Interpreting and knowledge mediation in the healthcare setting: What do we really mean by "accuracy"?

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This paper explores the concept of "accuracy" in the context of interpretermediated healthcare interaction by reporting on a study of simulated doctor-patient consultations involving professional Australian Sign Language (Auslan)/English interpreters. Wadensjö's (1998) taxonomy of renditions is used to analyse the ways interpreters convey health information. Our data reveals that interpreters frequently produce reduced and expanded renditions that are not detrimental to the message or the interaction. There has previously been little discussion of how qualified interpreters make these decisions, and we suggest that achieving accuracy in the healthcare setting may be a more dynamic and context-dependent process than previously suggested. While the use of role-plays can on the one hand can be considered a delimiting factor (due to their artificial nature), they also allow a systematic comparison of different interpreters, thus providing more robust evidence for healthcare interpreter training.

1. Introduction and contextual overview

The success of interpreter-mediated healthcare interaction depends to a significant extent on the linguistic choices made by interpreters (Tebble, 1999) and the ethical tenet of accuracy is considered important, given that real health outcomes are on the line (Hale, 2007). Accuracy is defined as the requirement for an interpreter to deliver information within a message "in the same spirit, intent and manner of the speaker, with no additions, deletions or alterations to the meaning" (Napier, McKee, & Goswell, 2010, p. 74). But what does this actually look like in practice? And what are the implications for healthcare? Studies have shown that untrained interpreters in healthcare settings may not convey information accurately (e.g., Dubslaff & Martinsen, 2005; Valero Garcés, 2005), but few studies have systematically explored how qualified interpreters perform in this regard, and even fewer have described how healthcare interpreters can add or omit information and still achieve accuracy.

This paper explores the concept of accuracy in the context of interpreter-mediated healthcare interaction involving Australian Sign Language (Auslan)/English interpreters. In Australia, interpreters receive their accreditation from the National Authority for the Accreditation of Translators and Interpreters (NAATI) by either passing a NAATI test or completing a NAATI-approved course of study. Accreditation is available at Paraprofessional or Professional level. Paraprofessional level accreditation is an entry-level qualification that assesses interpreters as

being "safe to practise", although the Professional level is regarded as the ideal minimum level of competence. An accredited interpreter, however, is not necessarily a trained interpreter.

Approximately 300 Auslan/English interpreters are active and regularly available for work (Napier, Major, & Ferrara, 2011), 70% of whom are accredited at the Paraprofessional level (Bontempo & Napier, 2007). Auslan/English interpreters serve a sign language-using deaf population of approximately 6,500 (Johnston, 2006, p. 152). Auslan interpreters are provided for private healthcare appointments through the federally funded National Auslan Interpreter Booking and Payment Service (NABS). NABS only employs interpreters who have NAATI accreditation.

The motivation for this study was the relative lack of research into healthcare interpreting in Australia in general, and in particular into signed language healthcare interpreting.

1.1. Accuracy

One of the seminal studies on accuracy in signed language interpreting was conducted by Cokely (1992). He conducted analyses on the output of interpreters working between English and American Sign Language, and developed a miscue taxonomy, identifying five types of shifts within the texts. These included additions, omissions, substitutions, intrusions and anomalies. Cokely's taxonomy focused on the search for inaccuracy or errors made by interpreters. Error analysis is also a popular approach in evaluating accuracy in simultaneous spoken language interpreting (e.g., Barik, 1994).

Alternatively, Napier's (2004) omission taxonomy for the analysis of interpreting between English and Auslan accounts for interpreters' strategic decision-making. The taxonomy was developed by analysing the output of ten interpreters working from a university lecture, and then eliciting metalinguistic reflections from the interpreters in retrospective interviews where they were shown the data and asked to comment on why omissions were produced. The taxonomy includes five omission types: conscious strategic, conscious intentional, conscious unintentional, conscious receptive, and unconscious¹. Napier (2004) proposes that every interpretation has an "omission potential" and depending on the number and types of omissions produced, accuracy can still be achieved.

