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Community interpreting as a socially *and* cognitively situated activity: knowledge structures in interpreter-mediated medical interactions

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Abstract: Community interpreting has traditionally been described as a socially situated activity. Drawing upon the Heidelberg School's psycholinguistic interpreting model as a theoretical framework and updating it with insights from functional pragmatics, this paper outlines why it is just as much a cognitively situated activity relying on knowledge-based inferences. On the basis of data from a larger Swiss hospital-based study, it shows how a lack of different sub- and superordinate knowledge structures in institutionalized medical interpreting settings may often be at the root of unsuccessful interpreting.

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Introduction

Research into community interpreting has been dominated by the descriptive analysis of discourse in interaction, or the "DI paradigm" (Pöchhacker, 2015, p. 68). Wadensjö (1998), in particular, paved the way to establishing this approach by adopting discourse analysis as a framework. In an attempt to clarify it, Wadensjö (2001) makes reference to Schiffrin who, upon observing that discourse analysis "remains a vast and somewhat vague subfield" (Schiffrin, 1994, p. viii), goes on to distinguish a) the code, b) the inferential and c) the

interactional model of communication as different approaches to discourse. Wadensjö explains that her own assumed model of communication is an interactional one and that her focus is therefore on the “interpreter-mediated encounter, and not interpreting (as, say, an individual’s transmission of the thoughts of others) or the interpreter (as, say, the individual as displayer of the intentions of others)” (2001, p. 189). As such, she excludes interpreters and their intentions or, in cognitive terms, the inferential side of interpreting, which is somewhat like putting the cart before the horse.

While it is true that discourse analysis “has come to be used [...] to describe activities at the intersection of disciplines as diverse as sociolinguistics, psycholinguistics, philosophical linguistics and computational linguistics” (Brown & Yule, 1983, p. viii), explicitly referring – as does Wadensjö (2001, p. 187) – to van Dijk (1985) is almost impossible without taking recourse to the cognitive dimension of interpreting. Kintsch and van Dijk’s seminal book (1983) explains discourse comprehension in terms of strategic situated cognitive activity. In fact, it serves as the very basis for Kohn and Kalina’s (1996) and Kalina’s (1998) cognitive-strategic approach to interpreting, which, based on a psycholinguistic perspective, views interpreting as strategic (bilingual) text comprehension and production processes. Accordingly, interpreting (and translation for that matter) is not only an (inter)act of communication and textual operation, but indisputably the result of cognitive processing carried out by interpreters (and translators) (Hurtado Albir & Alves, 2009, p. 54). This insight, which has spurred the cognitive turn in translation studies in the context of translation process research, is as true for community interpreting as it is for conference interpreting. It was recognized in conference interpreting studies under the CP (Cognitive Processing) paradigm (Pöchhacker, 2015, p. 66) long before it was taken on board by translation studies. It has also been acknowledged by Functional Pragmatics (FP), which highlights the mental dimension of the interpretation process by conceptualizing action patterns and procedures typical in an

interpreting setting as knowledge structures required for interpreters to reconstruct target language utterances (ten Thije, 2009; Bührig, 2009).

Any type of interpreting task involves mental processes, cognitive resources, language control and capacity management as well as a variety of executive functions including verbal working memory and (divided) attention (Hervais-Adelman, Moser-Mercer & Golestani, 2015). It would, therefore, be reductionist to focus on the interactive dimension of the situated activity alone. Community interpreting is not just a “socially situated activity” (Pöchhacker, 2015, p. 68), but a (socially) situated *cognitive* activity. The general focus on interactional sociolinguistics has led to a situation where the “body of research on community interpreting has to date focused mainly on aspects of the interpreter’s role in the interaction between interlocutors/participants and in the communication process”, at the expense of the cognitive processing dimension (Englund Dimitrova & Tiselius, 2016). The aim of this paper is to analyze medical interpreting within a discourse analysis framework which is both cognitive and social, namely the “cognitive and pragmatic discourse model of interpreting” which has become the cornerstone of what Pöchhacker called the “Heidelberg School” (2012, 19) of Interpreting Studies.

Community interpreting as situated cognitive activity

The Heidelberg School’s *cognitive and pragmatic discourse model of interpreting* is based on a large body of psycholinguistic evidence (as brought together by Kintsch and van Dijk, 1983, and others) and inspired by social constructivism. Applied, in particular, by Kohn & Kalina (1996), Kalina (1998), Braun (2004) and Albl-Mikasa (2007), it centers around the view that interpreters’ understanding of a source text is achieved by creating a ‘mental model’ during

their pragmatic engagement in a meaning negotiating 'discourse' event. This involves “strategic processes of continuous and cyclic utterance meaning formation (including monitoring and revision) based on linguistic as well as world-related knowledge” (Braun & Kohn, 2012, p. 190).

