gestures (referential, pragmatic, descriptive, those accompanying a repair, and those with a cohesive function) as well as gestural mimicry, the author proposes three main continua to describe an interpreter's overall gestural style: gesture frequency, gesture size and gesture mimicry. The elements on the continua can change both synchronically and diachronically as a consequence of the variability of factors like the level of experience of the interpreter, working environment, speaker's delivery style and personal delivery style of the interpreter (e.g. from least to more gestural). Moreover, the results related to personal gestural style in interpreting were confirmed by the interpreters themselves in interviews conducted after the experiment.

Demi Krystallidou, like Esther De Boe, dedicates her research to interpreter-mediated clinical communication and states that there is still much to be unraveled by adopting a multimodal perspective. According to Krystallidou, the analysis of verbal interaction essentially needs to include non-verbal cues. Her corpus consists of authentic video-recorded interpreter-mediated consultations at a large urban hospital in Belgium. In line with several other authors of this volume, she recognizes the challenges this entails, namely long administrative procedures, ethical clearance with independent ethics committees and at the moment of the actual data collection: obtaining informed consent of all participants. In her chapter, the author argues that interaction is not only divided into turns according to speech, but also according to change in participants' gaze and body orientation. These changes along with speech are used by all participants and especially by the interpreter as semiotic resources that do affect the doctor's and the patient's participation in interaction. This way, Krystallidou reveals eloquent silence as an impetus for participation through gaze, split ratification as an inclusion mechanism, but also gesture as a marker for introducing turn at talk and as an inclusion mechanism.
She concludes by repeating what has been a central thread in this volume: studying only verbal interaction in a complex interactional event like a medical consultation - rendered even more complex if it is interpreter-mediated – would do no justice to the multi-faceted character of the clinical interaction. Moreover, this kind of research provides insights into interactional dynamics that show that the interpreter (inter)acts in ways that go beyond the mere conduit. Krystallidou states that his can have significant implications both for the training of interpreters as well as for policy (code of ethics).

Jelena Vranjes and Geert Brône take the ongoing discussion on the pros and cons of new technologies, and most notably the high-quality streaming of audio and video data for novel forms of distant, remote or offsite interpreting (cf. Pöchhacker & Braun, this volume), as a starting point for a multimodal

analysis of interpreter-mediated interaction. More specifically, they argue that empirical multimodal analyses of participants' and interpreters' behavior in real-life interpreting settings may provide much-needed groundwork that helps to fuel this discussion. As one of the most central points of criticism raised by interpreting practitioners is that distant forms of interpreting lack certain characteristics that are typical for on-site or face-to-face interpreting (i.e. distant solutions are not *true-to-life*, Van Rotterdam & van den Hoogen 2011), it becomes increasingly important to pinpoint what these typical and natural characteristics are. Empirically grounded insights into these characteristics may then, in a research-technology-application loop, feed into innovative technologies, rendering novel interpreting solutions that more true-to-life.

In their empirical analysis, Vranjes and Brône zoom in on one specific phenomenon that has received increased attention in the recent literature in multimodal interaction analysis as well as interpreting studies, viz. eye gaze as a semiotic resource employed by speakers as well as hearers. Taking two key phenomena that are essential to any form of (face-to-face) interaction, namely listener feedback and turn-taking, the authors study the role of eye gaze in the successful realization of these phenomena in an attempt to the basic research question what (visual) information participants resort to in non-remote settings. The choice for these two phenomena was informed by different forms of distance interpreting. First, in the typical constellation for consecutive video-conference interpreting, the primary parties are in different locations, making it difficult, at least for one of the parties, to produce and monitor (non)verbal feedback signals. A baseline study on the frequency and function of such feedback patterns in face-to-face interpreter-mediated interaction helps in determining the level of granularity that is required from video-conference systems to come close to real-life interactions. Second, in remote interpreting settings, the primary participants are typically co-present, and interpreter works from a distant location. In this particular setting, the interpreter's function as manager of the interaction is rendered more problematic. The main question here are how interpreters typically manage the turn-taking process in real-life interaction, among others by means of gaze, and how important is visual access to the co-participants for a smooth exchange?

In order to answer the above questions, Vranjes and Brône make use of eye-tracking technology to gain highly detailed information of interpreters' and primary participants' gaze behavior. In the dataset for their study, all participants were equipped with mobile eye-tracking systems (in the form of glasses) while they engaged in unscripted, authentic interpreter-mediated interactions. A micro-analysis of the multimodal dynamics of these interactions, based on the eye-tracking data, reveals specific patterns in the realization of reciprocity of understanding (feedback) and anticipation of turn transitions.

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