Nevertheless, measurements of accuracy are complex and should consider not only factual information, but also style (Hatim & Mason, 1990). In a study of seventeen English-Spanish interpreted courtroom interactions, Hale (2002) observed that witnesses' utterances were often interpreted accurately in terms of content, but that the style of the source text was modified in the target text, for example through use of a different register and adding or omitting affective elements of the message (such as

hesitations and hedges). Hale suggests that interpreters' failure to convey these stylistic features can potentially weaken the credibility of witnesses, and consequently alter the outcomes of cases. Thus any measurement of accuracy should take into account not only the interpretation of factual information, but also affective information.

1.2. Wadensjö's measurement of accuracy

Wadensjö's (1998) work is based on authentic spoken language interpreted interactions in Sweden, and reveals that interpreters frequently use deliberate strategies in order to achieve message equivalence. Wadensjö asserts that the level of strategic decision-making depends on contextual factors within the interaction, as also noted by Napier (2004) in a monologic setting.

Wadensjö's (1998) approach involves the categorisation of utterances as "originals" or "renditions". Essentially, an interpreter's utterance is a "rendition", which relates in some way to the immediately preceding "original" utterance (e.g., by a doctor or patient). Wadensjö's taxonomy includes eight sub-categories of renditions: close renditions, expanded renditions, reduced renditions, substituted renditions, summarised renditions, multi-part renditions, non-renditions and zero renditions. Details of each category can be seen in Table 1. These sub-categories enable the analyst to explore the adequacy of an interpretation by looking at the appropriateness of a rendition within the interactional context.

Table 1: Wadensjö's rendition sub-categories

| Rendition type | Definition | |
|----------------|---|--|
| Close | Propositional content of original explicitly expressed in the rendition, style approximately the same. | |
| Expanded | More explicitly expressed information in the rendition than the original. | |
| Reduced | Less explicitly expressed information in the rendition than the original. | |
| Substituted | A combination of expanded and reduced. | |
| Multi-part | Two interpreter utterances correspond to one original, which is split into parts by the interjection of another original. | |
| Summarised | Text that corresponds to two or more prior originals. | |
| Non | Interpreter-initiated. | |
| Zero | Original not translated. | |

(see Wadensjö, 1998, pp. 107–108)

Through her analysis of interpreter-mediated police interviews and healthcare consultations, Wadensjö (1998) judges rendition types based not only on the closeness or divergence of renditions, but also on the context immediately preceding them and the wider context of the whole interaction. She notes that interpreters produce contextually, linguistically and culturally appropriate utterances that meet the communicative goals of the original statements. For example, reduced renditions are produced to place emphasis on the more recently articulated of two communicative goals in the original utterance; and close and expanded renditions are also produced in order to emphasise certain parts of the information. Angelelli (2004) and Bolden (2000) also note similar strategies in healthcare interpreting, which is the context for our study.

1.3. Healthcare interpreting

The majority of studies of healthcare interpreting have involved error analysis, with discussion of inappropriate omissions, additions and alterations of factual information produced by (untrained) interpreters (e.g., Aranguri, Davidson, & Ramirez, 2006; Laws, Heckscher, Mayo, Li, & Wilson, 2004). In her discussion of healthcare interpreting, Hale (2007) acknowledges that achieving accuracy can be a challenge, and promotes a

"direct" approach, in which "the interpreter interprets every turn, and the doctor and the patient address each other through the interpreter" (p. 41). This direct approach could be considered as being equivalent to Wadensjö's close rendition category, whereby the propositional content of the original is explicitly expressed in the rendition, and the style is considered to be the same.

Taking a similar stance, Tebble (1999) analysed a corpus of authentic interpreted healthcare interactions to examine the interpersonal, affective features of the discourse. Tebble (1999) notes that "all turns at talk should be interpreted" (p. 44), which mirrors Hale's (2007) call for a "direct" approach. A limitation of this type of analysis is that potential strategic reasons for reduced renditions are not discussed. For example, some of the original utterances in Tebble's data may not have been interpreted due to overlap, time-constraints, the interpreter's prior knowledge of the patient's understanding of English, or other factors.

We believe that judgments of accuracy should be made based on wider contextual evidence. Studies based on authentic spoken and signed language interpreting data have provided evidence that strategic decision-making, based on contextual factors, is a key component in healthcare interpreting (e.g., Angelelli, 2004; Bolden, 2000; Major, 2012; Metzger, 1999).

