



Real Space blends in Swedish Sign Language as an indicator of discourse complexity in relation to interpreting

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Abbreviations

AIC	International Association of Conference Interpreters
ASL	American Sign Language
CIT	Conference of Interpreter Trainers
EKR	Elisabeth Kübler Ross
ELAN	EUDICO Linguistic Annotator
NSL	Norwegian Sign Language
RID	Registry of Interpreters for the Deaf
RSB	Real Space blend

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Introduction

The present study builds directly on knowledge gained while working with three previous studies on the same signed discourse: Nilsson 2004, 2007 & 2008. In this study, an initial analysis is also made of additional material comprising eight interpretations of that signed discourse into spoken Swedish.

Before any of the studies were undertaken, the signed discourse was used as part of an admittance test for a diploma program for Swedish Sign Language interpreters at Stockholm University. Grading that test, I had noted that certain passages in the signed discourse seemed to pose greater problems for the interpreters than other passages. In addition, there was variation in the degree of difficulty such passages presented to different interpreters. Thus I became interested in identifying factors that make a piece of discourse more complex and therefore make it harder to understand and more difficult to interpret. Identifying such factors could both increase our knowledge of discourse structure in Swedish Sign Language in general and help determine what makes a piece of signed discourse easy or difficult to understand. Such knowledge could also benefit the training of interpreting students and improve the quality of interpretation between Swedish Sign Language and spoken Swedish.

The study consists of two main parts. First, an analysis is performed on three segments of signed discourse, describing them in terms of their Real Space blend (RSB) structure. The aim of this analysis is to provide increased knowledge regarding the creation of RSBs in Swedish Sign Language. Secondly, an initial analysis of eight interpretations of these segments into spoken Swedish is conducted, specifically focusing on whether the interpreters managed to identify preselected content units in the discourse correctly in their spoken renditions of it. It was hypothesized that the more Real Space blends a piece of signed discourse contained, the more problems there would be for interpreters to produce an equivalent target language discourse in terms of content units.

Theoretical background

The present study is grounded in Cognitive Linguistics, in particular *Mental Space Theory* (Fauconnier, 1985) and *Conceptual Blending Theory* (Fauconnier & Turner, 1998). More specifically, the study applies a comprehensive, descriptive model for the use of space in signed language developed by Liddell for American Sign Language (ASL).¹ The model was developed over several years and resulted in an expansion of Mental Space Theory. This can be followed in a number of publications, e.g. Liddell 1990, 1994, 1995, 1998, 2000, and 2003. Central to Liddell's model is the fact that signers "frequently conceive of areas of the space around them, or even themselves, as if they were something else" (2003:141). The concepts of *Real Space* and *Real Space blending*, which Liddell uses to describe how signers do this, are described briefly below.

According to Mental Space Theory, all entities that we speak about are conceptual entities that exist within conceptual structures called *mental spaces*. Mental spaces are "small conceptual packets constructed as we think and talk, for purposes of local understanding and action" (Fauconnier & Turner, [1998] 2006:307). They can be veridical, i.e. be an accurate model of (some part of) reality, but they can also be hypothetical, fictional, counterfactual, or represent the desires or hopes of a speaker (Taylor, 2002:590). Linguistic structures prompt the construction of mental spaces in the listener as well, and in order for us to understand each other, the mental spaces constructed by speaker and listener need to correspond.

Conceptual Blending Theory, or the *Theory of Conceptual Integration*, has its roots in Mental Space Theory and deals with a special type of relation between mental spaces called *blending*. Blending is a general cognitive process, and it operates on two (or more) input spaces to yield a new mental space – *the blended space*, or *the blend*. When blending occurs, structure from the input spaces is projected onto the new blended space. This blended space (or blend) does not inherit all of the entities and relations of the input spaces. A blend can also contain emergent structure which was not present in the inputs. A more detailed account of the theory can be found in e.g. Fauconnier & Turner (1998), Liddell (2003) and Selvik (2006).

¹ The same theoretical framework is used in Nilsson (2008), and described in some more detail there.

Real Space blending

According to Liddell, a person's mental representation of the immediate surroundings constitutes a special type of mental space: Real Space.² Liddell defines Real Space as "a person's current conceptualization of the immediate environment based on sensory input" (2003:82, referring to 1995). In order to produce or understand a stretch of signed discourse, signers and addressees must know that signs that seem to be pointing to an empty area in space are actually directed towards invisible blended entities in Real Space.

Real Space, as defined by Liddell (2003), is thus a mental space that differs from other mental spaces in that it is *grounded*, i.e. "its elements are conceptualized as existing in the immediate environment" (2003:82). As mentioned in e.g. Liddell (2003), Selvik (2006), and Nilsson (2008), Real Space blending is a cognitive process that is particularly valuable for describing signed languages, but it is not exclusively a signed language phenomenon. An example of how Real Space blending can be used to describe spoken English is found in MacGregor (2004).

Real Space blending has proven to be a very useful concept for describing the use of space in signed languages (cf. Nilsson, 2008). In an early article in which the concept is referred to as *blended mental spaces*, Liddell & Metzger (1998) investigate meaningful gestures in a narrative ASL discourse. In a later work, Liddell & Vogt-Svendsen (2007) describe how Real Space blends are created in a dialogue in Norwegian Sign Language. Their study focuses on the limited input provided by the signer, and how the interlocutor, despite this limitation, manages to conceptualize space in a way that makes it possible for the two of them to understand each other.

Token blend is the term Liddell (2003) uses for the type of Real Space blend that signers frequently construct using empty locations in the signing space ahead of them. The signer and the addressee both make associations between the conceptual content the signer refers to with particular sign(s) and an area in signing space, and this prompts the construction of a blended entity (a token) in that area. The signer can then direct signs toward that token to refer to that particular conceptual content. To indicate the nature of these entities, blended entities have come to be transcribed using vertical brackets.³

Liddell also describes a category of signs that he refers to as *buoys*, which constitute a special kind of visible blended entity. These are signs produced with the signer's weak hand, and the weak hand is "held in a stationary configuration as the strong hand continues producing signs" (Liddell, 2003:223). These signs "maintain a physical presence that helps guide the discourse as it

² I am adopting the convention used by Selvik (2006), where capital 'R' and 'S' are used as a reminder that Real Space does not refer to physical reality. The same convention is used in Liddell (1995), but not in Liddell (2003).

³ A transcription key for the present study can be found in Appendix 1.

proceeds” (2003:223). Liddell describes several kinds of list buoys and fragment buoys, as well as the THEME-buoy, all of which blend with conceptual entities in the discourse and become visible instances of those entities. He also describes the POINTER-buoy, in which the hand “does not acquire any new significance by blending. Instead, it *points toward* an important element in the discourse” (Liddell, 2003:250). The use of buoys in Swedish Sign Language has also been described in Liddell, Vogt-Svendsen & Bergman, 2007; Nilsson, 2007 and Nilsson, 2008. In the present study, the use of one type of buoy is discussed: the POINTER-buoy.

Another kind of activity produced by the signer’s non-dominant hand is described in Nilsson, 2007, viz. *sign fragments*. The term sign fragment is used here as described in Nilsson (2007), which differs from the *fragment buoys* of Liddell (2003). As opposed to buoys, sign fragments do not have a fixed form, but their form is the result of the non-dominant hand remaining in place from a previously produced two-handed sign. Sign fragments blend with the conceptual entity they refer to, and according to Nilsson, their function in Swedish Sign Language is apparently “[to tell] us who/what the topic of the discourse is” (2007:183).

Surrogate blends and partitionable zones

The signer’s hand(s) and (parts of) the body can also be part of a Real Space blend (Liddell, 2003:151-157). This way of using the signer’s body for reference in signed languages has been described as e.g. *role play*, *role shift* and *body shift*. According to Liddell, what happens is that the signer becomes a visible blended entity, and a *surrogate blend* is created.

In addition to the visible surrogate that (part of) the signer’s body constitutes, a surrogate blend can also contain invisible surrogates. These can be blended with empty physical locations in signing space, and signs produced in other parts of the discourse provide evidence for their existence (Liddell, 2003:152). Since surrogates in a surrogate blend are also blended entities, they are indicated with vertical brackets.

Surrogate blends are frequently used for representing *constructed dialogue* (Tannen, 1986) and *constructed action* (Winston, 1991; Metzger, 1995). A similar kind of construction in Danish Sign Language has been described using the terms *reported speech*, *represented action* and *represented thought* (Engberg-Pedersen, 1993:113–116). In Nilsson (2008) it is suggested that in Swedish Sign Language surrogate blends are used for *constructed dialogue* and *constructed action* and that there is also a parallel strategy that could be termed *constructed thought*. The present study, however, recognizes problems in distinguishing between constructed thought and the act of a signer rendering what somebody was saying/signing out loud to him-/herself, which will be discussed later.

In surrogate blends the signer becomes a visible blended entity, which is typically that of a visible human [actor]. Dudis (2004) examines what he describes as the *partitionable zones* of the body available to ASL signers. These zones can be *partitioned off* from the Real Space body and enable the signer to increase the information accessible from surrogate blends by creating a *multiple Real Space blend*. In the discourse analyzed for the present study, the signer frequently partitions off the hands (and forearms) to produce lexical signs that tell the addressee more about precisely what it is the surrogate in a particular surrogate blend is doing.⁴

Creating and understanding Real Space blends

Summing up their study of Real Space blends in Norwegian Sign Language (NSL), Liddell & Vogt-Svendsen state that

“Thus, contrary to the widely accepted (prescriptive) view that signers must identify every spatial element prior to making use of it, we find that this signer provides explicit identification of only some of the elements of her real space blends. The conceptual task of creating the remainder of each real space blends [*sic!*] falls on the addressee.” (2007:193)

In this study of NSL, Liddell & Vogt-Svendsen identify four sources of information that allow the addressee to create a Real Space blend, RSB_1 , that corresponds to the one created by the signer.⁵ The four types of information are “shared knowledge of the world, shared knowledge of the current discourse, shared knowledge of NSL grammar, and the directional signs produced by the signer” (2007:182). This shared information is crucial if the addressee is to understand the true nature of the Real Space blends created by the signer, thus making it possible for them to understand each other.

To describe one kind of knowledge an addressee needs to access in order to identify a discourse entity, the concept of *frame* (Fillmore, [1982] 2006) has been used. As Fillmore defines it, a frame is a system of concepts

“...related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made available.” (2006: 373)

In this study, the frame concept is used to help explain that knowing that the context of an event is a hospital evokes a *hospital frame*, which makes it

⁴ Liddell & Metzger (1998) also discuss this phenomenon, but without using the term partitionable zones, describing different types of constructed actions and their significance.

⁵ Liddell & Vogt-Svendsen use the abbreviation RSB but choose to write it in full without capitals: “real space blend” (2007:181).

easier to identify an unspecified person as e.g. a nurse, a doctor or a patient in some of the Real Space blends described.

Interpreting studies

A comprehensive introduction to the relatively young field of research known as interpreting studies can be found in an anthology by Pöchhacker & Shlesinger (2002), which presents a broad spectrum of previously published research. In their discussion of the process they used to select the papers for the volume, the editors describe the development of the field by stating that “[f]ifty-odd years have elapsed since the earliest attempts at a systematic description of interpreting” (Pöchhacker & Shlesinger, 2002:10).

Studies in which signed language interpreting is the specific area of research are an even more recent phenomenon.⁶ Early studies were more or less confined to those involved in signed language interpreting and in the training of signed language interpreters. Most of these studies were published in the US and often in proceedings from meetings of organizations such as the Registry of Interpreters for the Deaf (RID) and the Conference of Interpreter Trainers (CIT).⁷ Most were conducted by practicing interpreters and interpreter trainers themselves at a time when there were few academic training programs in this area. Many such studies therefore had little or no impact outside of the sphere of signed language interpreting. A change may be under way though, and the work of Roy (1989, 1993) is one such exception. Roy is the author of one of the two papers on signed language interpreting that are included in Pöchhacker & Shlesinger. In her work, she presents and develops the view of the interpreter’s role as an active participant in the interpreted event (Roy, [1993] 2002:345–353). The other paper on signed language interpreting in Pöchhacker & Shlesinger is written by Tate & Turner (1997). They describe the situation in England, Wales, and Northern Ireland, where interpreting practice is regulated by the Council for the Advancement of Communication with Deaf People (CACDP), which publishes a Code of Ethics to which British Sign Language interpreters are professionally bound to adhere.⁸ Tate & Turner discuss how interpreters perceive the Code and conclude that “the dominant, mechanistic Code-model does not

⁶ In line with e.g. Janzen (2005) *signed language interpreting* is used here, not *sign language interpreting*. Quotes from other publications may not follow this convention.

⁷ RID is a national membership organization in the US, representing the professionals who facilitate communication between people who are deaf or hard of hearing and people who can hear. CIT is an organization whose membership consists primarily of teachers of ASL/English Interpreting and teachers of ASL. However, as many countries in the world have no corresponding organization, CIT is beginning to serve an international community of signed language interpreter educators as well.