From this perspective, it is important to bear in mind that (medical) interpreters (as well as all other participants in the encounter) are guided not just by the bottom-up speech signals they receive, but just as much by top-down activated knowledge, expectations and meaning inferences. An interpreter's performance is very much determined by the mental representation or model s/he can construct when processing the encounter, which, in turn, depends on the linguistic, technical and discourse-specific knowledge s/he is able (or not) to master and integrate from long-term memory into the unfolding mental representation. Concurrently, processing is heavily influenced by the expectations generated in the process as well as by factors from the situational context.

As is known from social constructivist analyses of foreign language learning and use, cognitive processes are also determined by the individual's own developmental learning histories and performance requirements, which affect attitudes, motivation, self-image, self-esteem and goals (Kohn, 2011, p. 72, 74, 80). This puts into perspective the emphasis which has been placed, within the DI paradigm, on interpreters' agency and profound effect upon communication dynamics (e.g. Angelelli, 2004; Wadensjö, 1998). As Ozolin (2015, p. 327) points out, this view was put forward as a criticism of the long-cherished concepts of impartiality, neutrality and invisibility as part of the conduit model of interpreting. From a cognitive perspective, community interpreters may or may not see themselves as neutral players and they may or may not strive for invisibility and act accordingly, depending on a great many influencing factors as mentioned above, including their learning history and own

requirements. Quite obviously, language users' own requirements are very much related to available knowledge sources. Interpreters can act upon their requirements and goals only insofar as appropriate knowledge enables them to do so. Moreover, they are clearly restricted by situational factors. In mental health care settings, for instance, it is much more difficult to remain uninvolved for an interpreter striving, on the basis of his or her own requirements, for a conduit-like role in the encounter (Bot, 2003). From a socio-constructivist point of view, the following model, which summarizes coherence building in the interpreting process, is applicable also to community interpreting:

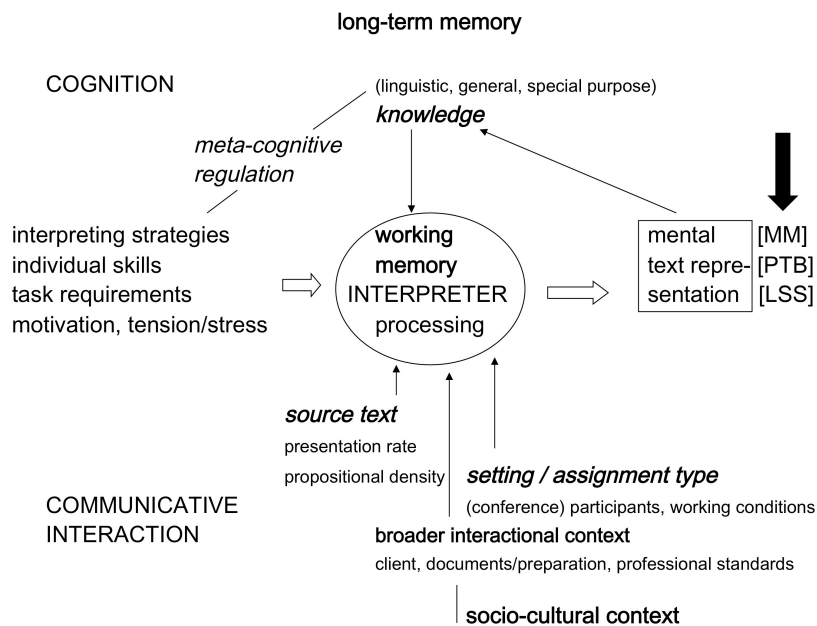


Figure 1: Interpreting as situated cognition (Albl-Mikasa, 2014)

From a methodological point of view, methods consisting of "recording, transcribing and analyzing spontaneous spoken interaction" (Wadensjö, 2001, p. 195-196) usually have been relied on under the DI paradigm. In order to gain an understanding of the interpreters' subjective requirements, motivations and goals, recordings of interpreted doctor-patient encounters would have to be complemented by retrospective interviews. In our own analysis

of interpreted doctor-patient encounters, we had no access to the interpreters after the recordings.

Our analysis is based on recorded data from doctor-patient encounters from the larger-scale study “Interpreting in Medical Settings: Roles, Requirements and Responsibility”, funded between 2010 and 2012 by the Swiss Commission for Technology and Innovation (KTI) and carried out by an interdisciplinary team of medical specialists from the University Hospital of Basel (Marina Sleptsova and colleagues) and interpreting studies/applied linguistics researchers from the Zurich University of Applied Sciences (ZHAW) (Gertrud Hofer and colleagues). The core of their empirical results consists of 19 authentic, interpreted conversations (14.42 h, 856 min) along with a broad, questionnaire-based survey regarding the role of interpreters as perceived by medical personnel as well as medical interpreters (cf. Sleptsova et al., 2014). In the interpreted conversations, German and Swiss-German speaking doctors and healthcare personnel interacted with patients of Turkish and Albanian origin at the university hospitals of Basel and Zurich and the Inselspital Bern. The encounters were video-recorded and transcribed using the transcription software EXMARaLDA. The Turkish and Albanian parts were translated and the translations double-checked.