Shlesinger (2009) calls for more replication of existing interpreting studies in order to test findings and applicability across different languages and contexts. Thus for our study, we felt it was appropriate to adopt the model proposed by Wadensjö (1998) as aspects of her taxonomy have been replicated by other spoken language interpreting researchers in their examination of healthcare interpreted events. Amato (2007) focuses on zero and non-renditions to gain insight into what interpreters choose not to render, and Cirillo (2012) also analyses these same categories to explore how interpreters' initiatives may either promote or inhibit affective communication in doctor-patient talk. Until the current study, Wadensjö's taxonomy had not been applied to the analysis of signed language interpreting.

In our study, we provide further evidence that the error-based models of accuracy are inadequate for explaining the decisions made by interpreters, and that accuracy in the healthcare setting can only be fully understood with regard to interactional context.

2. Research method

2.1. Participants and data collection

Using network sampling, a flyer seeking expressions of interest to participate in the study was sent to NAATI accredited Auslan/English interpreters registered with various interpreting agencies, and who were members of the Australian Sign Language Interpreters Association. Ten interpreters from the Sydney area were recruited to participate in a simulation of doctor-patient interaction between a real GP and a deaf patient (both female). The role-play was repeated ten times, and each interpreter participated only once.

As it was not a quantitative study, there was no attempt to balance demographic characteristics, although the ten interpreters varied in age, gender, educational background, and interpreting experience. Six interpreters were female and four were male. Three held NAATI Professional accreditation and seven had Paraprofessional accreditation. The most experienced had been interpreting for eighteen years, and the least experienced for one year. Eight interpreters had completed formal interpreter training, while two had gained accreditation without completing a training programme.

The role-play was designed to be as naturalistic as possible. It was developed in consultation with the GP and the deaf person, and the scenario was built upon an injury that the deaf person had sustained in real life. It involved the patient visiting her GP after fracturing her ankle (having first had this treated in hospital) in order to request more pain medication. The GP then addressed a potential risk of osteoporosis, questioning the patient about her diet, describing the causes of bone weakness, and recommending further tests. Interpreter participants commented that they quickly forgot that the interaction was simulated, particularly because there was a real GP involved, and thus we are confident that the role-play resembled a realistic interaction as much as possible.

Two digital video cameras were used to record each role-play, and the researcher was not present in the room during recording. Each role-play ran for between 13 and 16 minutes, and the GP and patient followed the same brief for each scenario.

2.2. Transcription and analysis

The role-play video footage was transcribed and analysed in ELAN, a computer programme that allows the precise alignment of transcription with video data (Wittenburg, Brugman, Russel, Klassmann, & Sloetjes, 2006). Auslan signs were represented in written form using standard signed

language research conventions, such as CAPITAL LETTERS, to 'gloss' the main content of the signer's talk (Johnston & Schembri, 2007). In order to prevent identification of the interpreter participants, each interpreter was allocated a letter code.

For the analysis presented in the current paper, we focused on one excerpt that occurred with particular consistency across each of the ten role-plays. This excerpt begins approximately 4-5 minutes into each role-play, and starts when the GP briefly questions the patient about her diet and lifestyle. After establishing that the patient is likely to be deficient in calcium and vitamin D, the GP explains that tests are needed in order to either diagnose or rule out osteoporosis as a cause of bone weakness. Due to the amount of data and the space limitations of this paper, here we report only on the analysis of the Auslan renditions produced by the interpreters.

The excerpts varied in length, with the average duration being 6 minutes, 13 seconds. For the purposes of this study, units of analysis ("originals") were defined based on the GP's utterances. In order to draw boundaries between utterances, we considered pausing and intonation, and also relied on our intuition as native speakers of English. The GP (who had previously worked with interpreters in real life) spoke at a measured pace and often paused between utterances. Interpreter renditions tended to follow the GP's utterances in terms of her prosodic utterance boundaries (i.e. when she paused), so it was ideal to analyse the interpreter utterances following the same boundaries.