⁸ As of January 5, 2010, the organization became Signature: <http://www.signature.org.uk/> accessed February 11, 2010.

accord fully with interpreters' own views on their professional practices" (Tate & Turner, [1997] 2002:381).⁹

Though there now seems to be a potential for more of a shared perspective on interpreting, regardless of language modality, there is still a need to bring together research in the field of signed language interpreting, to reflect the ongoing process of professionalization. Recent anthologies of that kind are e.g. Marschark, Peterson & Winston (2005) and Janzen (2005). In his introduction, Janzen notes the presence of two perspectives: "two generalized ways of thinking about the interpreter's work – as 'interpreting' (the activity the interpreter undertakes) and 'interpretation' (the result of the activity)" (2005:21). As we will see, several of the early publications on signed language interpreting tended towards a *third* perspective focusing on the interpreter as a person and desirable personality traits in interpreters.¹⁰ The field could thus be described as having three main perspectives, where focus is on the *process* (the activity), the *product* (the result of the activity), or the *producer* (the interpreter).

Starting with the latter, there are a number of studies that mainly focus on the *producer*, i.e. on the interpreter, and the various types of knowledge, skills, and personality traits that are desirable in an interpreter. In an early text book on interpreting, published by the Registry of Interpreters for the Deaf, Frishberg states that:

"Interpreting involves competence in at least two languages, an understanding of the dynamics of human interaction in two quite different modalities (for the signing interpreter), an appreciation of social and cultural differences, the ability to concentrate and maintain one's attention, a good deal of tact, judgment, stamina, and above all a sense of humor." (1986:3)

Some more examples of studies of the producer as a person, i.e. the interpreter, and how she should behave are: Atwood & Gray, 1986; Baker-Shenk, 1986; Jones, 1986; Liu Cavell & Wells, 1986; Miller & Mathews, 1986; Strong & Fritsch Rudser, 1986.¹¹ Napier, referring to other studies, produces a list of twenty three "desired components of an interpreter's repertoire" (2002:x).

Moving on to the *process* of both translation and interpretation, according to Cokely "[t]he study of the process has yielded no less than sixteen types of models that attempt to describe the translation process" (1992:11). These sixteen types of models are all models of written translation and/or spoken

⁹ Models for the work of interpreters are further discussed below.

¹⁰ This perspective can also be seen e.g. in the theme for a symposium held in Lessius Hogeschool in Belgium in May 2009: "Aptitude for Interpreting. Towards Reliable Admission Testing" <http://www.lessius.eu/tt/nieuws/aptitude/aptitude.aspx> accessed February 6, 2010.

¹¹ The pronoun *she* will often be used generically in referring to signed language interpreters here, both because it is a fact that most signed language interpreters are female, and because all of the interpreters in the present study were female.

language interpretation, with references ranging in time from 1927 to 1981. Some early attempts at describing the interpreting process as such, from the perspective of signed language interpreting, can be found e.g. in Ingram (1988), Roy (1989), Cokely (1992), Isham & Lane (1993, 1994), and Isham (1994).

The role of signed language interpreters has been described in terms of different *models*. Several of these models tend to include a mixture of both the mental (or cognitive) processes involved, and of ideas regarding how the interpreter should behave and the possible effects of that. Some influential models have been e.g. the *conduit model* (Neumann Solow, 1981), the *helper model* (Frishberg, 1986), the *sociolinguistically sensitive model* (Cokely, 1992), the *bilingual-bicultural model* (McIntire & Sanderson, 1993). Some more recent models are the *interactive model* of interpreting, described by e.g. Roy (1989) and Metzger (1999), and a move towards a *cognitive model of interpreting* presented by Wilcox & Shaffer (2005).

This inclusion of descriptions of what the interpreter should do is reflected in many of the studies on signed language, which describe different types of communication, and different interpreting methods, sometimes also attempting to measure the effect of the service provided. Brener (1990) e.g. studied meetings between deaf persons and an optometrist, to see whether having an interpreter present improved the communication or not. Livingston, Singer & Abrahamson (1994) compared what deaf students understood best; interpreting into ASL or transliteration, i.e. the use of signs from ASL in a way that is more based on English syntax. In a more recent study, van Herreweghe shows that though we generally assume that “by means of the sign language interpreter, equal participation of both parties becomes possible” (2002:73), this is actually not true.

Finally, we have the perspective where focus is on the *product*. Several such studies, discussing and describing different types of equivalence in written translation, are listed by Cokely (1992:13-15). According to him, there had been only two “attempts to analyze the content and quality of interpreted messages” at the time (1992:6). By this, he is referring to two studies that are both on spoken language interpretation, rather than on signed language interpretation: Gerver (1969) and Barik (1973).

In the field of signed language interpreting, the *product* of the interpreting process has also been described in some studies. A majority of these studies analyze interpreting (and also translation) from spoken (or written) language into signed language. Several such studies focus on how natural-looking the signed target language is and the difference in strategies and language use between non-native and native interpreters.¹² Santiago & Barrick describe

¹² There is a tendency to consider only deaf interpreters as native interpreters in many of these studies, despite there being hearing interpreters who have grown up in signing families and are thus native signers.

how English idioms are treated by hearing and deaf interpreters and find that “the latter produced more figurative target texts” (2007:27). According to them, this is consistent with:

“Ressler’s (1999) idea that Deaf interpreters are able to produce more natural-looking ASL interpretations, as well as Tray’s (2005) hypothesis that native signers and native English speakers use different strategies when translating a figurative English source text.” (Santiago & Barrick, 2007:27).

Cokely (1992) presents a *sociolinguistically sensitive process model* of sign language interpreting (1992:124), and one of the issues discussed is the importance of appropriate levels of competence in both languages. As his data, Cokely used videotaped ASL interpretations of ten presentations from the CIT convention in 1983. He categorizes the six (hearing) interpreters in his study, not according to their language skills, but as one group having Deaf parents (DP) and the other having Hearing parents (HP).

Napier (2002) describes the use of *translation style* and the use of *omissions* in terms of *linguistic coping strategies*. She analyzes interpretations of a university lecture, from spoken English to Australian Sign Language (Auslan). Though she notes whether the interpreters in her study are native or non-native signers, the focus of her study is more on the interpreters’ educational background, and their familiarity with the subject interpreted, than on their linguistic background.

Cokely (1992) and Napier (2002) both discuss possible reasons for parts of the source message not being present in the target language discourse. The material studied in both cases consists of interpreting from spoken English into a signed language. Cokely identifies seven key stages in the interpreting process and the factors a sociolinguistically sensitive process model must take into account, in order to distinguish between different kinds of *miscues* and their causes. According to Cokely, miscues are “deviations from the original text” and can be further divided into *omissions*, *additions*, *substitutions*, *intrusions*, and *anomalies* (1992:73–75). Napier (2002), on the other hand, looks at omissions as not necessarily being wrong or a mistake, but as part of a strategy that a skilled interpreter can use to benefit communication. In a theoretical study applying Gile’s (1995) Effort Model of simultaneous interpretation to signed language interpreting, Leeson demonstrates that “interpreters make decisions at every step of the interpreting process” (2005:66). In line with Napier (2002), Leeson regards omission as a strategy an interpreter can use. Leeson, however, broadens the strategy, looking at how the interpreter “chooses to omit or add information to the target language message strategically in order to maximize the completeness of the target language message” (2005:66).

The present study also looks at the interpreted product and compares it to the source discourse. However, the product analyzed here is an interpretation

from a signed language into a spoken language. Cognitive Linguistics is used as a framework to analyze how complex a piece of signed source discourse is as regards Real Space blending. The interpreters' renditions are then analyzed to see if this measure of discourse complexity could be used as an indicator of whether a particular piece of signed discourse will cause more problems for interpreters when they interpret it simultaneously into spoken language.

Interpreters and their linguistic background

The interpreters whose interpretations have been analyzed in this study were initially regarded as a single group consisting of eight individuals. However, as we saw in the section on interpreting studies, there has been much discussion of the influence that linguistic background has on signed language interpreters. I therefore decided to make it possible to take that parameter into consideration as well. Of the eight interpreters whose spoken interpretations were analyzed, four describe themselves as having grown up using mainly Swedish Sign Language to communicate at home, and this group will be referred to as the *L1-interpreters*. The other four will be referred to as the *L2-interpreters*. No further information regarding their actual linguistic competence in the two languages has been sought, though. Since the interpreters were already represented with one letter each in the transcriptions and other material, L1 or L2 was prefixed to that letter, resulting in combinations such as: *L2a* to show that interpreter a is an L2-interpreter, and *L1c* to show that interpreter c is an L1-interpreter.

A classification system is used by the International Association of Conference Interpreters (AIIC), among others, in which the working languages of conference interpreters are described as an interpreter's *A*, *B* or *C language*.¹³ In brief, an interpreter's *A* language is his/her native language (or another language strictly equivalent to a native language), which the interpreter works *into* from all his/her other languages in both simultaneous and consecutive mode. The label *B* language is used for a language other than the interpreter's native language, of which s/he has perfect command and works *into* from one or more of his/her other languages (not necessarily in both simultaneous and consecutive mode). Finally, a *C* language is a language of which the interpreter has a complete understanding and is one *from* which s/he works.

This classification system is rarely used with respect to signed language interpreters despite the fact that they often work in conference settings, sometimes even at the same time as interpreters who are members of AIIC. As signed language interpreters have traditionally not been members of

¹³ www.aiic.net/ViewPage.cfm/page199.htm#guide, accessed 26 November 2009.

AIIC, they may not even have heard of the AIIC classification system and therefore do not use it.¹⁴

Another reason the AIIC classification system may have not been used is that signed language interpreters are more like community interpreters in the sense that they usually work in both directions, i.e. they interpret both *into* and *from* the signed language that counts as one of their working languages. In addition to working at conferences, and in the kind of settings where community interpreters work, many signed language interpreters work in educational settings. According to Russel & Janzen (2004), reported in Janzen (2005:17), a total of 68% of respondents to a Canadian survey of ASL-English interpreters reported either full-time or part-time employment in educational settings from kindergarten to the university level. No such figures are available for Sweden, but it is likely that the numbers are lower due, e.g., to differences in educational policies

One more possible reason for the classification system not being used is that the linguistic background of signed language interpreters has changed drastically during the past twenty years. Earlier, the background of signed language interpreters was almost solely that of growing up using sign language, and there was no great need to discuss the matter. A majority of the signed language interpreters in Sweden today, however, have not grown up using sign language. The current use of terminology like *L1-interpreters* and *L2-interpreters* reflects the need for terminology indicative of this change.

¹⁴ To become a member, you have to be sponsored by active AIIC members who work with the same languages. See <http://www.aiic.net/ViewPage.cfm/article118.htm> (accessed 14 February 2010) for details on this.

The study

The incentive for this explorative study was, among other things, a wish to describe why some parts of a signed Swedish Sign Language discourse seemed to create more problems when signed language interpreters produced simultaneous renditions of them into spoken Swedish than other parts of that discourse did. In Nilsson (2008), where use of signing space in the same signed discourse is described in detail, an analysis of the blended entities that occur during one particular sequence of the discourse is presented (cf. Nilsson, 2008:38). In the present study, an attempt is made to analyze the structure of selected segments of this Swedish Sign Language discourse in terms of Real Space blends and to make this structure more easily observable through the use of Real Space blend tables. Interpretations of these segments into spoken Swedish, produced by eight interpreters, are also analyzed, to compare the degree of complexity of the signed source segments with how well the interpreters manage to render them into spoken Swedish.

One assumption underlying this RSB analysis is that a segment of a signed discourse that contains relatively few Real Space blends thereby has a relatively simple structure. A segment with many RSBs, on the other hand, and particularly if these in turn contain many blended entities, is more complex. This degree of complexity will then in turn be reflected in the structure and visual impression of the Real Space blend tables, which thus will also show whether the segment represented in it has a complex Real Space blend structure or not. Furthermore, the RSB tables will help provide a quick overview of e.g. the number and type of blended entities used in a specific segment of the discourse.

In addition to the video recorded signed discourse, the material also consists of video recordings where eight signed language interpreters produce simultaneous interpretations of the signed discourse into spoken Swedish. Listening to these recordings revealed a significant difference in how well the interpreters managed to render the source language in different parts of the source discourse. Therefore, a preliminary analysis of parts of the interpretations was also included in the study. A tentative comparison was then made between the structure of a particular discourse segment, as regards Real Space blending, and the degree of difficulty it seems to pose for the interpreters. What the interpreters render and do not render is discussed and accounted for with the aid of tables in which the presence or absence of selected content units is presented for each interpreter.

Aims and hypothesis

One of the aims of the study was to identify factors that were deemed to make a piece of discourse more complex and thus harder to understand. The factors discussed are: which perspective the signer uses, as well as switching between such perspectives; the identity, type and location of blended entities; the number of blended entities; whether the entities are explicitly introduced and re-introduced or not; and which expressions (if any) are used in relation to them. Real Space blend tables are introduced in the study, in an attempt to make these factors more easily perceptible. The fact that the same entity can be talked about using blended entities such as tokens, visible surrogates, and invisible surrogates, or as not being part of a blend at all, is also discussed as something that might make a piece of signed discourse easier or harder to understand.

Another aim of the study was to see whether there is a relationship between how complex a piece of discourse is in terms of Real Space blends, and how many problems it seems to pose to the interpreters whose work is analyzed here. In the study, the source discourse and the target discourse are compared to see whether they include the same *content units*. A hypothesis for the study could thus be that the more Real Space blends a piece of signed discourse contains, the more problems there will be for interpreters to produce an equivalent target language discourse in terms of content units.

In order to test the hypothesis, an explorative analysis was made of the interpretations of each of the segments described. Key discourse entities were first identified and listed. These entities mainly consisted of animate entities that are part of the Real Space blends, but some other entities were also chosen due to their importance in the discourse. This first attempt at analyzing and describing the spoken Swedish produced by the interpreters was unsatisfactory, however. An interpreted rendition of the source discourse that did not give an impression of being successful could still have a fairly high number of discourse entities marked as correctly rendered. Thus, the result of that first analysis, which looked only at whether key discourse entities were present in the interpreted rendition, did not match the overall impression of that rendition.