Of the various dimensions of cognitive processing that influence interpreters’ performance and decision-making outlined above, our analysis will focus on knowledge structures which reflect action patterns. These can be examined on the basis of the recorded and transcribed data without recourse to introspective data. To that end, we will update our chosen cognitive and pragmatic discourse model of interpreting by integrating insights from FP, because FP links pragmatic action phenomena to the underlying mental structures (cf. Rehbein, 1977; Ehlich & Rehbein, 1979, 1986; Redder, 2008). From this perspective, action patterns and procedures are reflected as knowledge structures and mental processes that form a necessary

basis upon which interpreters reconstruct and reproduce target language utterances from source language utterances. Accordingly, interpreting has been characterized as ‘reproductive action’ within an ‘internally dilated speech situation’ (cf. ten Thije, 2009; Bührig, 2009). For healthcare settings in particular, FP studies have highlighted how internalized action patterns related to institutional interaction processes guide doctor-patient communication (DPC) and how linguistic choices trigger and steer specific action courses (cf. Rehbein, 1993; Löning & Rehbein, 1993; Rehbein & Löning, 1995). In multilingual constellations, the course of DPC may be particularly affected, because institutionalized action patterns that have evolved with and are closely tied to specific linguistic forms, may become disrupted in the interpreting process (Rehbein, 1993; Bührig et al., 2000; Bührig, 2009; Bührig & Meyer, 2009). The integration of FP allows us to investigate the role of action pattern background knowledge. These patterns represent institutional routines as typically followed by medical personnel. More specifically, it makes it possible to examine the consequences for interpreters’ processing and performance, when such knowledge, taken for granted by the doctors, is missing on the interpreters’ part.

Knowledge structures in interpreted doctor-patient communication (IDPC)

In interpreted doctor-patient communication (IDPC), the course of interaction is determined by the cognitive processing of all three parties and the respective knowledge they bring to bear on the situation. It is generally assumed that the participants are in an asymmetrical knowledge constellation. Especially the *unequal distribution of knowledge* between doctor and patient has often been described as resulting in a communicative relationship between an “expert” and a “lay person”, when, in fact, it is more accurate to speak of the patient not as a “lay person”, but as a “non-expert” within an institution (cf. Hartog, 1994; 2006, p. 176f).

This is because a patient in his or her capacity as a client seeking counseling from the institution, carries both general and more specific first-hand empirical knowledge of institutional structures and processes, termed ‘first order knowledge’. The doctor, as an agent of the institution, carries both ‘first order’ and ‘second order’ knowledge, which consists of systematically acquired expert and institutional knowledge (Ehlich & Rehbein, 1977; 1986). Second order knowledge (also called “Institutional knowledge Level 2”, Bührig, 2009, p. 152) includes insights into institutional structures, decision-making processes and action patterns for specific institutional purposes, with which clients/patients are not usually familiar. The more frequently patients are involved in medical encounters in hospitals and with doctors and experience testing and treatment processes, the better their understanding of the related procedures and terminology becomes. According to Löning (1994), patients may either acquire ‘semi-professional’ knowledge during the course of an illness and, thus, some elements of ‘second order’ expert knowledge, or ‘pseudo-professional’ knowledge, i.e. ‘first order’ knowledge in the guise of ‘second order’ knowledge which is reflected in patients’ usage of medical expressions, but does not come with an understanding of the underlying medical notions and explanatory background.

Interpreters, by contrast, may not be too familiar with the internal affairs of the hospital, in which their interpreting assignment takes place. Nor may they be highly knowledgeable regarding the procedures in place or medical subject matters and terminology involved in the specific case. This may, in fact, be a reason why plurilingual family members and ad hoc in-house staff interpreters are sometimes better equipped for the interpreting task. Family members may have substantial knowledge relevant to the case on the basis of their close relationship with the patient and frequent visits to the hospital or talks with the doctors concerned (Bührig & Meyer, 2015, p. 302; Rosenberg et al., 2007, p. 250). Similarly, in-

house medical staff members’ “institutional and technical knowledge can be an asset for their interpreting activities” (Martínez-Gómez, 2015, p. 422).

Knowledge is, thus, a term covering a wide range of matters, be it knowledge of the medical subject and terminology, of the wider institution and its processes, or of specific DPC action patterns and discourse structures. In this paper we will concentrate on the actual IDPC encounter and on knowledge of its specific set-up. Each encounter is embedded in a specific purposeful process and is structured accordingly. A principal characteristic of doctor-patient communication is, therefore, the differentiation between the types of interactions, namely ‘Initial medical interview’ and ‘Follow-up encounter’, depending on whether or not doctor and patient have had previous encounters, i.e. whether or not a joint ‘pre-history’ of former medical encounters has been established.