In total, there were 412 renditions, averaging 41 per excerpt. All renditions were categorised according to Wadensjö's taxonomy, and this process was conducted separately by both researchers to ensure reliability (Burns, 1997). Our judgments were based both on interactional evidence within the video data and on our intuitions derived from our professional experience as interpreters and researchers. Complicated or unclear examples were discussed until an agreement was reached. The process of categorising thus was an important part of the analysis itself, and more detailed analysis was conducted on the most frequent rendition types. In section 3 we describe patterns identified in our analysis, and discuss two of the rendition types in detail—expanded and reduced—with reference to representative examples from the data.

3. Findings and discussion

We begin by giving a general overview of the renditions produced. Initially we had anticipated that the process of categorising all renditions might reveal some patterns based on demographic factors; however, this was not the case and no such patterns could easily be extracted. Table 2 provides a summary of the overall rendition frequency, with the exception of "multipart" renditions, which did not occur in our dataset.

Table 2: Summary of rendition types

| Rendition type | Frequency |
|----------------|-----------|
| Close | 123 |
| Expanded | 97 |
| Reduced | 81 |
| Substituted | 69 |
| Zero | 24 |
| Non | 11 |
| Summarised | 7 |
| TOTAL | 412 |

Overall, the main types of rendition that were produced were close renditions, expanded renditions, reduced renditions, and substituted renditions. There were far fewer instances of summarised renditions, zero renditions and non-renditions, which may have been because the data chosen for analysis had many monological characteristics and interpreters did not need to engage in much discourse management during that particular excerpt.

Close renditions, which were the most frequent, were judged to mainly convey the core meanings of the original utterances appropriately. This does not mean that close renditions are *always* the most appropriate approach, however, as we believe that many concepts require alternative strategies in order to be conveyed accurately in the context. We encountered some challenges in identifying patterns in the category of substituted renditions as we were unable to ask the interpreters themselves whether certain substitutions had been conscious strategies or unconscious miscues. Thus, we focus our discussion in the remainder of this paper on our analysis of the reduced and expanded rendition types, as these revealed particularly interesting patterns.

3.1. Reduced and expanded renditions

In conducting a more detailed analysis of reduced and expanded renditions, examples of both successful and less successful (sometimes even problematic) renditions were identified. It must be stressed, however, that problematic renditions could not be attributed to any one interpreter, or to any group of interpreters based on demographic factors. Additionally, the

deaf actor reported that all ten interpreters performed adequately, so individual miscues highlighted by our analysis were not perceived to be detrimental to her ability to access health information overall.

3.1.1. Reduced renditions

A substantial proportion of the 412 renditions (81, or 19.66%) included some type of reduction in comparison with the original utterances. In order to identify exactly what interpreters were reducing, a second and more detailed analysis of this subset of data was conducted. It was established that while some reductions were strategic in nature (as per Napier's [2004] identification of conscious strategic omissions), many did involve apparent miscues, although rarely was the core message negatively affected (with the exception of 12 out of 81 reduced renditions). Interpreters tended to make minor reductions to content (usually not core content), cohesion, and/or affective elements such as mitigation or hedging. The types of reduction identified in the data are outlined in Table 3 below.

Table 3: Analysis of reduced renditions

| Type of reduction | Frequency |
|--|-----------|
| Strategic reduction | 20 |
| Reduction of affective or cohesive elements | 11 |
| Reduction of content (not core content) | 34 |
| Reduction of both content and affective elements | 4 |
| Core message missing or altered | 12 |
| TOTAL | 81 |

For reasons of space, we cannot provide examples of all categories, although we will discuss a rendition in which content and affective elements are reduced, followed by a strategic reduction. We begin with Example 1, which occurs as the GP is explaining how vitamin D levels can be improved. A back translation of the glossed Auslan rendition is provided in italics.

Example 1: Reduction of content and affective elements

GP: If you don't have enough vitamin d then probably what we would do is get you to take a tablet that's got vitamin d that's the easiest way to get your cal-your vitamin d level up

IntE: IF NOT ENOUGH VITAMIN D: (.) WELL GIVE TABLETS (.) IMPROVE YOUR VITAMIN D =[If you don't have enough vitamin d (.) well we have to give you tablets to improve your vitamin d]

In this example, the core message is conveyed with accuracy by the interpreter. That is, he clearly conveys the GP's statement that if the patient has low vitamin D she can be given tablets to improve it. Some content is slightly reduced, however, specifically that tablets are the easiest way to improve the problem. Additionally, the GP's original utterance includes softening devices and hedging around the need to take a tablet ("probably what we would do is get you to take a tablet"), which is rendered much more direct in the interpretation: "well we have to give you tablets".