Correctly identifying the discourse entities is only one requirement of rendering a segment correctly into spoken Swedish; another is that the right person must be attributed to saying/doing the right thing to the right person. This question – *Who does what to whom?* – was one of the key issues behind this study. My specific interest was in why something so central to a given message could so often be rendered incorrectly in interpretations. In an attempt to find a better way of analyzing the interpretations and whether they were equivalent to the source discourse, small summarizing descriptions of the discourse content were added, to capture other aspects of the renditions as well. Examples of such short descriptions are: *EKR studied to be a doctor,*

EKR started to study psychology instead and What happens after death. These short descriptions were added to the interpretation tables, and they were labeled – rather simplistically – as *relations* between the entities.

In order for a rendition of the source discourse to be regarded as equivalent, in the sense used for this study, the absolute minimum of information it must correctly convey are thus these two kinds of content units: discourse entities and relations. If a relation is to be regarded as correctly rendered in the analysis, the involved discourse entities must also be correctly identified. The interpretation tables reflect all of the information a listener receives from the interpreter, including information given if the interpreter decided to rewind and add something. This is still a very basic analysis, however, which does not take into consideration factors like voice modulation, appropriate choice of synonymous expressions, stylistic level, etc.

Materials and methods

The Swedish Sign Language discourse used for this study consists of a nearly ten-minute long monologue, in which the signer retells the contents of an autobiography she has read.¹⁵ The signer is retelling the content freely, without any written notes. During the recording session, a native signer who had not read the book was sitting next to the camera as the addressee of the monologue.

The signed discourse was used as part of an admittance test for a diploma program for Swedish Sign Language interpreters at Stockholm University. The program was open for professional interpreters who already had an acceptable level of interpreting competence. The level of their skills was tested during a session containing four mock interpreting assignments, each of which had a duration of approximately ten minutes. The four discourses used were all monologues, and the discourse analyzed here was used as source language for one of the assignments, in which the interpreters' skills in working from Swedish Sign Language into spoken Swedish were tested.

The interpreters were first allowed to see the beginning of the discourse as a means of getting to know the signer and her way of signing. The discourse was then presented from the beginning again, and the instructions given to the interpreters were to interpret it simultaneously into spoken Swedish. Some key concepts had been presented to them in writing before, e.g. the long and unusual name of the main character: Elisabeth Kübler Ross (EKR).

The interpreters could stop the videotape and repeat portions of it if they wanted to, either handling the remote control themselves or asking for assistance. They knew that the results of these mock interpreting assignments

¹⁵ The title of the book is *Livets hjul: En självbiografi i dödens närhet* (the title of the English original is *Wheel of life*), written by Elisabeth Kübler Ross.

would determine whether they were accepted into the program or not, something which may of course have affected whether they chose to stop the tape or not. Stopping the tape and rewinding it may be an indication of whether an interpreter thinks she has rendered the content of the discourse accurately or not. However, given the circumstances in which interpreters were observed for this study, they may have thought that stopping the tape several times would call into question their skills as interpreters and thus avoided doing so.

These mock interpreting assignments were captured on video for later analysis and class discussions. The video camera was directed at the television monitor so that the resulting recordings consist of the interpreters' spoken renditions into Swedish as well as a recording of what the interpreter was seeing. Thus, it is possible to see if the interpreters stop the video tape, if they rewind it or not, if they are lagging far behind, etc.

There were of course other senses in which the recording situation was unnatural beyond that they consisted of mock interpreting assignments for test purposes. A television monitor only gives a two-dimensional rendition of a three-dimensional language. In addition, if an interpreter decided to stop and rewind, she only saw exactly the same signed sequence again. In a natural situation, the signer most likely would have rephrased what she had said and possibly slowed down her signing a bit. The fact that this was an admittance test also potentially makes it a very stressful situation, and some of the participants are possibly affected by this more than others.

The eight interpretations that are analyzed are those produced by the eight interpreters who were offered and accepted a place in the program. When I decided to do a study on signed language interpreting, it was natural that I turn to the students I was currently teaching and ask permission to use the recordings from their admission tests. Since I personally knew all of them, the interpreters were randomly labeled *interpreter a*, *interpreter b*, etc. when the interpretations were first transcribed. This was done before any of the studies of the source discourse were made. The reason was not only to preserve the integrity of the interpreters but also to avoid any preconceptions about them on my part affecting the analysis. After several years of working with only the signed discourse, I had no recollection of who e.g. interpreter a was when I returned to the transcribed interpretations.

The sign language discourse has been transcribed using ELAN (EUDICO Linguistic Annotator), and different aspects of it have been studied in Nilsson (2004, 2007, 2008).¹⁶ The interpretations were also transcribed using ELAN. In order to make the transcription process more manageable, the source text was divided into smaller *chunks*. There are a total of forty chunks

¹⁶ This annotation software can be downloaded at <http://www.lat-mpi.eu/tools/elan/> free of charge.

of varying length. A translation of the whole discourse into English, divided into these chunks, can be found in Appendix 3.

Three segments, each consisting of two or three chunks of the signed discourse, were chosen for analysis. The analysis is described and presented both in the form of tables and in the form of text describing and discussing the content and structure of each segment. In addition, there are also discussions of the problems each segment, or part of a segment, posed for the interpreters. Key content units, both discourse entities and relations between them, have been identified, and an analysis was conducted on whether the interpreters managed to render them correctly or not. This is only a very rudimentary first attempt, which of course does not provide a complete picture of whether the renditions can be considered equivalent to the source discourse or not.

In the Description and analysis section of the study, the material is presented with the aid of tables. In the Real Space blend tables, glosses are used, and how this is done will be described in more detail when the first RSB is presented. The choice of suitable glosses to represent signs is always problematic. In the present study, the largest challenge turned out to be deciding which gloss to use to identify discourse entities in signed sequences where the signer becomes a visible instance in a surrogate blend and represents one of many persons. One of the points made in the analysis is the fact that even though the signer herself is only one person, she will sometimes represent one of many (non-specific) persons. When the English gloss has a specific singular form, it was easy to indicate that the signer is one of many: [doctor in audience]. But, when she is one of the many in the audience, this had to be indicated with additional words in the text, e.g. *one of*, before [many in audience], resulting in: *one of* [many in audience].

The renditions into spoken Swedish were translated into English by me and are presented mainly in the form of tables indicating whether key discourse entities and their relations are rendered or not by each of the interpreters. These tables are described in more detail when the first of them, Table 3, is presented. For the most complex segment, translations of the complete interpretations produced by all eight interpreters are also presented.

Description and analysis

Analyzed segments

Three segments from the discourse were chosen for a detailed analysis regarding their Real Space blend structure. The segments vary in duration between 36 and 40 seconds and were each further divided into two or three chunks during the transcription of the material (cf. Table 1).

Table 1. *Analyzed segments.*

Segment #	Duration	Number of chunks	Number of RSBs	Non-blended sequences
Segment 1	40 sec.	3	3	1
Segment 2	36 sec.	3	8	0
Segment 3	40 sec.	2	15	4

Segments 1 and 3 are the longest, both lasting 40 seconds. As is seen in Table 1, however, there is no direct correlation between the duration of a segment and the number of RSBs it contains. Whereas segment 1 only contains three RSBs and one sequence without blended entities, segment 3 contains a total of fifteen RSBs and four sequences with no blended entities.

Segment 1

Content and structure

The first segment described in this study (chunk 1–3) consists of the first 40 seconds in the signed discourse, during which the signer introduces the topic of her talk and gives some background information about the main character. The following is a translation of segment 1 into English. All translations of the signed discourse were made by me and follow the original quite closely. They are therefore sometimes more of a transliteration than a translation into idiomatic English.¹⁷

¹⁷ It is also worth bearing in mind that they are written versions of a “spoken” (as opposed to written) language.

“Well, I have read a book by, written by, Elisabeth Kübler Ross. She was born in Switzerland, but moved to the US, because she married an American during WWII, well, right after, that’s when she married. She studied to be a doctor, but digressed from that, began to study psychology and became a psychiatrist instead. She is a truly remarkable woman. She is known as “the lady of death”, as she does a lot of research on death.¹⁸ What happens after death, what happens to a person before death, what happens in their minds? Well, maybe it’s a bit difficult to tell what happens after death, but she at least seems to have found out some things.”

Despite being 40 seconds long, this segment is not very complex in terms of Real Space blends. There are only three RSBs, and they contain no more than three different blended entities in all: |EKR|, |USA|, and |dying person|.

When the signer talks about the three blended entities she mainly uses token blends, and a majority of the signs that are meaningfully directed in this segment are directed towards |EKR|. There is, however, also a very brief sequence that contains a surrogate blend. The signs produced in it: INDEX-c STUDY (‘I studied’), can in a sense be regarded as redundant, since they constitute a repetition of something previously mentioned in the same chunk: NON-1ST-SING^{>|EKR|} STUDY (‘she studied’).

In the introductory sequence of segment 1 the signer begins by saying that she has read a book and that the book is written by Elisabeth Kübler Ross (EKR). This is the only time the signer mentions herself and is thus the only time INDEX-c (‘I’) is used to refer to herself.¹⁹ She introduces the main character and author of the book she has read by fingerspelling the full name. In the sixth column of Table 2, *Expressions used about the entities*, the expressions used about the discourse entities in Real Space blends are glossed. The glosses in this column mainly represent noun phrases (including pronouns). When signs are directionally modified information regarding that is also provided, e.g. NON-1st-SING^{>|EKR|}.²⁰ When two signs that are produced simultaneously are glossed, this is indicated with a + after the first one.

¹⁸ “The lady of death” is my translation into English from Swedish Sign Language; some other epithet may actually be used in English. Present tense is used, as EKR was still alive at the time of the video recording, though she has since passed away.

¹⁹ INDEX-c is, however, used about a number of different discourse entities several times during the discourse. This use is described in detail in both Nilsson 2004 and 2008.

²⁰ A transcription key for the glossing can be found in Appendix 1, and the analyzed segments are glossed and translated in full in Appendix 2.

In Table 2 the Real Space blend structure of segment 1 is illustrated:

Table 2. *RSB table, segment 1, chunk 1–3*

RSB	Perspective	Blended entity	Type of blended entity	Location of blended entity	Expressions used about the entities
---	signer	---	---	---	INDEX-c #ELISABETH #KUBLER #ROSS
1:1 token	signer	EKR	token	left of signer/mid	SELF cl-PERSON ^{> EKR}
		USA	token	in front of signer/high	INDEX ^{>forward/high} USA
		EKR	token	left of signer/mid	NON-1st-SING ^{> EKR} , NON-1st-SING ^{> EKR} SELF, NON-1st-SING ^{> EKR}
1:2 surr.	EKR	EKR	visible surrogate	signer, excl. hands producing INDEX-c STUDY	INDEX-c
1:3 token	signer	EKR	token	left of signer/mid	NON-1st-SING ^{> EKR} , PSYCHOLOGY/DOCTOR NON-1st-SING ^{> EKR} , NON-1st-SING ^{> EKR} , cl-PERSON ^{> EKR} WOMAN, NON-1st-SING ^{> EKR} , NON-1st-SING ^{> EKR} , DEATH/LADY NON-1ST-SING ^{> EKR} , NON-1st-SING ^{> EKR} ,
		dying person	token	left of signer/low	HUMAN-BEING cl-PERSON ^{> dying person}
		EKR	token	left of signer/mid	NON-1st-SING ^{> EKR} , NON-1st-SING ^{> EKR}

In addition to pronouns, other pointing signs, and the noun classifier cl-PERSON, verbs are also frequently meaningfully directed in signing space; however, they have not been listed in the column for expressions used about discourse entities. This is due to the fact that a directionally modified verb will clearly identify the entity it is used about only if the addressee has already correctly identified the entities in the blend. Therefore, verbs may not always help identify the discourse entity in question, even if they are directionally modified.

Returning now to the analysis of the discourse, no signs are meaningfully directed in signing space yet, so no Real Space blend is created during this first sequence. As is seen in the first column of Table 2, *RSB*, no RSB number is assigned for such non-blended sequences.

The second column, *Perspective*, provides information regarding the perspective from which the signer is producing signs. The analyzed discourse is not a narrative discourse; however, the analyses carried out for Nilsson 2004, 2007 and 2008 showed that several discourse strategies previously described as typical of narratives are used in it. To avoid creating erroneous associations with narrative discourse, the label *signer's perspective* has been chosen rather than *narrator's perspective*. This second column indicates that signs are produced from the signer's perspective or provides information regarding the identity of the discourse character whose perspective they are being produced from.

The introduction of the main character is followed by the signs SELF cl-PERSON^{>|EKR|}, and the second of these signs is located to the signer's left, thus associating that area in the signing space with EKR. When the signer makes an association between the conceptual content she refers to with a particular sign(s) and an area in signing space like this, it prompts the construction of a blended entity, a token, in that area and is treated as the construction of a Real Space blend. This means the signer has now created a Real Space blend, which so far contains one blended entity, the token |EKR|, to the left of the signer. In the first column of Table 2, *RSB*, a number is assigned each time the signer creates or uses a Real Space blend. Each RSB is given a unique number, consisting of a combination of, first, the number of the segment in which it occurs, and then a running number for when it occurs in that segment. Thus, RSB1:1 is the number given to the first Real Space blend in segment 1. In addition, for each RSB the first column contains information regarding whether it is a token blend (*token*) or a surrogate blend (*surr.*).