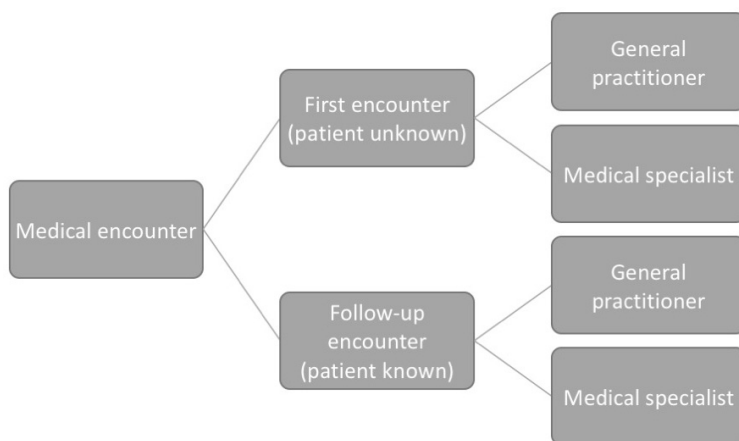


Figure 2: Basic types of doctor-patient interaction (cf. Rehbein & Löning, 1995)

First encounters or *Initial medical interviews* take place when a general practitioner or medical specialist has yet to identify the illness a patient suffers from. This type of doctor-patient communication is often dubbed an ‘anamnesic medical interview’ due to its focus on reconstructing the patient’s medical history, even though physical examination, diagnosis and

counseling may take place within the same encounter. A substantial part of the encounter will revolve around reconstructing the patient's medical history including family members' serious illnesses up to the point where her/his current ailments started. The internal structure of this conversational type is characterized by specific question types on the part of the doctor and narrative stretches on the part of the patient. If a serious illness is suspected or has been diagnosed, the referral to a medical specialist will involve recollecting the personal medical history and restarting the anamnesis (cf. Bührig & Meyer, 2009, p. 191).

The second discourse type, the *Follow-up encounter*, includes all types of doctor-patient communication where patients are in the process of being treated or checked up on against a known medical history and illness. The patient in that case is known to the doctor and medical records carrying information on the diagnoses, subsequent treatments and their successes are available. Moreover, a large part of this information is part of a shared 'pre-history' between doctor and patient, as are routines and action practices that both will rely on (cf. Rehbein, 1977). This holds for medical specialists treating a long term illness just as well as for general practitioners who may have seen a patient over the years with changing ailments.

These two broad types are further subdivided, in research on medical encounters, into at least four types of doctor-patient communication according to their *overall purposes* (cf. Rehbein & Löning, 1995; Löning, 2001; Bührig & Meyer, 2015):

- a. anamnestic medical interview (cf. Bührig & Meyer, 2009),
- b. informed consent (cf. Meyer 2004, Bührig & Meyer, 2015, p. 307),
- c. delivery of diagnosis (with specific subtype of „bad news delivery“, cf. Bührig & Meyer, 2015, p. 308),
- d. counseling (cf. Hartog, 2006).

In this subdivision, type (a) is primarily a first encounter, aiming at diagnosis, while types (b) through (d) represent follow-up encounters in the process of treating an illness. They aim at decision-making regarding further diagnostic and/or therapeutic procedures, as well as the patient's compliance and adherence to therapy. Type (d), namely counseling, may particularly occur when a serious illness is detected and a decision needs to be taken, or if the patient during a check-up brings up a subject of her/his own concern. Counseling may actually take place within all kinds of DPC shortly before the closure of the encounter, especially if a patient makes use of a "final-concern sequence" in order to discuss "previously unmentioned mentionables" (White, 2015, p. 175-177, p. 183-185).

Knowledge of the discourse types' general structure and overall purposes can be assumed to be part and parcel of the doctor's background, but not necessarily of the interpreter's. Since discourse structures typical of DPC will be an integral part of a doctor's knowledge set, they will naturally co-determine his or her chairing role throughout the encounter.

Finally, discourse or encounter types are internally structured, again in accordance with the overall goals and purposes to be achieved. Looking at the only slight differences in category labeling by various authors, it becomes clear that the internal structure of a DPC encounter must be an institutionalized one, learned and internalized by the medical staff.