As noted by Tebble (1999) and Hale (2002), the reduction or modification of affective elements of talk can potentially be just as significant as the reduction or modification of content, and therefore should inform our understanding of accuracy. In Example 1, the interpreter's rendition could affect how the patient judges the GP (for example, she may form an impression that the GP is very direct or even bossy). This example is one of many from our data that supports calls in the literature for interpreters to pay attention not only to the content but also to the style of talk. It is important to stress that we do not mean affective markers should necessarily be conveyed literally; we also identified many instances in which affective markers in English originals were successfully conveyed in Auslan renditions, and this was almost always achieved through nonlinguistic features such as body movement and facial expressions (see Hoza, 2007; Major, 2012).

It is also revealing to investigate reduced renditions categorised as "strategic". We identified twenty of these, representing 24.69% of the total number of reduced renditions. Strategic reductions were reductions—and sometimes even complete omissions—that were judged to be strategic moves rather than miscues (see Napier, 2004). In some cases, a reduction occurred because the interpreter needed to stop and clarify. In other instances, information was already clear from context and did not need to be repeated by the interpreter. Example 2 illustrates this, and some additional interactional context has been provided. The original utterance that is the focus of this example is underlined.

Example 2: A strategic reduced rendition

GP: ...that's called osteoporosis

IntB: ...O-S-T-E-O-P-O-R-O-S-I-S THAT NAME THAT =[the name of that is osteoporosis]

PT: ((smiles and shakes head))

GP: Have you ever come across that word?

IntB: No what- sorry what's osteoporosis?

In this example, the GP has been explaining about the condition called osteoporosis, and the patient (PT) immediately responds by smiling and shaking her head. This indicates a lack of understanding and is a cue often perceived by interpreters to be a clarification request, even though it is completely non-linguistic (Major, 2012). Thus, when the GP asks "have you ever come across that word?", a strategic reduction occurs: IntB does not convey this, because to do so would be redundant. Instead, he conveys the patient's implied request for clarification: "no what- sorry what's osteoporosis?", responding directly to the GP's question in a manner that might be more typical of monolingual question-answer pairs.

This example illustrates the need to conduct message equivalence analyses giving consideration to context; if we had only considered the original utterance, and the interpreter's lack of a corresponding rendition, we might have judged this to be a miscue, rather than a strategic move designed to maintain the flow of talk. We now turn to the other end of the spectrum and examine the nature of expanded renditions.

3.1.2. Expanded renditions

Ninety-seven renditions were expanded (23.54% of the total dataset). Table 4 below provides a comprehensive list of all the expansion types, although it should be noted that some renditions included more than one type of expansion, making the total number of expanded features (122) greater than the number of renditions (97).

Table 4: Analysis of expanded renditions

| Type of expansion | How many occurred |
|---|-------------------|
| Implicit information made explicit | 54 |
| Repetition or cohesive elements added | 33 |
| Expansion with visual encoding for clarity | 20 |
| Evaluative comment added | 5 |
| Problematic expansion (wrong information added) | 5 |
| Meta-comment added | 2 |
| Elicitation of patient feedback added | 2 |
| Mitigation added | 1 |
| TOTAL | 122 |

As opposed to reductions, very few expansions involved miscues, minimal or otherwise. Certainly, there were some problematic expansions, but these represented only 5 out of 97 expanded renditions, or 5.15%. Thus, in the interests of space, problematic expansions are not addressed further here. Overwhelmingly, it was our judgment that the expansions found in this dataset were strategic and were used to convey a clearer message than might have been achieved with a close rendition. In this section, we describe and illustrate the three most frequent types of expansion.

The first type of expanded rendition to be addressed is when information implied by the GP in the original is expanded and made explicit in the rendition. This was the most frequent type of expansion, occurring in 54 out of the 97 expanded renditions (55.67%), and it is illustrated in Example 3 below.

Example 3: Making implicit information explicit

GP: Do you: have much dairy products in your: diet?