The identity of a blended entity is given in column three, *Blended entity*, and the identity of this first token is |EKR|. In column four, *Type of blended entity*, we find information regarding whether the blended entity is a token or a surrogate. For surrogates there is also information as to whether they are visible surrogates, i.e. consist of (part of) the signer's body, or invisible surrogates, which in the segments analyzed in this study consist of areas in signing space.

More detailed information regarding the location of the blended entity is provided in column five, *Location of blended entity*. The token |EKR| is located to the left of the signer, and at *mid height*, i.e. neither particularly high nor particularly low but approximately at chest height.

The token |EKR| will frequently be used when the signer talks about EKR. Both the pronominal pointing sign NON-1st-SING^{>x} and other signs are directed towards |EKR| during the rest of the segment.

The signer's gaze also plays a vital part in creating Real Space blends. For this study, gaze direction will not be described in great detail but taken into account when it is of particular relevance.²¹

Several tokens can be created as part of the same token blend, and the next discourse character introduced is an inanimate entity, USA, which also becomes part of RSB1:1. The location in signing space used for the blended entity |USA| is already clear from the verb: MOVE-FROM-TO^{>|EKR|-forward/high}, as the verb ends at a location in front of the signer approximately the height of her forehead. It is not until the following signs (INDEX^{>forward/high} USA) are produced, however, that we know the identity of the place to which EKR has moved.

The signer continues to talk about EKR using three instances of NON-1st-SING^{>|EKR|}, one in combination with the sign SELF, and these signs are also listed in the sixth column. When several different expressions are used about an entity, as well as when the same expression is repeated, the glosses in the column are separated with a comma (,).

Up until now, the signer has mainly had her gaze directed at the addressee, but here she breaks that eye contact and rapidly produces two signs from the perspective of a discourse entity: INDEX-c STUDY ('I study'). When the signer herself, or parts of her, becomes a visible blended entity, a surrogate, as she does here, this creates a surrogate blend. As no other animate discourse entity has been introduced, and the signer has said that EKR was studying to become a doctor, INDEX-c now clearly refers to EKR and the signer's body has become a visible surrogate |EKR|. Surrogate blends are also Real Space blends, given running numbers as part of the same system as the token blends, and therefore this new Real Space blend is numbered RSB1:2. When the perspective is that of a discourse character, as it is in surrogate blends, the identity of that blended entity is stated in vertical brackets in column two. In RSB1:2 the perspective is that of |EKR|. As there are no invisible surrogates in this sequence, only |EKR| is listed in column three, and only *visible surrogate* listed in column four.

Studying is an activity that does not actually entail stretching out your hands in front of you, palms facing up, with repeated ulnar contact, as the signer does when she produces the sign STUDY. Therefore, the hands that produce the sign are not part of the surrogate, and the location of the blended entity in column five is described as signer, excl. hands producing INDEX-c STUDY. This is an instance of use of a partitionable zone, where the signer's hands and forearms are partitioned off from the surrogate. They are used to produce the lexical item STUDY, which tells the addressee what the surrogate is doing. As will become evident, the signer's hands and forearms sometimes are, and sometimes are not, part of the surrogate blend. This is why column

²¹ The use of gaze direction in this discourse has also been described to some degree in Nilsen 2004 and 2008.

five contains specific mention of which signs the hands/forearms are producing during a surrogate blend and whether or not these signs are considered part of the surrogate. Only INDEX-c is listed in the sixth column, as it is the sign that is used about the discourse entity.

The signer then returns to signer's perspective and uses several different signs directed towards the token |EKR| to her left to talk about EKR. The return to the use of tokens from signer's perspective makes this a token blend. To avoid highly complex analyses regarding whether the signer actually returns to using a previous token blend or creates a new one, all instances where the signer switches from using one RSB to using another are given a new number, making this RSB1:3. In this blend, the signer begins to talk about another discourse participant, which will occur frequently during the whole discourse, viz. the group of people that EKR interviews and/or works with during her research. Exactly who this group consists of differs during the discourse, though. First the signer talks about how EKR does research on death and on what happens to people after and before death. The first mention of these persons has been glossed *dying person*, but the signer will later also talk about a *dying patient*, *cancer patients*, etc. What several of the different constellations of people referred to in the discourse have in common is that they are people who are dying, and they meet EKR. EKR's research on death is mentioned before this dying person is introduced, and it is this contextual information alone that tells an addressee that the sign HUMAN-BEING here refers to a dying person, and not just any person. The sign HUMAN-BEING is followed by $cl\text{-PERSON}^{>|dying\ person|}$, directionally modified so as to indicate the location of that token to the signer's left. The location of this token is listed as *left of signer/low*, as the impression an addressee gets is that $|dying\ person|$ is located lower than |EKR|. However, the analysis for Nilsson (2008) revealed that this impression is largely based on the signer's use of gaze direction and directionally modified verbs, and not related to a measurable difference regarding the exact location in signing space of the signs produced.

Finally, after she has introduced the dying person, the signer returns to talking about EKR, using two more instances of $NON\text{-}1st\text{-}SING^{>|EKR|}$ as well as one instance of the sign $SEEMS^{>|EKR|}$, which is a verb and therefore has not been glossed in the table. As the token |EKR| remains in the same location as before the dying person was introduced, this has been analyzed as still taking place within RSB1:3. In my analysis, a Real Space blend is regarded as continuing to be the same one as long as the previously created token(s) remain the same, even though they may not be explicitly mentioned again, and as long as the signer's perspective is the same.²² If a referent is qualified, i.e. if

²² Fridman-Mintz & Liddell (1998:262), on the other hand, when describing the same kind of phenomenon as *Grounded Mental Spaces*, consider “[a]ddition or erasure of elements from a previous mental space” to be “[m]otivating factors in the creation of new spaces”.

the signer first talks about e.g. a *dying patient* in general, then talks about a more specific *cancer patient*, this is also regarded as use of the same RSB if nothing else is changed. But if the signer changes subject and uses new tokens, this is considered a new RSB.

In the Real Space blend tables, the chunk structure within a segment is also illustrated; the second chunk of a segment is shaded, and if there is a third chunk, that part of the table is not shaded. Thus, in Table 2, chunk 1 and 3 are not shaded, but chunk 2 is.

Interpretation

Segment 1 is 40 seconds long, but it is not particularly complex in terms of the number of Real Space blends and blended entities, as well as their relations. There are, on the other hand, some complicating factors from an interpreter's point of view. One is the fact that this is the very beginning of the discourse, which means that an interpreter is not yet fully acquainted with this signer's signing style, the topic, etc. The segment also begins with a long, unusual name being fingerspelled. Further complicating the presentation of the author's name, the signer does not add a gesture indicating two dots above the *U* of the manual alphabet, which would have turned it into a *Û*, but uses an ordinary *U*.²³ Finally, when she talks about EKR being interested in research about death, the signer specifies this as research on what happens both before and after death. What happens *after* death is not an obvious part of a research about death frame, and this might therefore be another complicating factor.

The segment begins with one sequence containing no blended entities, and in all there are only three Real Space blends (whereof one is a brief surrogate blend). The main part of the introduction of referents takes place in chunk 1, where the signer introduces the main character (EKR) and the place where she lives (USA), and creates blended entities for them (RSB1:1). In addition, the signer talks about Switzerland and an American, without creating any blended entities. Finally, she introduces one more discourse entity that will recur frequently (dying person). Since the existence of this discourse entity is first made clear with a verb, it is listed as part of a relation.²⁴

There are thus only five discourse entities mentioned during these 40 seconds, and the relations between them are quite easily predictable: the main character is introduced, we are told where she moved to, whom she married and when, her studies and the exam they resulted in, and finally we are introduced to what she is interested in doing research on and with whom

²³ Interestingly, this is something I did not notice until June 2009, i.e. after watching the discourse many, many times. Therefore, my previous studies of the material make no note of this.

²⁴ The concepts *content unit*, *relation*, and *discourse entity* as used in the study are introduced in the Materials and methods section.

she is doing this research. The translation of segment 1 is repeated here, for the sake of convenience:

“Well, I have read a book by, written by, Elisabeth Kübler Ross. She was born in Switzerland, but moved to the US, because she married an American during WWII, well, right after, that’s when she married. She studied to be a doctor, but digressed from that, began to study psychology and became a psychiatrist instead. She is a truly remarkable woman. She is known as “the lady of death”, as she does a lot of research on death. What happens after death, what happens to a person before death, what happens in their minds? Well, maybe it’s a bit difficult to tell what happens after death, but she at least seems to have found out some things.”

In Table 3 key discourse entities in segment 1 and their relations have been listed in the first column with the relations given in italics. On the bottom line in the first column in the interpreting tables, the total number of both kinds of content units is first given in parentheses. Then the numbers for discourse entities and relations, respectively, are also given in parentheses. In Table 3 there are a total of 14 content units; 4 discourse entities and 10 relations. Then there is a single column for each of the interpreters, presented in alphabetical order according to the random letter (a–h) assigned to them. Information as to whether the interpreters mention the discourse entities or not, and whether the relations between entities are correctly rendered is presented with an *x* in the *yes-column* or the *no-column*. Again, an italicized *x* marks the relations, whereas the symbol for discourse entities is a capital, non-italicized X. Finally, the last line for each interpreter gives both the total number of entities and relations rendered and not rendered respectively. Interpreter L2b, e.g., correctly identified 13 of the 14 content units, whereas 1 content unit is not rendered. Below this total figure, the results are also presented separately: first, entities and then relations with a slash (/) between them. The 13 content units that interpreter L2b has rendered correctly comprise of 4 entities and 9 relations (4/9), and the relations are again given in italics.

Table 3 shows that with only one exception, all of the content units are rendered correctly by all of the interpreters. The exception consists in one of the interpreters (L2b) not mentioning that the main character switched to studying psychology, but she still correctly renders that EKR became a psychiatrist.

Table 3. Interpretation segment 1

Discourse entities & relations	L2a		L2b		L1c		L2d		L1e		L1f		L2g		L1h	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
EKR	X		X		X		X		X		X		X		X	
<i>EKR has written the book</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
Switzerland	X		X		X		X		X		X		X		X	
<i>EKR was born in Switzerland</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
The US	X		X		X		X		X		X		X		X	
An American	X		X		X		X		X		X		X		X	
<i>EKR moved to the US after WWII because she married an American</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>EKR studied to be a doctor</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>EKR started to study psychology instead</i>	<i>x</i>			<i>x</i>	<i>x</i> ¹		<i>x</i> ¹		<i>x</i> ¹		<i>x</i>		<i>x</i>		<i>x</i> ¹	
<i>EKR became a psychiatrist</i>	<i>x</i>		<i>x</i>		<i>x</i> ¹		<i>x</i> ¹		<i>x</i> ¹		<i>x</i> ²		<i>x</i> ¹		<i>x</i> ¹	
<i>EKR does research on death</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>EKR does research on dying people</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>What happens before death</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>What happens after death</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
Total (14); entities (4) /relations (10)	14 4/10	0	13 4/9	1 0/1	14 4/10	0	14 4/10	0	14 4/10	0	14 4/10	0	14 4/10	0	14 4/10	0

x^1 = 'psychologist' (*psykolog*), x^2 = (a degree in) 'psychology' (*psykologi*).

In chunk 1, the signer introduces the main character and author of the book by fingerspelling her full name: Elisabeth Kübler Ross, but she actually spells the middle name Kubler. The long and unusual name was however written in full on an information sheet handed over to the interpreters before they started taking the test. Despite this, three of the interpreters do not get the name right but say *Röss*, *Köbbler* and *Köppler* respectively.²⁵ In Table 3 this could have been analyzed as not identifying the referent correctly. It could then consequently have been argued that when later talking about the main character saying “she”, these interpreters are actually talking about the wrong person through the whole discourse. What has been decisive for the present analysis, however, is whether they make it clear that they are talking about the main character, and not whether they managed to get her name right when they interpreted chunk 1.

Rapid RSB switching can be a factor that makes a signed sequence more complex, and was thus believed to make a segment more difficult to understand. In chunk 2 the signer uses both NON-1st-SING^{>[EKR]} and INDEX-c when she talks about EKR, and this rapid switching from use of token space to use of surrogate space in RSB1:2 could possibly have created problems for the interpreters. In Table 4, translations of all of the interpreters’ renditions of chunk 2 are shown:

Table 4. *Interpretation chunk 2*

Interpreter	Interpretation
L2a	<i>She herself studied to be a doctor... but then she... entered the... field of psychology, and studied to be a psychiatrist instead.</i>
L2b	<i>She started to study to be a doctor... and then she became a qualified eh... psychiatrist.</i>
L1c	<i>Eeah... She studied... to... eh... she attended medical school, but she then... eh later she changed to psychologist, and took a degree as a psychologist.</i>
L2d	<i>She studied to be a doctor... but... then she, entered the field of... psychology, and became a qua... qualified psychologist.</i>
L1e	<i>She... stud... was... planned to study to be a doctor, but... got side-tracked and studied to be a psychologist instead. Today she is a registered psychologist.</i>
L1f	<i>She eh studied to be a doctor, but as the time passed she gradually moved into the field of psychology, and took a degree in... psychology.</i>
L2g	<i>She studied to be... a doctor, but she changed to psychology and became... a psychologist, a qualified psychologist.</i>
L1h	<i>And she, eh... wanted to study to be a doctor, but then she changed direction and became a psychologist, a qualified psychologist.</i>

²⁵ These written approximations of the interpreters’ pronunciations of the names all contain the Swedish letter ‘ö’, which is pronounced [ø].