Valero Garcés (2007)	Dubslaff & Martinsen (2007)	Pittarello (2012)
Initial greetings	Opening	Opening
Enunciation of problems	Medical history	Complaint
	Examination	Examination or test
Evaluation and discussion of the patient's condition	Diagnosis	Diagnosis
Discussion and prescription of the treatment and/or check-ups	Consultation/medical advice	Treatment or advice
Farewells		Closing

Table 1: Internal structure of doctor-patient encounters

The following functional purposes are linked to the standard structure as sketched out in table 1:

- 1) *opening* (with or without initial greetings, depending on whether the patient has seen the doctor in the waiting area or at the counter beforehand): introduces the purpose of the DPC at hand, including announcements preparing the patient for the imminent course of action to be taken, and serves to establish 'rapport' (Spencer-Oatey, 2013) between doctor and patient;
- 2) *enunciation of problems*: establishes the medical history ('anamnesis', esp. in initial medical interviews), serves as stock-taking of the patient's current condition in order to create a basis for diagnostic evaluation; questions are used in particular to trigger verbalizations of perceived ailments on the patient's part in order to enable the doctor to interpret them in medical terms (Bühlig & Meyer, 2009, p. 189-191);
- 3) *evaluation and discussion* of the patient's condition (including verbal and physical examination and diagnostic procedures, the result of which often is not available immediately): serves to establish a diagnosis and/or need of transfer to a specialist for further evaluation;
- 4) *discussion and prescription of treatment and/or check-ups, consultation and medical*

advice (oriented towards problem-solving, resulting in a decision and treatment suggestion): serves to create compliance and adherence on the patient's part to therapeutic proposals, taking into account the patient's needs for counseling, support and further information;

- 5) *closing* (with farewells, often preceded by an agreement regarding further appointments): closes the current speech situation while establishing rapport in order to keep up the joint action system for future interaction and to secure compliance and treatment success.

These five phases of DPC reflect series and sequences of speech actions which are organized in accordance with the medical experts' knowledge of institutionalized action patterns. At an even deeper level, micro-structures of knowledge below the level of speech action patterns are at work. Linguistically, they are rendered by inconspicuous everyday expressions, e. g. *matrix constructions* such as "I think (that)" (cf. Hohenstein, 2004). In DPC, they are employed by doctors in order to make evaluative statements and aimed at triggering specific mental processing of the doctor's utterance on the part of the patient. According to Rehbein (2007, p. 430) matrix constructions "serve the purpose of balancing out the stock of knowledge between actants at the propositional level" (Rehbein, 2007, p. 430). They can help patients process medical information from the doctor's expert knowledge in relation to their own knowledge structures, creating "interaction coherence" amongst the parties involved (cf. Rehbein 2007, p. 429-431).

Interpreters without specialized institutional knowledge of such internal and external structures or of the constructions and expressions by means of which they are expressed lack insight firstly into the embeddedness of the conversations in the larger institutional processes (Bührig et al., 2000), secondly, their internal purposes as outlined above, and thirdly, into the implications of the more subtle speech actions implemented by the doctors, such as eliciting

metaphorical descriptions of pain in order to preclude a specific diagnosis or making targeted use of questioning strategies (cf. Bührig 2009, p. 156f, 166; Bührig & Meyer, 2009, pp. 198-202; Rehbein, 1993; 1994). This may be one major reason why trained medical interpreters' performance in data analyses is repeatedly found to be insufficient and impeding rather than supporting the IDPC (Bührig & Meyer, 2004; 2009, p. 197). In other words, problems arise from the fact that the medical staff in charge of the conversation follow a goal-oriented action plan based on a heightened awareness of these internal and external structures, the respective action patterns and their purposes. When interpreters do not share such knowledge, they are unable to infer meaning as implied by the doctor or to judge the relevance of targeted phrases. This will impede strategic interpreter processing, such as anticipation, and also enact misjudgement of the importance of (rendering) certain expressions the doctor used. It has been found, for instance, that mitigating and rapport-building expressions, such as hedges or phatics are extremely frequently left unrendered by medical interpreters (Albl-Mikasa et al., 2015). Similarly, the above-mentioned matrix constructions are often omitted by the interpreters and our assumption is that they are omitted, because interpreters are unaware of the specific role these expressions play in the DPC action plan.

The functional problems of such interpreting performances are obvious: when interpreters do not know that the welcoming section at the beginning of an encounter serves to build rapport with the patient or that the following treatment discussion aims to establish compliance on the part of the patient this is reflected in their (non-)rendition of the expressions chosen by the doctor for that very purpose. On one hand, this may jeopardize treatment success, because rapport, trust, and compliance are indispensable prerequisites. On the other, faulty renditions may lead to detours in the conversation and lengthy, unsuccessful stretches of communication.

We will now turn to a discussion of two speech action sequences from our KTI data (as described above), demonstrating how a lack of knowledge on the interpreter's part may affect the course of the conversation and impede its goals and purposes. The first example is an elaborated version of our first, brief introduction of a cognitively-founded approach to community interpreting (Albl-Mikasa & Hohenstein, 2017). The second example has not been discussed before.