IntG: WHAT YOU HAVE TAB- DRINK (.) MILK FIRST CHEESE SECOND YOGHURT YOU EAT+ PLENTY WHAT FEW+ WHAT? =[Do you have tab- do you drink milk or do you eat cheese and yoghurt a lot or only occasionally?]

Different languages encode concepts in different ways, and the concept of "dairy" is a good example of this, as Auslan does not have one sign that corresponds directly to this superordinate term. To convey this concept in

Auslan, one can borrow directly from English and fingerspell "dairy", or one can expand and give examples of foods implied by the English term. Both strategies are considered to be legitimate language contact strategies used by deaf people and interpreters (Davis, 2003; Napier, 2006). In Example 3, IntG chooses to expand the concept by specifying milk, cheese, and yoghurt. An additional expansion is "a lot or only occasionally", as the interpreter makes explicit what the GP had implied by "do you have much".

Thirty-three expanded renditions included the addition of cohesive elements, typically linking the rendition back to previous statements or topics of talk, as illustrated in Example 4:

Example 4: Adding cohesive elements

GP: Okay it sounds to me like you have a calcium deficient diet

IntB: ((nods head)) YOU FROM MY (MAYBE) ME ASSESS ALREADY YOU-EXPLAIN (ME) FEEL MAYBE YOU (HAVE) NOT-ENOUGH C-A-L-C-I-U-M IN (YOUR) FOOD EAT =[So from my assessment of your explanation I feel that you may not have enough calcium in your diet]

In this example, IntB adds referential cohesion by referring more explicitly back to previous talk: "so from my assessment of your explanation", before conveying a close (albeit slightly more hedged) rendition of the original utterance. Referential cohesion is considered an important aspect of signed language discourse (Cresdee, 2006), thus it can be considered that this interpreter employed this strategy appropriately.

We found that interpreters also expanded utterances in a bid to make the message clearer by encoding information visually: a strategy that is regarded as typical in signed languages (Brennan, 1992; Brennan & Brown, 1997). This occurred in twenty of the expanded renditions, as illustrated in Example 5 below. Prior to this extract, the GP has explained that the patient will not need to pay for tests if she goes to a place that "bulk bills" (that is, a medical service that does not directly charge fees to the patient and instead claims them from the Australian Government's publically funded universal health system). This meaning was conveyed (with a close rendition) by the interpreter, but the patient nonetheless sought clarification: "MEAN ME STILL PAY?" =[does that mean I still have to pay?]. Example 5 occurs after this question has been interpreted to the GP.

Example 5: Expansion with visual encoding for clarity

GP: No no no I will send you to a place (.) that you just sign

IntF: NOTHING B-U-L-K B-I-L-L MEAN ME REFER FORM SHE TELL-THEM SIGN SWIPE-CARD =[No bulk bill means I will refer you with a form to a place where you can easily just sign and swipe your card]

It seems reasonable to assume that the interpreter's expanded rendition in this instance may relate to the patient's prior request for clarification. She first mirrors the GP's original utterance ("no") and then adds an explanatory link "bulk bill means". She then specifies exactly how this will happen "I will refer you with a form to a place", and expands on "you just sign" to describe how patients actually use their Medicare cards: "you can easily just sign and swipe your card". Another example that was used by almost all the interpreters was when the doctor was discussing the need for an x-ray, they depicted visually how one might hold up an x-ray against a light to look at it. This way of visually and systematically describing an action or series of events is a typical Auslan strategy; it would be unlikely to be used when interpreting from Auslan into English as English does not usually encode this level of visual detail.

A post-recording interview with the deaf actor revealed that she preferred a style of interpreting that included a lot of visual expansion, rather than too much fingerspelling. Although it is important to remember that individual patients will have different preferences, our data shows that expanded renditions are an important part of the healthcare interpreter's repertoire. Interpreters should always expand with caution, however, particularly when relying on a lay understanding to expand upon technical medical concepts, as lay and professional use of medical terminology may differ (Thompson & Pledger, 1993). Even interpreters who have had rudimentary healthcare interpreter training may not necessarily grasp medical concepts to the same degree as healthcare practitioners who have received substantially more training.