As we can see in Table 4, the brief switch to use of surrogate space in RSB1:2 in chunk 2 causes no noticeable problems for the interpreters. There is, however, not much else that makes this chunk (or even the whole segment) complex, and as mentioned in the analysis of segment 1 above, the signs produced in the surrogate blend (INDEX-c STUDY) can be regarded as redundant since the information has already been given. It would be unidiomatic for the interpreters to say something like “I study”, in the spoken rendition of the signs in RSB1:2, as if EKR was saying that. The correct way to deal with these two signs when interpreting is actually to say nothing. Thus, the interpretations do not really give us any clear indication as to whether the interpreters noticed (and understood) this brief surrogate blend or not.

Chunk 2 contains another specific interpreting problem at lexical level, though. The signer produces a combination of two signs: PSYCHOLOGY/DOCTOR. This sign combination is frequently used with the meaning ‘psychiatrist’ in Swedish Sign Language, but the signs were not accompanied by the Swedish mouth pattern (*psykiatriker*). This means that an interpreter has to identify the professional category that the signer has in mind, and retrieve the Swedish word for it, without the aid of mouth movements. Interestingly only interpreters L2a and L2b use the correct Swedish word for psychiatrist (*psykiatriker*), whereas the other six interpreters all incorrectly used the Swedish word for psychologist (*psykolog*), which would be the correct interpretation for the first sign in the combination (cf. note x^1 in Table 3). Interpreter L1f does not use any word for the profession at all, but says that EKR “took a degree in psychology” (cf. note x^2 in Table 3).

In chunk 3 the signer talks about EKR by using the token |EKR| to her left, which causes no problem for any of the interpreters. She also mentions the dying persons EKR works with. Two of the interpreters (L1f and L1h) do not mention the dying person while interpreting chunk 3, but identify that discourse entity correctly when interpreting chunk 4 in segment 2. The division of the discourse into chunks was made for purely practical reasons, in order to make transcription in ELAN more manageable. Therefore, mentioning a discourse entity a bit “too late” does not constitute a mistake but has been marked as correctly identifying that entity in Table 3.

To sum up, the structure of segment 1 with few RSBs, combined with the easily predictable relations between discourse entities, does not seem to cause any major problems for the interpreters in terms of rendering the content units discourse entity and relation, as used in this analysis.

Segment 2

Content and structure

The next segment consists of chunks 4–6. It thus follows directly on segment 1, and is of almost equal length (36 seconds). As we can see from the translation of this segment, the signer now goes into more details about EKR and her ideas.

“Moreover, she enjoys talking to patients, patients who are going to die soon. She thinks that today’s health care is too focused on life and living. Even though some people may need someone to talk to, some people also need to die. According to her, there are certain rules; she calls it lessons, the lessons of life. And once you have done all your lessons, gone through all of them piece by piece, then somebody above will allow that you die.”

There are a total of eight RSBs in segment 2, compared to the three in segment 1, and the segment also contains more different tokens. The |dying person EKR talks to| becomes a |dying patient|, then the signer talks about only |some of the dying patients|, and finally the more general |dying patient| reappears. In addition to these blended entities, representing various types of people that EKR works with, there are also the tokens |EKR|, and |somebody above|.

As surrogates can be visible or invisible, column four also provides information as to whether surrogate blends are visible surrogates (i.e. consist of (parts of) the signer’s body) or invisible surrogates, when this is called for. In segment 2 there are three surrogate blends, each containing a different visible surrogate, and each with its accompanying invisible surrogate. When the signer produces the first surrogate blend, she becomes a visible instance of the specific individual EKR. In the other two surrogate blends, however, she becomes a visible instance of one person, who in a sense represents a whole group of non-specific persons: |today’s health care| and |person doing lessons|.

The first Real Space blend in the second segment (RSB2:1) contains the same token |EKR| as the one in RSB1:3 (in Table 2). If segment 1 had been longer, this sequence would also belong to segment 1 and be part of RSB1:3. However, since an artificial segment boundary has been inserted here, the sequence is analyzed as being part of segment 2, and thus considered a new token blend, in a new table, with a new RSB-number.

In Table 5 we see the Real Space blend structure of segment 2:

Table 5. *RSB table, segment 2, chunk 4–6*

RSB	Perspective	Blended entity	Type of blended entity	Location of blended entity	Expressions used about the entities
2:1 token	signer	EKR	token	left of signer/mid	NON-1st-SING ^{> EKR}
2:2 surr.	EKR	EKR dying person EKR talks to	visible surrogate + invisible surrogate	signer, excl. hands producing DISCUSS-WITH ^{> dying person} left of signer/low	
2:3 token	signer	dying patient	token	left of signer/low	cl-PERSONx2 PATIENT cl-PERSON-plur DIE PATIENT WILL ON WAY DIE, NON-1st-PLUR ^{> dying patients}
		EKR	token	left of signer/mid	NON-1st-SING ^{> EKR} MEDICAL-SERVICE TODAY
2:4 surr.	today's health care	today's health care dying patient EKR talks to	visible surrogate + invisible surrogate	signer, excl. hands producing FOCUS ^{> dying patients} but incl. hands producing LIVE!x3 ^{> dying patients} left of signer/low	
2:5 token	signer	some of the dying patients	token	left of signer/low	ONE PART
2:6 token	signer	EKR EKR	token token	left of signer left of signer	NON-1st-SING ^{> EKR} ONE #LESSON IN LIFE NON-1st-SING ^{> EKR} #LESSON IN LIFE, ALL #LESSONS, ONE LESSON

2:7 surr.	person doing lessons	person doing lessons lessons of life	visible surrogate + invisible surrogate	signer, incl. hands produc- ing LEAF- THROUGH ^{> lessons of life} left of sign- er/low	
2:8 token	signer	somebody above dying patient	token token	above signer left of sign- er/low	UP ^{>UP} HEAVEN SOMEONE NON-1st-SING ^{> dying patient}

The signer continues to talk about EKR by using an instance of NON-1st-SING^{>x} directed towards |EKR| to her left. At the same time, this mention of EKR serves as information to the addressee regarding whom the signer will blend with in the coming surrogate blend, which is then created through the use of a verb: DISCUSS-WITH^{>|dying person|} in RSB2:2. The signer’s body “becomes” the body of EKR, i.e. the signer becomes the blended entity |EKR|. Again, the hands and forearms are not part of the surrogate but are partitioned off and produce a verb that tells the addressee what the surrogate is doing (talking to a dying person). This means that though this is a surrogate blend, it is not an instance of constructed action. In addition to the visible surrogate |EKR| there is also an invisible surrogate |dying person EKR talks to|, located to the left of the signer. Both the visible and the invisible surrogate are glossed in columns three and four in the table. When a visible surrogate is accompanied by an invisible surrogate, this is indicated with a + before the invisible surrogate in the fourth column.

DISCUSS-WITH^{>|dying person|} is an instance of a kind of verb in which the signer’s gaze and/or hands indicate the direction where an entity being acted upon/with is located. When such verbs are used it can be more or less clear whether the signer really creates a surrogate blend or not.²⁶ For the analysis illustrated in Table 5 the sign has been considered as a sign that creates a surrogate blend.

In order to specify the dying persons that EKR enjoys talking to, the signer returns to signer’s perspective, creating RSB2:3. In this token blend, she directs an instance of NON-1st-SING towards the token |EKR| again. Before creating the next blend, which is a surrogate blend, the signer first produces the signs MEDICAL-SERVICE TODAY (‘today’s health care’), followed by the signs TOO MUCH. The production of these signs tells us the identity of the next visible surrogate but does not in itself create a surrogate blend. The signs are glossed in the sixth column in the RSB2:3 part of the table because

²⁶ This is also treated in Concluding discussion, below.

that is where they occur and are included since they help the addressee identify the surrogates in the following Real Space surrogate blend.

When the signer then produces the verb FOCUS^{>[dying patient]} she is a surrogate representative of today's health care, focusing on the invisible surrogate [dying patient] to her left, and we now have a new surrogate blend (RSB2:4). The signer's hands are not part of the surrogate, though, since they are not illustrating what doctors or nurses do with their hands when they focus on a dying patient. The hands and forearms are partitioned off and produce the lexical item FOCUS, a verb that tells the addressee what the surrogate is doing. Again, we have a surrogate blend which is not constructed action. The sign LIVE, which is repeated three times from the same perspective in RSB2:4, is a different matter, however. Here we see the signer as one representative of the large group of people that today's health care consist of. As the visible surrogate [today's health care] she animatedly tells an invisible surrogate [dying person] that s/he must live: LIVE! LIVE! LIVE! Therefore, the signer's hands and forearms are here considered part of the surrogate, and this is analyzed as an instance of constructed dialogue.

The signer also talks about EKR's idea that there are two kinds of dying patients: some who may need somebody to talk to, and some who need to die. Both groups are introduced with the phrase ONE PART ('some') from signer's perspective. It is only when the second group of dying patients is introduced that a token blend (RSB2:5) is created, however, as the signer's gaze is directed down to her left while she produces that second instance of the two signs. Therefore, the glosses ONE PART only occur once in the sixth column in the table.

Even though the signer then continues to produce signs from signer's perspective, the next sequence has been treated as a new Real Space blend (RSB2:6). This is because the signer now introduces a completely new topic, which is then described in more detail. She introduces an inanimate entity that is a central idea in EKR's world view, *lessons of life*, by using four different expressions. No blended entity is created yet, but these signed expressions are again necessary for the addressee's understanding of the next surrogate blend, and they are therefore listed in the sixth column in the table.

Following this introduction, these lessons of life become an invisible surrogate in the next surrogate blend (RSB2:7). This third surrogate blend in the segment consists of the verb LEAF-THROUGH^{>[lessons of life]}. Here, the signer has become a visible surrogate, and the addressee must deduce from the context that she is a [person doing lessons]. Again, as throughout the study, this is regarded as the signer becoming a visible surrogate that represents one out of a group of people. From the previous context, the addressee can deduce that the objects the surrogate is leafing through are the lessons of life that a person has to go through. Interestingly, these lessons, which do not consist of any concrete matter, are yet described as if they are things that can be leafed through with the hands and leafing through these invisible entities is equal to

doing lessons.²⁷ The sign has been analyzed as an instance of constructed action, where the hands and forearms are part of the surrogate. The use of a surrogate person to show somebody physically leafing through something that actually is non-concrete could possibly be regarded as a kind of metaphorical use.²⁸ This verb is similar to DISCUSS-WITH^{>[dying person]} in that it is directed toward something invisible that is acted on, but here the hands and forearms are considered part of the surrogate and not partitioned off. Liddell describes a category of indicating verb in ASL where “the face and eye gaze should be directed toward the entity to map onto the landmark” (2003:117). No analysis of such verbs has been conducted for Swedish Sign Language to date, and such an analysis is outside the scope of this study.

The signer returns to producing signs from signer’s perspective, and in the final token blend of segment 2 (RSB2:8), one more token is introduced: [somebody above], which is an entity that decides whether a person is allowed to die or not.

Interpretation

Segment 2 is of almost equal length to segment 1, lasting 36 seconds, but has a more varied and complex Real Space blend structure. It contains eight RSBs, of which three are surrogate blends, and there are a total of seven different discourse entities. In the surrogate blends the signer becomes a visible instance of EKR, but also of today’s health care and of a person doing the lessons of life. In addition, there are invisible surrogates, and some of the relations between discourse entities can to some degree be regarded as unexpected.

Another important discourse entity, discussed at some length by the signer, is the concept *lessons of life*, which is particular to the work of EKR. These lessons are mentioned several times in different ways. The signer fingerspells both the singular and the plural form of the Swedish word for ‘lesson’ (*läxa, läxor*), and in addition she uses a lexical sign meaning ‘lesson’. For a person who has never come across the concept before, this use of several different expressions might make it difficult to identify the discourse entity, as well as realizing that all these expressions refer to the same entity.

As this segment contains more referents than segment 1 did, there are more blended entities, both tokens and surrogates, to keep track of. Let us look at the translation of segment 2 again:

“Moreover, she enjoys talking to patients, patients who are going to die soon. She thinks that today’s health care is too focused on life and living. Even

²⁷ Similarly, it has been noted for ASL in a description of interpreted discourse that the interpreter “actually places ‘fear’ to his right and interacts with it, as if this abstract concept were an interlocutor in a conversation” (Winston & Monikowski, 2003:217).

²⁸ Such an analysis, and a discussion of it, lies outside the scope of this study.

though some people may need someone to talk to, some people also need to die. According to her, there are certain rules; she calls it *lessons, the lessons of life*. And once you have done all your lessons, gone through all of them piece by piece, then somebody above will allow that you die.”

In Table 6 the content units in chunk 4–6 are listed, and for each interpreter it is again stated whether they are correctly rendered or not.

The segment starts with chunk 4, where the signer states that EKR enjoys talking to dying patients. This is mainly expressed using a token blend (cf. RSB2:1, Table 5). The verb DISCUSS-WITH^{>|dying person|} has been analyzed as creating a surrogate blend (RSB2:2), and after producing that verb the signer returns to using token space (RSB2:3). As no other discourse entities have been introduced yet, it is not difficult to identify the discourse entities in RSB2:2, and all eight interpreters manage to convey the contents of this fairly simple chunk without any particular problems.