Discussion of examples

Example (1): knowledge of speech actions and institutional action patterns

The following excerpt represents an IDPC between a Swiss-German female doctor (DocF1) and a female Turkish patient (PatF1T) with little L2 German, interpreted by a female, trained intercultural community interpreter (IntF1) with L1 Turkish and L2 German. The patient has been treated for multiple medical problems, notably cancer of the right kidney, paralysis and immobility problems (the patient previously had to use a wheelchair), as well as bladder

inflammation. Bearing the patient's medical history in mind, the following example is typical of *follow-up encounters* in the case of long-term illness.

Example (1): Opening part of the interaction (KT1-Nr.11424.1 PFES-ES_Vid1), 20s at min. 01:28.0-01:49.5. The transcript provides the original German or Turkish version of each utterance in italics with the English translation below.

1DocF1 *Frau D.*

'Ms D.'

2PatF1T ((sits down)) *Ja.*

'Yes.' ((answers in German))

3DocF1 *Jetzt fangen wir an.*

'We are starting now.'

4DocF1 *Ähm wir machen heute ne Kontrolle.*

'Um we are going to do a check-up today.'

5DocF1 *Und jetzt habe ich als erstes ne Frage.* ((points to fingers of PatF1T))

'And now I have a question first.'

6DocF1 *Haben Sie Blut abgegeben für I-En-Er- Kontrolle?*

'Did you give a blood sample for INR testing?'

7IntF1 *Eee bugün sadece kontrol yapacak, bu kontroldan sonra sonuç alıcak.*

'Uh today there will only be a check-up, after that check-up there will be a result.'

8IntF1 *Kan verdinizmi bugün?*

'Did you give a blood sample today?'

The doctor starts opening this follow-up encounter in utterance 1DocF1 with a form of address, greeting the patient, answered by the patient herself in 2PatF1T. Utterance 3DocF1,

in which the doctor *announces* to the patient that the interaction is about to start, is not rendered in Turkish. In example (1) there are two more *announcements* made by the doctor, which are not rendered in Turkish in the form of announcements:

In 4DocF1, the doctor announces a joint action to be carried out, establishing a joint action system by using the first person plural “we” and an inclusive personal predicate (“are going to do”). The interpreter renders this in 7IntF1 as a complex Turkish utterance, which is not an *announcement* at all. Instead, in Turkish she makes an impersonal prediction, asserting an event without the active involvement of either doctor or patient (“there will be”). In fact, the “result” of which the interpreter speaks, is not the purpose of the current interaction, but she seems to feel the need to construct a purposeful relation and supplies this information in her own right. In addition, she uses the mitigating expression “only” to play down the planned action, making the whole exchange – i.e. checking up on the patient in the aftermath of cancer therapy – appear to be a trivial matter. This and the added element “there will be a result” in Turkish (7IntF1) goes to show that she has not understood the purpose of the current interactional phase, which is precisely to introduce the goals of the DPC at hand, prepare the patient by making announcements for the imminent course of action to be taken, and establish rapport.

In 5DocF1, the doctor makes an *announcement* of her question *before actually posing* the question in 6DocF1. The interpreter in 8IntF1 overrides the announcement by simply asking the question. More specifically, the doctor qualifies her question (by saying “now”, “first”) as *preceding* the interaction the patient can expect, namely enunciation of the patient’s problems. At the same time, she refers to shared knowledge regarding the standard procedure of a „check-up“. Her use of the medical term “INR” implies that the patient can relate to it, since it is a routine she has undergone several times already and knows to be part of a “check-up”.

The interpreter, by contrast, omits the medical label “INR testing”, which suggests that she does not know the expression, its reference to a specific procedure or that it is related to institutional knowledge shared by patient (semi-professional knowledge as a client of the institution, see above) and doctor (institutional knowledge of second order, as an agent of the institution, see above).

In functional terms, opening sections serve to prepare patients for the course of action to be expected during the encounter. Announcements belong to an action pattern that aims to render a course of action planned by the speaker mentally accessible to the listener in constellations in which the latter has no control over the imminent actions (Rehbein, 1981; Hohenstein, 2005, p. 296-298). Hence, doctors’ announcements are intended to facilitate patients’ mental anticipation of the joint course of action and enable them to comply. They are particularly well-suited for creating rapport, because they enable patients’ mental participation in a speech situation where their range of control and scope of action are limited. In the case of a medical follow-up encounter, announcements of the imminent course of action are also linked to the pre-history shared between doctors and patients. Since interpreters are rarely party to this pre-history, this poses a challenge for interpreting early on in the DPC. Both mental participation in the doctor’s action plan and the rapport building effect of an announcement’s illocutionary force (i.e. goals and purpose of the utterance) are undermined.

Example (1) illustrates that a lack of knowledge of the action pattern related to the standard structure of doctor-patient interaction at hand makes it difficult for the interpreter to understand and interpret into Turkish the goals and purposes relevant to the institutional context. The crucial insight from example (1) is that even at the very beginning and with seemingly simple and small units of speech, substantial modifications are inflicted upon the doctor’s and patient’s joint action system, altering rapport building and mutual understanding

in the communicative action that is taking shape.