In sum, analysis of the renditions produced by Auslan/English interpreters in the healthcare context, and detailed discussion of two rendition types, reveal that interpreters do make strategic decisions about their interpretation choices based on the context within an interaction. The findings from this data support Wadensjo's (1998) research with spoken language interpreters.

4. Limitations of the study

Before drawing this paper to a close, there are various limitations of the study that we would like to acknowledge:

 Our findings may be skewed by the fact that we only analysed Auslan renditions, and it seems reasonable to assume that renditions in English and other languages may give rise to other strategies. More research is needed to gain a fuller picture of the rendition types used by signed language interpreters in various contexts and in both language directions.

- As noted earlier, the use of simulated data always presents limitations as participants can be influenced by the artificial nature of the experience. The kind of comparison presented in this study, however, would not have been possible with authentic data. While the use of role-plays can on the one hand be considered a delimiting factor, they also allow a systematic comparison of different interpreters, thus providing more robust evidence for healthcare interpreter training.
- The judgments made in the analysis were based on our intuitions as experienced professional interpreter practitioners, educators and researchers. We were not able to verify our allocation of strategies through interviews with interpreters, which was how Napier (2004) categorised levels of consciousness and strategy in her analysis of interpreting omissions. Targeted interviews with interpreters would have shed light on the strategies employed, which may have shifted the numbers of renditions placed within each category.

5. Conclusion

This paper has explored the concept of "accuracy" in the context of interpreter-mediated healthcare interactions involving professional Auslan/English interpreters. Close renditions made up the largest category (but still represented less than one third of all renditions), and the majority of close renditions were judged to be adequate. There appeared to be many substituted renditions, but clear categorisation was difficult without being able to ask the interpreters themselves whether these substitutions had been conscious strategies or unconscious miscues.

The two categories of most interest were reduced and expanded renditions. Although there were some problematic reductions, for the most part, reduced renditions were not judged to alter the core message. It is important for interpreters to be mindful, however, of the reduction of affective elements and we agree with Hale's (2007) and Tebble's (1999) assertions that the style of talk is important. Many different features of the talk were expanded, principally to make implied information explicit, to add cohesion, or to clarify the message by encoding visual information. Expansions were generally judged to be successful renditions that ensured message equivalence, and promoted accuracy. In the light of these research findings, therefore, we claim that accuracy is achieved not only through close renditions. Often, alternative strategies such as expanded renditions are required, and these judgments are made by interpreters based on interactional context.

Wadensjö's (1998) typology of renditions provides a basis for better understanding the context-bound process of decision-making in interpreting, and our examples have illustrated the application of this typology to signed language interpreting. Students could also usefully apply this analytical technique to the examination of their own interpreting practice, through participation in role-plays and retrospective analysis (Metzger, 2000). Furthermore, the provision of comparative samples from studies such as ours will offer students the opportunity to compare their own renditions with those produced by accredited interpreters.

Although our findings are specific to Auslan/English interpreting (specifically English into Auslan), we have identified some interesting patterns that could be followed up in future studies. Further research is needed to explore notions of context-bound accuracy in more depth, and we would like to reiterate Shlesinger's (2009) call for more replication of existing interpreting studies. This study is the first to apply Wadensjo's (1998) taxonomy to the analysis of signed language interpreting, and we would like to see greater comparison—across spoken and signed language interpreting in different settings—of what "accuracy" really means in context.

6. Acknowledgments

Data for this study was originally collected in 2010 as part of a doctoral study (Major, 2012), although the current study adopts a different analytical approach. The researchers would like to thank Dr Linda Mann, Katrina Lancaster, and all the interpreter participants.

Transcription conventions

| NOT-ENOUGH | Represents one sign in Auslan |
|----------------------------|--|
| M-I-N-E-R-A-L | Fingerspelled word |
| EAT+ | Sign is repeated once |
| ((smiles and shakes head)) | Description of non-linguistic features |
| ((nods head)) YOU | Non-linguistic feature that carries on over talk |
| you: | Word/sign is held |
| (.) | One second pause or less |
| (HAVE) | Transcriber's best guess at an unclear utterance |

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Due to the word limit of this paper we are not able to provide more detailed definitions, so readers are encouraged to refer to the original Napier (2004) paper for more detail on the omission types.