Chunk 5 is more complex, though, as it contains a surrogate blend in which the signer becomes a visible instance of today’s health care, telling an invisible |dying patient| that s/he must live (cf. RSB2:4, Table 5). As we can see in the column with expressions used about discourse entities, the signer reintroduces EKR with a pronoun (NON-1st-SING^{>|EKR|}) and then introduces today’s health care with a noun phrase before RSB2:4 is created. All interpreters except one (L1c) identify this new discourse entity correctly. However, as indicated for RSB2:4 in Table 5, the signer expresses the relation *EKR thinks health care is too focused on patients surviving* in a way that leaves empty the sixth column, which is used for expressions used about the entities. This creates problems for the interpreters, and the first three interpreters in Table 6 (L2a, L2b and L1c) do not render the relation correctly. This is only the beginning of a sequence that causes problems for these interpreters. As chunk 5 continues, two different groups of patients are introduced with the same sign combination (ONE PART; RSB2:5) used for both of them. A blended entity is only created for one of these groups of patients, however. In addition, the discourse content is quite drastic here, as the signer says that one group of patients needs to talk, whereas one group of patients needs to die.²⁹ This sequence creates problems for several interpreters, not only the three interpreters who had problems rendering the previous relation, but an additional two interpreters (L1e and L1h), who mention neither the two groups nor their relation.³⁰

In chunk 6 EKR’s concept *lessons of life* is introduced with several different signs in a token blend (cf. RSB2:6, Table 5). In Table 6 we can see that only one of the five interpreters that had problems identifying the two

²⁹ Interpreting unexpected and/or drastic discourse content is treated in a section of Concluding discussion, below.

³⁰ Note that in order for these relations to be considered rendered correctly, the two groups must have been mentioned to begin with.

groups and rendering their relations continues to have problems, failing to identify this new discourse entity correctly as well (interpreter L1e). For the other seven interpreters, this new discourse entity is apparently adequately introduced. In RSB2:7 the signer then creates a surrogate blend, where she becomes a |person doing lessons|, where she illustrates doing lessons as if physically leaping through something. This is a construction that does not add any new information as such but illustrates what doing your lessons might look like. This is not something a person speaking Swedish or English would be likely to do. Therefore, this particular surrogate blend has not been included in the list of content units.³¹ Finally, in RSB2:8, the signer says that it is EKR's belief that once you have done all your lessons in life, *somebody above* will allow you to die. This final part of the segment is rendered correctly by four interpreters, whereas three interpreters fail to mention both the discourse entity, somebody above, and the relation. The interpreter who did not identify lessons in life (L1e) does identify somebody above, but as she did not identify both entities correctly, their relation is not considered correctly rendered either.

Segment 2, which contains more RSBs than segment 1, thus creates more problems for the interpreters, though most of them manage to render much of it correctly. For chunks 5 and 6, two of the L1-interpreters fail to correctly identify three of the discourse entities, but for very different reasons. Interpreter L1c has a general tendency to try to “say everything she sees”. This creates problems for her, since she cannot speak fast enough to do that without stopping the video tape. When she has stopped the video recorder, she frequently starts it without rewinding the tape and often misses what was said just before she stopped it, as when she misses the mention of “today's health care” in chunk 5. Interpreter L1e fails to identify something in chunk 5, goes back, misses something else, goes back again, and becomes very agitated. She frantically tries to find a way to create a coherent text from what she sees and is obviously very disturbed by the fact that she has these problems so early on during the test. Compared to her performance during the main part of the test, she under achieves here.

³¹ It would be possible to illustrate this as a surrogate blend with a gesture in spoken language as well, but as the interpreters are not visible in the video recordings, it is not possible to know if any of them do that.

Table 6. *Interpretation, segment 2*

Discourse entities & relations	L2a		L2b		L1c		L2d		L1e		L1f		L2g		L1h	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
EKR	X		X		X		X		X		X		X		X	
Dying person	X		X		X		X		X		X		X		X	
<i>EKR talks to dying persons</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
Today's health care	X		X			X	X ¹		X		X		X		X	
<i>EKR thinks health care is too focused on patients surviving</i>		<i>x</i>		<i>x</i>		<i>x</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
Two groups		X		X		X	X			X	X		X			X
<i>One group needs to talk</i>		<i>x</i>		<i>x</i>		<i>x</i>	<i>x</i>			<i>x</i>	<i>x</i>		<i>x</i>			<i>x</i>
<i>Another group needs to die</i>		<i>x</i>		<i>x</i>		<i>x</i>	<i>x</i>			<i>x</i>	<i>x</i>		<i>x</i>			<i>x</i>
Lessons in life	X		X		X		X			X	X		X		X	
Somebody above	X			X	X			X	X		X		X			X
<i>Somebody above allows person who has done all lessons to die</i>	<i>x</i>			<i>x</i>	<i>x</i>			<i>x</i>		<i>x</i>	<i>x</i>		<i>x</i>			<i>x</i>
Total (11); entities (6) /relations (5)	7 5/2	4 1/3	5 4/1	6 2/4	6 4/2	5 2/5	9 5/4	2 1/1	6 4/2	5 2/3	11 6/5	0	11 6/5	0	6 4/2	5 2/3

*x*¹ says *sjukdomen idag* ('today's disease') instead of *sjukvården idag*, but it sounds like a slip of the tongue.

The Real Space blend structure of segment 2 contains more RSBs than that of segment 1, and even though there are fewer discourse entities and fewer relations than in segment 1, several of the interpreters have difficulties rendering segment 2 correctly. One interpreter (L2b) only renders 5 content units correctly: 4 entities and 1 relation. Three interpreters (L1c, L1e and L1h) only render 6 content units correctly; all three of them render 4 entities and 2 relations, though not the same ones. There are two interpreters who manage to render all 11 content units correctly: interpreters L1f and L2g. As can be seen from the bottom row stating total numbers for each interpreter, there is a clear tendency that if an interpreter has problems, she will have more problems correctly rendering the relations than correctly identifying the discourse entities. Interpreter L2a, e.g., correctly identifies 5 entities out of 6 but only 2 relations out of 5. As the relations are often expressed using directionally modified verbs, this to a certain extent corroborates what was suggested in the description of the RSB tables above, viz. that verbs do not always help identify the discourse entities.

Segment 3

Content and structure

Segment 3 consists of chunk 25–26. The two chunks in segment 3 were chosen for the study mainly because of an initial impression that the discourse structure in them is complex. The signer describes how EKR invites dying patients to accompany her to lectures she gives, and how various parts of the audience react to this.

“Then, she will say that these people are patients who are about to die. After that one-hour lecture, she will invite the audience to ask questions. She will say ‘Go ahead, ask questions, they are about to die any time now, maybe tomorrow, the day after tomorrow, or today - maybe during this lecture... Feel free to ask them questions.’ But the audience is usually completely non-plussed, not wanting to ask anything. Then, gradually, they start, and more and more questions will be asked. And a lot of people have also been helped during her lectures, thinking ‘So, this is me, these are my feelings...’ And many doctors are afraid to face the fact that even though they try to save the life of a patient, that patient may still die, this may happen quite often... However, her lectures will introduce them to a different way of thinking. If somebody dies, it’s not such a big deal, it’s because it was time for him or her to die.”

The discourse in segment 3 did turn out to be highly complex, resulting in an exceptionally large RSB table. The Real Space blend analysis presented in Table 7 constitutes *one* possible analysis of segment 3. The segment contains a number of sequences that can be analyzed in more than one way, of which

several are discussed below. There are also two sequences where it seems as if there is a false start, possibly the signer changes her mind regarding how to express something. Table 7 contains the analysis of the whole segment. However, only the first part of the analysis of the segment (RSB3:1–RSB3:9) will be presented in detail. In addition, some selected parts are discussed, presenting alternative analyses.

The segment is approximately 40 seconds long, which makes it equal in length to segment 1. But whereas segment 1 contains only three RSBs and one non-blended sequence, segment 3 contains fifteen Real Space blends and four non-blended sequences.

There are several surrogate blends in which the signer becomes a visible instance of different discourse entities, some of which are not identified with any lexical signs. The segment contains three different visible surrogates: |EKR|, |many in audience|, and |doctor in audience|. As in the analysis of segment 2, the signer is sometimes analyzed as being one person representing a whole group. The visible surrogates occur more than once, and when they occur there is usually at least one (sometimes two) additional invisible surrogate(s), e.g. |dying patients|, the never explicitly mentioned |audience|, and |doctor's patient who dies|. The signer frequently switches between these surrogates, and does so rapidly, sometimes without much previous indication to help the addressee identify which discourse entity she will become a visible instance of.

In all, there are six different blended entities to keep track of: |EKR|, |patients|, the |audience|, |many in audience|, |doctor in audience|, and |doctor's patient who dies|. The |patients| are later qualified as |dying patients| but are still counted as *one* discourse entity in the analysis below. Except for |EKR|, these discourse entities are all non-specific.

The beginning of segment 3 can be analyzed in at least two different ways. Looking at it according to the analysis chosen for Table 7, the signer first produces a sign that has been glossed NON-1st-SING^{>|EKR-f|}, which is followed by the verb SAY. She then seems to decide that she needs to clarify the identity of the token that the pointing sign NON-1st-SING is directed towards and adds a combination of two simultaneous signs. While her non-dominant hand produces an instance of the POINTER buoy, directed towards |EKR-f|, the dominant hand produces the fingerspelled pronoun #SHE^{>|EKR-f|}. As there is only one person in the discourse who can be uniquely identified with 'she', the identity of the token is then absolutely clear. The POINTER buoy is a sign that can be directed towards, or point at, blended entities but does not construct a blend of its own. Both signs are directed towards a token, making this a token blend.

In Table 7 the Real Space blend structure of Segment 3 is presented:

Table 7. *RSB table, segment 3, chunk 25–26*

RSB	Perspec- tive	Blended enti- ty	Type of blended entity	Location of blended entity	Expressions used about the entities
3:1 token	signer	EKR	token	in front of signer	NON-1st-SING ^{> EKR-f} , #SHE ^{> EKR-f} + POINTER ^{> EKR-f}
3:2 surr.	EKR	EKR not yet stated EKR	visible surrogate + invisible surrogate visible surrogate	signer, incl. hands producing THAT-IS + POINTER ^{>?} forward/right signer, incl. hands producing SICK cl-PERSON- PLUR ^{> patients} , INDEX ^{> patients} ,	THAT-IS + POINTER ^{>?} SICK cl-PERSON- PLUR ^{> patients} INDEX ^{> patients} ,
		patients	+ invisible surrogate	forward/right	SICK cl-PERSON- PLUR ^{> patients} INDEX ^{> patients} ,
		EKR	visible surrogate	signer, incl. hands producing WILL ON WAY DIE + POINTER ^{> dying patients}	WILL ON WAY DIE + POINTER ^{> dying patients}
		dying patients	+ invisible surrogate	forward/right	
3:3 BG surr.	signer	BG EKR	BG visible surrogate	signer, incl. hands producing POIN- TER ^{> dying patients}	
		BG dying patients	+ BG invisible surrogate	forward/right	POINTER ^{> dying patients}

3:4 surr.	EKR	EKR dying patients EKR dying patients EKR audience dying patients EKR dying patients	visible surrogate + invisible surrogate visible surrogate + invisible surrogate visible surrogate + invisible surrogate visible surrogate + invisible surrogate visible surrogate + invisible surrogate	signer, incl. hands producing POIN-TER ^{> dying patients} forward/right signer, incl. hands producing the verb INVITE ^{> dying patients forward/right-new location in front of EKR} moved from forward/right to in front of signer-/close with the modified verb INVITE signer, incl. hands producing ASK-QUESTIONS ^{> audience- dying patients} in front of signer/remote in front of signer/close signer, incl. hands producing THERE ^{> the lecture} LECTURE in front of signer/close	POINTER ^{> dying patients} NON-1st-SING ^{> dying patients} THERE ^{> the lecture} LECTURE
---	signer	---	---	---	---
3:5 surr.	EKR	EKR dying patients	visible surrogate + invisible surrogate	signer, incl. hands producing the verb INVITE ^{> dying patients forward/right-new location in front of EKR} moved from forward/right to in front of signer-/close	
3:6 token	signer	audience dying patients	token token	in front of signer/remote in front of signer/close	
					MANY

3:7 surr.	one member of the audience	many in audience	visible surrogate	signer, excl. hands producing NON-PLUSSED	
3:8 BG surr.	signer	BG many in audience	BG visible surrogate	sign fragment on left hand; NON-PLUSSED	
3:9 surr.	many in audience	many in audience many in audience dying patients	visible surrogate visible surrogate + invisible surrogate	signer excl. hands; first sign fragment, then both hands; NON-PLUSSED signer excl. hands producing ASK-QUESTIONSx6 ^[dying patients] in front of signer/close	
---	signer	---	---	---	MANY
3:10 surr.	many in audience	many in audience	visible surrogate	signer excl. hands producing HAVE-A-FEELING signer incl. hands producing AHA INDEX-c, HOW FEEL-INSIDE	INDEX-c
---	signer	---	---	---	MANY DOCTOR
3:11 surr.	doctor in audience	doctor in audience doctor's patient who dies	visible surrogate + invisible surrogate	signer, incl. hands producing POSS-c PATIENT INDEX-c TRY SAVE LIFE OF INDEX-c. gesture DIE. in front of signer	POSS-c, INDEX-c, INDEX-c
---	signer	---	---	---	---
3:12 surr.	doctor in audience	doctor in audience the lecture	visible surrogate + invisible surrogate	signer, incl. hands producing INDEX ^{>forward/high} in front of signer/remote	INDEX ^{>forward/high}
3:13 token	signer	the lecture	token	in front of signer/remote	ARRIVE-AT ^{>[the lecture]}
3:14 surr.	doctor in audience	doctor in audience	visible surrogate	signer, incl. hands producing FAIL LEAVE-IT.	
3:15 token	signer	doctor's patient who dies	token	in front of signer	NON-1st-SING ^{>[doctor's patient who dies]}

An alternative way of analyzing the beginning of segment 3 would be to say that the signer begins producing signs from |EKR|'s perspective, in which

case it is a surrogate blend, and that the first instance of NON-1st-SING is directed towards the invisible surrogate |dying patients|. The signer then realizes that the identity of the visible surrogate may not be clear, and decides to clarify it with the combination of the POINTER buoy and #SHE, both directed towards |EKR|. That sign combination would then be regarded as inserted additional information from signer's perspective.