While, in example (1), substantial changes to the propositional build-up and to the doctor's speech actions resulted from the interpreter's lack of knowledge of a highly institutionalized action pattern, the following second example is added to the discussion to illustrate how cognitive processing at the level of knowledge micro-structures, i.e. below the level of speech action patterns, may also adversely affect IDPC. To that end, three matrix constructions are looked at more closely. As follows from the analysis of example (2) below, the "balancing out" of knowledge regarding the assessment of the patient's healing prospects that is supposed to result from the doctor's use of matrix constructions gets lost in the process of interpreting due to a change or omission of the matrix constructions by the interpreter.

Example (2): Matrix constructions and mental processing below the level of pattern knowledge

The second IDPC excerpt is taken from a follow-up encounter between a Swiss-German male doctor (DocM1) and a female Turkish patient (PatF2T), which is interpreted by another female, trained intercultural community interpreter (IntF2) with L1 Turkish and L2 German. The patient was treated for breast cancer by means of surgery and chemotherapy, is currently undergoing radiotherapy and has severe pains in her left side. The excerpt is from the pre-final phase of the consultation, before closing. The doctor asks the patient whether she has any further questions. The patient explains that in order to regain calm she needs to know that no cancer is left in her body. Example (2) represents the doctor's answer and its rendition in Turkish by the interpreter.

Example (2): Pre-Closing part of the DPC (KTI-Nr.11424.1 PFES-ES_Vid2), Score frame 328, min 27:12.2. The transcript provides the original German or Turkish version of each utterance in italics with the English translation below.

1DocM1 *Hmhm ich denke, die Chancen sind hervorragend, dass kein Krebs mehr da ist.*

‘Well, I think the chances are excellent that there is no more cancer.’

2aDocM1 *Aber man muss immer sagen, wir können die Zukunft nicht sicher vorhersagen,*

‘But one always needs to say, we cannot predict the future exactly,’

2bDocM1 *ich kann Ihnen das nicht versprechen und schwören.*

‘I cannot promise you and swear it to you.’

3DocM1 *Das ist/ das gibt immer natürlich Überraschungen im Leben.*

‘That is/ there are always of course surprises in life.’

4DocM1 *Aber die Chance ist sehr gut, dass wir alles wegbekommen haben mit der*

‘But the chance is very good that we could erase it all with the’

4DocM1 *Chemotherapie, der Strahlentherapie, der Operation, alles zusammen.*

‘help of the chemotherapy, radiotherapy, and operation, all together.’

5aIntF2 *Yani şansımız diyo büyük,*

‘Actually our chances, he says, are good,’

5bIntF2 *yani şansımız çok büyük em ameliyatla kemoter/ em*

‘actually our chances are very good, with the operation, chemoter/ em’

5bIntF2 *kemoterapiyle ışın tedavisinle,*

‘Chemotherapy, radiotherapy,’

5cIntF2 *yani şansımız çok çok büyük birşey kalmadığma dair,*

‘actually the chances are very, very large that nothing remains,’

5dIntF2 *ama tabi gelecekte hiç bir şey söyleyemeyiz yani ner çıkar ne olur bunu.*

‘but for the future we cannot say what will become of it, what will happen from it.’

In example (2), the doctor gives an expert opinion of the patient’s healing prospects. The overall tenor of utterances from 1DocM1 to 4DocM1 is that of positively reassuring the patient of her benign prospects and, at the same time, making sure not to make false promises. The mitigations in utterances 2a/bDocM1 and 3DocM1 serve this latter purpose. However, this is not rendered in Turkish, even though the Turkish utterance 5dIntF2 (“but for the future we cannot say what will become of it, what will happen from it”) picks up on the adversative structure (“ama”/“but”) and propositional reference to the “future” (cf. 2DocM1). In fact, the illocution rendered by the interpreter in 5a/b/c/dIntF2 differs substantially from the doctor’s message. Instead of transporting the optimistic outlook carried by the doctor’s expert assessment, it delivers a *toning down* of the patient’s prospects. This is mainly due to a change in or omission of the three *matrix constructions* “I think”, “the chances are excellent that” and “the chance is very good that”, that had been used by the doctor in utterances 1DocM1 and 4DocM1.

In utterance 1DocM1, following the patient’s request, the doctor starts with “I think”. Even if “I think” is an everyday expression, the (speaker deictic) “I” here does not point to a subjective, personal judgement, but to the expert perspective of a medical doctor, because due to the constellation, the doctor’s role as an agent and expert in the institution needs to be taken into account. As a matrix construction, “I think” turns the complete utterance into an *assessment*. Both aspects, that the doctor is *sharing his opinion* in his capacity as an expert, and that, from this position, he makes an *expert assessment* of the patient’s outcome, are lost in the Turkish rendition.