Regardless of how RSB3:1 is analyzed, the next Real Space blend is a surrogate blend, RSB3:2, in which the signer becomes a visible instance of |EKR|. The signer as the surrogate |EKR| here begins to set the scene for the rest of the segment and introduces a group of dying patients that have accompanied EKR to the lecture she is holding (which was in turn introduced in chunk 24). This introduction of the dying patients is directed towards an invisible surrogate, the |audience|. Though the audience is not explicitly mentioned, a lecture frame entails there being an audience present, and this audience will be part of several of the following surrogate blends. There is one more invisible surrogate, the group of |dying patients| that |EKR| introduces to the |audience| and which the signer points at twice with her left hand in RSB3:2. Liddell describes the POINTER buoy as a sign which "points toward an important element in the discourse" (2003:250). In this sequence the POINTER buoy is produced by (the signer as) |EKR| and points at the invisible surrogate that it will gradually be possible to identify as |dying patients|. At the same time, the signer produces another referring sign with her dominant hand, a sign which ends with a pointing in the same direction; THAT-IS. The following phrase is then added, to help the addressee identify the invisible surrogate: SICK cI-PERSON-PLUR^{>|patients|} INDEX^{>|patients|} WILL ON WAY DIE. During the last four of those signs the POINTER buoy reappears on the signer's non-dominant hand.

Next follows a sequence that has been analyzed as RSB3:3. The sign combination LECTURE FINISH ONE-HOUR that occurs here has been analyzed as additional information from signer's perspective, and the signer directs her gaze at the addressee. While those signs are produced, the POINTER buoy that is produced with the non-dominant hand of (the signer as) |EKR| in RSB3:2 is still held. It has been analyzed as still being directed towards the invisible surrogate |dying patients|. According to the analysis chosen for Table 7, the surrogate blend is backgrounded during this comment from signer's perspective, and this is marked with *BG* in the columns for RSB number, for identity, and for type of blended entity respectively, during RSB3:3.

In the full transcription in Appendix 2, the sign combination in RSB3:3 is preceded by a *possible* instance of INDEX-c: INDEX-c? LECTURE FINISH ONE-HOUR. There are some unclear instances of INDEX-c like that in the discourse, which are so brief that it is hard to tell whether they are actually there or not. Should this actually be an instance of INDEX-c, the sequence would be analyzed as part of a continuation of the surrogate blend (RSB3:2),

with the signer still being a visible instance of |EKR|, but without the hands being part of the surrogate. However, this is not the analysis chosen for Table 7.

Following the sequence analyzed as consisting of additional information from signer's perspective, the signer once again becomes a visible instance of EKR and returns her gaze to |dying patients|. While RSB3:4 is now being created the POINTER buoy produced with the signer's non-dominant hand from RSB3:3 (and RSB3:2) is still held for a short while but then disappears when the first verb is produced. In this new surrogate blend, the signer as |EKR| invites the invisible surrogate |dying patients| onto the stage, between her and the |audience|, using the directionally modified verb INVITE^{>|dying patients|forward/right-new location in front of |EKR|}. This instance of the verb INVITE moves the surrogate |dying patients| from the previous location forward/right to a location in front of the signer as |EKR|. This movement of the verb also indicates that the location of an |audience|, whose presence can be deduced through a lecture frame, would be in front of the signer/remote.

Having thus moved the invisible surrogate |dying patients| to a place on a |stage| between |EKR| and an |audience|, in RSB3:4 the signer as |EKR| tells the |audience| that they should ask the |dying patients| questions. Again, she uses a directionally modified verb: ASK-QUESTIONS^{>|audience|-|dying patients|}.

Towards the end of RSB3:4, a pointing sign combined with LECTURE creates problems. The pointing sign is hardly visible and could be an instance of NON-1st-SING^{>|the place of the lecture|} or THERE^{>|the place of the lecture|}. The table is based on the analysis that it is an instance of THERE^{>|the place of the lecture|} followed by the noun LECTURE. Regardless of what kind of a pointing sign it is, the signer then directs her gaze at the addressee and produces a gesture that indicates an uncertainty as to what might happen with the dying patients who are present during the lecture. Again, this can be analyzed in two ways. It could be analyzed as a continuation of the surrogate blend and the signer just briefly checking that the addressee is following what she is saying by quickly making eye contact. In Table 7, however, since the signer produces a meaningful gesture, it has been analyzed as a return to signer's perspective, which means this is a non-blended sequence.

The signer then creates a surrogate blend, in which she becomes a visible instance of |EKR| again, RSB3:5. She does so by repeating the verb INVITE^{>|dying patients|forward/right-new location in front of |EKR|}, directionally modified in the way it was in the beginning of RSB3:4.

Immediately after producing INVITE^{>|dying patients|forward/right-new location in front of |EKR|}, the signer resumes eye contact with the addressee again and produces another meaningfully directed verb, viz. a repetition of the verb ASK-QUESTIONS^{>|audience|-|dying patients|}, as produced in RSB3:4. Since the sign is produced with the signer's gaze directed at the addressee, this is analyzed as the construction of a new token blend: RSB3:6.

Before RSB3:6 ends, the signer produces a quite brief instance of the noun MANY, with a duration of approximately 5 frames (≈ 0.2 sec.). This is the same strategy that was used, e.g., at the end of RSB2:3, where the signer identifies the kind of entity of which she will become a visible instance in the next (surrogate) blend. The surrogate she will become in RSB3:7 is thus introduced in RSB3:6, with the sign MANY, while she moves her gaze and head away from the addressee.

The signer assumes a new position of her head (and body) as she becomes this new surrogate and creates RSB3:7. The last group of people requested to do something was the invisible surrogate [audience], which [EKR] told to ask the [dying patients] questions. The recently produced instance of the sign MANY thus serves to delimit the group *many in the audience* from the whole of the audience, the presence of which is still only deduced from the lecture frame. The signer's facial expression is that of a person who does not know what to do, and her gaze is directed far up and away to the right. In this surrogate blend, the signer has become a visible instance of one of the [many in audience]. She produces the two-handed sign glossed as NONPLUSSED, and the hands producing it are not part of the surrogate blend but again an instance of partitioning off of the hands to produce a sign telling the addressee that the surrogate is nonplussed and not doing anything. NONPLUSSED is first held with both hands for 33 frames (≈ 1.3 sec.), which is a long time for a single sign to last.³²

In order to tell the addressee *what* it is the audience is not doing, the signer has to insert a comment from signer's perspective: DON'T-WANT ASK. These two signs are produced with the signer's dominant hand, while the non-dominant hand remains in the position of NONPLUSSED for 12 frames (≈ 0.5 sec.) as a *sign fragment*.³³ The sign fragment on the non-dominant hand has been analyzed as backgrounding the visible surrogate [many in audience]. Part of the signer's posture also keeps the surrogate active, as does the signer's facial expression. However, since the signer resumes eye contact with the addressee and produces additional lexical information (DON'T-WANT ASK), this sequence has been analyzed as mainly told from signer's perspective, RSB3:8.

The signer returns to producing the two-handed version of NONPLUSSED, now held for 20 frames (≈ 0.8 sec.). She is once again a visible surrogate of one of the [many in audience], thus creating RSB3:9 with the hands partitioned off to produce a sign telling us something about the surrogate. Next she produces the phrase GRADUALLY BEGIN, followed by the verb ASK-QUESTIONSx6[>][dying patients]. The signer's gaze alternates between the gaze di-

³² The duration can be compared to the 5 frames of MANY in RSB3:6, as well as to the duration of the fragment of NONPLUSSED in RSB3:8, which is held for 12 frames, while the dominant hand produces two signs.

³³ Sign fragments, as a category of activities performed with the signer's non-dominant hand, are discussed in Nilsson (2007).

rection of the surrogate and having eye contact with the addressee, but the sequence has still been analyzed as belonging to RSB3:9. The hands are not part of the surrogate but partitioned off to produce signs providing more information about what is happening. The verb ASK-QUESTIONSx6^{>[dying patients]} moves from the signer as a visible instance of |many in audience| towards |dying patients|.

In RSB3:10 the signer once again becomes a visible instance of |many in audience|. First, she indicates this with a similar facial expression and gaze direction as those used in RSB3:7, this time combined with the sign HAVE-A-FEELING. The hands that produce the sign are not part of the surrogate but are again partitioned off to produce a sign that tells the addressee that the surrogate has a feeling. That feeling is then described with signs glossed in Table 7. These signs, though, are produced in a way that looks as if the surrogate person is thinking or possibly talking to herself. The signer's hands have therefore been considered part of the surrogate when she produces the signs. It is not really possible to tell whether a construction like this should be analyzed as constructed thought, and the person in the audience thinking, or constructed dialogue, and the person in the audience actually signing to herself (which anybody would be able to see).³⁴ Between the two first (AHA INDEX-c) and the two last (HOW FEEL-INSIDE) of these four signs, the signer briefly resumes eye contact with the addressee. This time, however, as the glance is very brief and does not co-occur with any meaningful signs or gestures, it has been analyzed only as a quick check that the addressee is following the story.

A while later, introducing the fact that when they attend EKR's lectures, doctors in the audience are faced with a different kind of thinking than they are used to, the signer begins to say something but then seems to change her mind about how to say it. It is possible that she decides that more information needs to be added. First, she produces a pointing sign directed forward, while she seems to be on her way to become a visible surrogate |doctor in audience|, followed by the sign MEET. The pointing sign has been analyzed as directed towards |the place of the lecture| and is regarded as an invisible surrogate in RSB3:12.

But, immediately after the two signs in RSB3:12 the signer inserts a clarifying comment from signer's perspective: ARRIVE-AT^{>[the lecture]} DURING LECTURE MEET OTHER THINK, thus creating RSB3:13. In this RSB, ARRIVE-AT^{>[the lecture]}, which is a pointing sign, is produced from signer's perspective and |the place of the lecture| is thus a token in a token blend. The signer's gaze first follows the sign ARRIVE-AT^{>[the lecture]}, but then she resumes eye contact with the addressee. That clarifying comment is followed by a surro-

³⁴ The term *constructed thought* was suggested for this in Nilsson (2008). Liddell & Metzger (1998:668-670) discuss a similar phenomenon in ASL, deciding to treat both as constructed dialogue (following Tannen; 1986, 1989).

gate blend, RSB3:14, in which the signer once again is a visible instance of |doctor in audience|.

Looking at Table 7, the sheer size of it tells us that segment 3 is more complex than the previous two segments analyzed. In addition, there are long sequences where the sixth column, with expressions used about the discourse entities, is completely empty, which means that an addressee gets little help identifying the entities. During her production of this segment, the signer frequently resumes eye contact with the addressee, checking for feedback and possible indications that the addressee needs clarification. The frequent eye contact is especially visible from RSB3:8 and onwards. This could be taken as an indication that the signer is well aware that this is a highly complex piece of discourse.

Interpretation

Segment 3 is by far the most complex of the segments analyzed. Though it is equal in length to segment 1, it contains more RSBs, fifteen as compared to three, and in addition there are four non-blended sequences. There are six different discourse entities in the segment: |EKR|, |patients|, the unmentioned |audience|, one of |many in audience|, |doctor in audience|, and |doctor's patient who dies|. The |patients| are later qualified as |dying patients|, but were still counted as one discourse entity in the analysis. In addition, if we look in the last column in Table 7, there are few or no signs at all glossed as expressions used about the entities. This means the interpreters get little help in identifying the discourse entities.

The translation of segment 3 is repeated here for the sake of convenience:

“Then, she will say that these people are patients who are about to die. After that one-hour lecture, she will invite the audience to ask questions. She will say ‘Go ahead, ask questions, they are about to die any time now, maybe tomorrow, the day after tomorrow, or today - maybe during this lecture... Feel free to ask them questions.’ But the audience is usually completely non-plussed, not wanting to ask anything. Then, gradually, they start, and more and more questions will be asked. And a lot of people have also been helped during her lectures, thinking ‘So, this is me, these are my feelings...’ And many doctors are afraid to face the fact that even though they try to save the life of a patient, that patient may still die, this may happen quite often... However, her lectures will introduce them to a different way of thinking. If somebody dies, it’s not such a big deal, it’s because it was time for him or her to die.”