The main clause “the chances are excellent” states a positive evaluation of the patient’s outcome; however, by following up with “that” the doctor turns it into a second matrix construction. In what follows, he rephrases parts of what the patient had verbalized before: her doubts about not having any more cancer cells in her body, which the patient had asked him to confirm for her. This is stated as a fact, “there is no more cancer”. It is embedded within the matrix construction as a *factual proposition* (termed ‘p-construction’, cf. Hohenstein, 2004; Rehbein, 2007), which makes it possible to link the expert medical perspective of the doctor with the patient’s perspective. This construction type is designed to render the medical facts upon which the doctor is basing his positive expert assessment accessible to the patient. In doing so, ‘interaction coherence’ is established (Hohenstein, 2004, p. 330; Rehbein, 2007, pp. 429-431). However, this effect is not rendered in Turkish.

The third matrix construction that springs to mind is used by the doctor in 4DocM1. Apart from the introductory adversative connective “but”, its structure is very much like the first utterance. The doctor slightly changes his evaluative assertion (“the chance is very good that”) and connects it to a factual statement of expert success; this is done from a personal perspective, by using a speaker deictic (“we could erase it all [...]"). Here, too, evaluation and factual verbalization are connected by means of the matrix construction, thus achieving an illocution of assertive positive assessment.

In contrast, the Turkish rendition in utterance 5aIntF2 uses reported speech (“he says”), giving an *account of the doctor’s speech action* instead of expressing an expert assessment. Utterance 5bIntF2 picks up on 4DocM1, but *lacks the matrix construction*. As a consequence, neither utterance reproduces the doctor’s speech actions, producing utterances of a different kind instead. Utterance 5cIntF2 mimics the matrix construction in the doctor’s assessment in 1DocM1, but fails to convey the exact assessment, because the matrix (“actually the chances

are very very large that”) and factual statement (“nothing remains”) do not reproduce interaction coherence between the expert knowledge and patient’s perspective. This is due to the modals „actually” and „very” and the change in referring to “large” instead of “excellent” chances. These alterations show that the mental processes connected with the doctor’s matrix constructions do not form part of the interpreter’s cognitive processing while reproducing the utterances in Turkish. To enable the patient to access the doctor’s positive assessment and, thus, to adapt her own knowledge structures accordingly, the rendition of the matrix constructions would have been crucial.

To sum up, matrix constructions represent micro-structures of knowledge that, especially in expert discourses, bridge the gap between the expert’s perspective and the client’s knowledge (cf. Hohenstein, 2004, p. 330-331). Consequently, in interpreted DPC, it is essential for these linguistic structures to be rendered in the patient’s language. Interpreters in IDPC need to understand the goal-oriented mental processes involved in these constructions on the doctor’s part in order to reproduce them in the patient’s language and render them accessible to the patient’s information processing.

Conclusion

Following up on a first brief introduction of community interpreting as socially *and* cognitively situated cognition (Albl-Mikasa & Hohenstein, 2017), this paper is an elaborated version aiming to demonstrate the role knowledge plays in IDPC. As one of the most complex bilingual tasks and cognitive activities, interpreting is an act of pragmatic cognitive discourse processing and the interpreters’ comprehension and production processes depend heavily on various types of linguistic and non-linguistic knowledge. Especially in settings like

institutionalized medical interpreting in hospitals, a wide range of super- and subordinated knowledge types influence the interpreters' processing and performance, namely knowledge of larger institutional processes, of external and internal structures of discourse events (e.g., doctor-patient encounters), of specific related action patterns as well as of linguistic devices, such as pertinent expressions (e.g., hedges, phatic expressions) or matrix constructions.

Drawing upon the Heidelberg School's psycholinguistic interpreting model as a theoretical framework and updating it with insights from functional pragmatics, we have attempted to show, on the basis of data from a larger Swiss hospital-based study, how a lack of such knowledge may often be at the root of unsuccessful DPC interpreting. An interpreter who lacks such knowledge is not able to process the interactional complexity underlying the DPC or follow through with the doctor's action plan, goals and purposes. Thus, it becomes apparent that each DPC interaction type and phase bears different challenges for interpreters. For instance, in initial medical interviews, particular attention must be paid to the way doctors phrase their questions or use metaphors. Follow-up encounters, by contrast, presuppose both knowledge of the patients' experience during diagnosis and treatment to date and knowledge of the diagnostic and therapeutic procedures carried out and likely to be referred to by doctors. To enable interpreters to assess the relevance of particular assertions, announcements or questions uttered by the doctor and take the right decisions as to how to render them, they need to be party to such knowledge at least to some extent. Institution-specific knowledge at different levels of abstraction is a fundamental component of *cognitive* processing and a prerequisite for successful *social* interaction. Hence it would be highly beneficial to incorporate this aspect into medical interpreter training.

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