In Table 8, the content units in chunks 25–26 are listed, and for each interpreter, it is stated whether this information is correctly rendered. As pre-

dicted by the hypothesis, this segment creates large problems for most of the interpreters, and it will therefore be discussed in more detail below.³⁵

As is evident from Table 8, this remarkably complex segment creates more problems for all of the interpreters than the previous two segments did. Only one interpreter (L1f) renders segment 3 very well, correctly identifying all content units except one of the relations. This interpreter also managed very well with the two previous segments, correctly identifying all content units in both of them. Two more interpreters (L1c and L1h) manage to give a reasonably good rendition of segment 3, correctly identifying 10 out of 13 discourse entities and relations. On the other hand, there are two interpreters who have a truly difficult time trying to render segment 3. In fact, one of them (L2a) only manages to identify one (1) of the discourse entities correctly and does not render any of the relations correctly. The other one is interpreter L2b, who only renders 2 entities and 1 relation correctly. For the remaining three interpreters (L2d, L1e and L2g), as we can see in Table 8, several content units are not correctly rendered.

The previously seen pattern of discourse entities being easier to identify correctly than relations is less clear in this more complex segment. Interpreter L1e, e.g., correctly renders more relations (4) than discourse entities (3). If we look at the discourse entity |many in audience|, we can see that four of the interpreters do not identify it correctly, and five of the interpreters fail to identify |doctor in audience| correctly. Part of the reason for this change in pattern might be found if we return to Table 7, where the RSB structure of segment 3 is described, and especially the column *Expressions used about the entities*. There are very few signs glossed in the column, and for several RSBs the column is completely empty: RSB3:5, RSB3:7–3:9, and RSB3:14. This means that an addressee gets little help identifying the discourse entities in those Real Space blends. In addition, the few glosses that are found in the column are quite general (e.g. MANY, MANY DOCTOR), and in addition they refer to subgroups of a group of people that was not explicitly introduced. In a complex segment like this, it is thus maybe not strange that so many of the interpreters have problems identifying these discourse entities.

³⁵ Cf. the next section, The interpretations in more detail.

Table 8. Interpretation segment 3

Discourse entities & relations	L2a		L2b		L1c		L2d		L1e		L1f		L2g		L1h	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
EKR		X	X		X		X		X		X		X		X	
Dying patients	X		X		X		X		X		X		X ²		X	
<i>EKR introduces dying patients to the audience</i>		x		x	x			x		x			x			x
<i>EKR invites the audience to put questions to the dying patients</i>		x		x	x ¹		x ¹		x ¹		x ¹			x		x
<i>The audience is non-plussed</i>		x		x	x		x		x		x		x			x
<i>The audience gradually start to ask questions</i>		x		x	x		x		x		x		x			x
One of many in audience		X		X		X	X		X		X			X		X
<i>Many have been helped by attending EKR's lectures</i>		x		x		x	x			x	x			x		x
Doctor in the audience		X		X	X			X		X	X			X		X

cont.

Table 8. *Interpretation segment 3, cont.*

Discourse entities & relations	L2a		L2b		L1c		L2d		L1e		L1f		L2g		L1h	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
Doctor's patients who die		X		X	X			X		X	X		X		X	
<i>Doctor troubled by patients dying though doctor tries to save their lives</i>		<i>x</i>		<i>x</i>	<i>x</i>			<i>x</i>	<i>x</i>		<i>x</i>		<i>x</i>			<i>x</i>
<i>Many doctors meet a new way of seeing things during these lectures</i>		<i>x</i>		<i>x</i>	<i>x</i>			<i>x</i>	<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	
<i>They learn that if a patient dies, it's not such a big deal</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>		<i>x</i>	<i>x</i>			<i>x</i>		<i>x</i>
Total (13); entities (5) /relations (8)	1 1/0	12 4/8	3 2/1	10 3/7	10 4/6	3 1/2	7 3/4	6 2/4	8 3/5	5 2/3	12 5/7	1 0/1	6 2/4	7 3/4	10 5/5	3 0/3

*x*¹ not explicitly stated

*X*² the patient (sing.)

Another complicating factor may be found in, e.g., RSB3:2–3:4, which is a sequence that contains frequent switching between several visible surrogates, and their accompanying invisible surrogates, combined with the use of back-grounding. Only one of the interpreters (L1c) manages to render this sequence correctly. Interestingly, the interpreters that render most of the content units are all L1-interpreters, and the ones that have most problems are all L2-interpreters. This, as well as some other matters regarding interpreting, will be considered in the Concluding discussion below.

The interpretations in more detail

The interpreters were allowed to stop the video tape if they wanted to and to rewind it as well. Whether they did so or not varied between interpreters. To stop and rewind could be seen as an indication of failure, that of not understanding the signer, and therefore might be something to be avoided. A test situation like this in particular might make an interpreter who has stopped the tape several times previously less inclined to do so again, even though the result might have been a better interpretation.

In the following, we will take a closer look at whether the interpreters decided to stop the video tape or not. We will also see whether they chose to rewind the tape or not, and in the case they did whether they added any information. For each interpreter, translations into English of their renditions of the two chunks in segment 3 are provided. Though the original interpretations are in spoken Swedish, these translations into English still provide an indication of the different approaches used by the interpreters. These quotes from the interpretations are presented in italics to make them easy to separate from the translations of the signed source discourse. In some sequences an interpreter talks to the person ready to help with the video recorder, or seems to be talking to herself, and in order for this to be visibly different, these comments are not italicized.

Considering the scarcity of detailed studies on the end product produced by signed language interpreters working into a spoken language, it was decided to present the renditions of all of the eight interpreters in the study. For each interpreter we will also look at how many content units they render correctly. The translations of each interpreter's rendition in full also make it possible to see how this has been scored. We begin with the rendition that contains the highest number of correctly rendered content units, and then go through them all in succession, ending with a rendition that only contains one correctly rendered discourse entity.

Interpreter L1f

Interpreter L1f watches chunk 25 only once and immediately starts to interpret. She has to stop during chunk 26, though, as she is lagging too far behind and decides to rewind to see part of chunk 26 again:

25: *“And then she also says that... The patients who are going to die. Eh, after an hour, people are allowed to ask it questions. Because it, it is going to die anytime it may be today, it may be tomorrow, or... eventually. And people are allowed to ask questions, and then a lot of them don’t want to do that, but then after a while they, they begin to ask questions and...”*

26: *“...they feel that they have been very much helped by it. There are also many doctors who are afraid of letting go of their patients. Because it is, eh... Should the patient die then that would be very hard for this doctor. But eh... But if you see it as it being this persons turn to, to move on...” (L1f)*

In chunk 25, the interpreter incorrectly uses “it” (*den*) to refer to a patient that the audience is told to ask questions, where *han* or *hon* (‘he’ or ‘she’) would have been more natural. In addition, this interpreter’s rendition might be hard to follow due to the many instances of non-specific “them” and “they”. The discourse entities can be regarded as correctly rendered, provided the listener does manage to identify the correct discourse entity. This analysis is based on the assumption that the listener is able to do that. The rendition of chunk 26 is quite general, lacking in detail, and the interpreter decides to rewind the tape. When she watches chunk 26 again, she adds the following:

26: *“But during the lectures they start to think in a different way, should a person pass on, die, then that is a part of life, and that may be something good.” (L1f)*

The content of the source discourse is thus more fully rendered, but it may be hard to know exactly who “they” (in chunk 26) are by now, even though the doctors have been mentioned earlier. Interpreter L1f is the interpreter who correctly renders the largest number of content units, only failing to render one relation.

Interpreter L1c

A somewhat different approach is demonstrated in the work of interpreter L1c. She watches the segment only once and renders it as follows while she is watching:

25: *“Eh... she says that these dea... dying (Oh my God! Laughs.) The, the pat... she has taken some... patients who are going to die any time. They may have an hour left. And they have been invited... to these... during the lectures that she has held. And eh well they may even have... died. Eh, but for people to... come really close, eh, and ask them about what they have... on their mind. Eh, in the beginning it may be that people hesitate to ask questions, but then after a while people begin to ask loads of questions.”*

26: *“There are many patie... eh many doctors also who are eh also troubled because their eh mission is to save the patients from death. Eeh and therefore*

they also carry a certain... fear... During the lectures they get... a completely different picture... eh then it isn't the most important thing to save the patient but... to let the patient die. Eeh a different kind of thinking is what they meet during these lectures." (L1c)

Interpreter L1c has a tendency to say everything she sees, which can be deduced from the length of her rendition. During this segment, she talks so much that she has to stop the video tape twice during chunk 25 and three times during chunk 26 in order to catch up. There are many instances of non-specific "they" in this interpreter's rendition of chunk 25, too, which might make it hard to know exactly who she is talking about. In this analysis, it has been deemed possible to follow her rendition, though. There is also a case of wrong tense, when she says "they may even have died" about the dying patients. Interpreter L1c correctly renders 10 of the 13 content units, failing to render 1 discourse entity and 2 relations.

Interpreter L1h

This interpreter is lagging far behind when watching this segment, and she decides that she needs to have the tape rewound to see chunk 26 again. While watching the segment again, interpreter L1h also adds a bit more information to her rendition of chunk 25:

25: "And... the patients who are... terminally ill... then... they say that... these patients may die any time. During the lecture even, or today or tomorrow, and... they may ask questions and questions, but... the audien... to begin with they don't dare to ask, but finally... they dare to get started and ask questions and they... (Can you please rewind a bit?) To begin with... the audience is a bit hesitant and don't dare to ask, but eventually... they start asking lots of questions."

26: "But many have been helped during this time and 'Aha, this is me, how do I work?' And there are many doctors who are also eh... afraid of their patients, because they want to save, save them. But here you meet a different way of thinking that 'Yes, ok, now now this person has been allowed to pass on to a different world.'" (L1h)

The rendition produced by interpreter L1h does give most of the details from the original. She correctly identifies 10 content units, 5 entities and 5 relations, whereas only 3 relations are not correctly rendered. However, it is hard to tell how difficult it may be for a listener to follow her interpretation, because of the many instances of non-specific "they" which have here been analyzed as possible for a listener to identify.

Interpreter L1e

Having watched chunk 25 once and interpreted it while she is watching, interpreter L1e then decides to rewind the tape during chunk 26:

25: *“And when eh... first she lectures for an hour. Then... one of these patient... dying patients comes... up on the stage and people are allowed to ask questions. And many are nonplussed and don’t... first don’t dare to ask any questions, but then... they get going. And... things ease up and questions are asked, but...”*

26: *“And many... think it is eh, difficult to talk about death, even doctors often think it is hard to talk about death when they have... in contacts with patients who are going to die and such.” (L1e)*

The rendition of chunk 25 is not equivalent to what the signer says. The beginning of the rendition of chunk 26 indicates that the interpreter does not quite understand what the signer is saying, and she then stops the video tape and rewinds it. When she resumes interpreting she says:

26: *“And fight... and the doctors are only fighting to la... save lives and don’t really want to see that... maybe they are denying that they... are dying. But when they have been to one of those conferences and... met and listened to... dying patients they get another, different thoughts and... it feels better... in their work.” (L1e)*

This rendition is still not equivalent to what the signer says. It is too general and also contains many instances of non-specific “they”, which may make it hard to follow. For the purposes of this study, though, it has been deemed possible to follow the interpretation. Interpreter L1e correctly renders only 8 content units, 3 entities and 5 relations, whereas 2 entities and 3 relations are not correctly rendered.

Interpreter L2d

To begin with, interpreter L2d watches the segment and starts to interpret while she is watching:

25: *“And she and patients who were dying... when they had talked for an hour, you, you could ask questions... to this person, who was dying. And then... it usually became very quiet, nobody asked any questions. But then eventually they got started, and there were many questions, and...”*

26: *“...and many felt helped by this. And they could think about, yes... how... how they themselves thought about death...” (L2d)*

The whole part in which EKR says that the patients can die any time is lost in this rendition. As the audience has not been mentioned, the use of “many” in chunk 26 is too general to correctly identify the discourse entity *many in audience*. The interpreter is lagging behind, and judging from the very general expressions in her rendition, she does not quite understand the signer,

and finally decides to rewind the tape. When she watches chunk 26 again, she adds the following:

26: "...many may also have felt... eh a bit confused by this, but doctors are supposed to save lives. But this is a, another, a different way of thinking, that yes... if you cannot save lives they disappear into something different." (L2d)

Many of the details in the source discourse are still lost, and even though interpreter L2d correctly renders 7 content units, 3 entities and 4 relations, there are also 2 entities and 4 relations which are not rendered correctly.

Interpreter L2g

This interpreter only watches the segment once. Interpreter L2g waits until approximately 9 seconds into chunk 25, which is 21 seconds long in all, before she starts her rendition and says:

25: "And during one lecture, the... the patient was this... said that 'Yes, I know I'm going to die, it can happen any time, and you can ask me anything you like now. It's possible I'll die here within an hour, or I can die tomorrow.' At first, it was completely quiet, but eventually there were more and more questions." (L2g)

In this rendition the words spoken by EKR to the audience seem to be those of the patient him-/herself, and EKR is not mentioned at all. While watching the end of chunk 25 and the beginning of chunk 26, which is 19 seconds long, interpreter L2g is silent for approximately 9 seconds again. Then she stops the video tape and produces the following rendition of chunk 26:

26: "At this lecture one met another thought... it can also happen that that doctors who... try to save a... a patient's... life, but fail, really feel bad after th... from that afterwards. But here they got another view of it, when they heard this person's views... facing death." (L2g)

In general, one could say that the gist of the source discourse is rendered, but much is also missing. Whereas 6 content units, 2 entities and 4 relations, are correctly rendered by interpreter L2g, there are another 3 entities and 4 relations which are not rendered correctly.

Interpreter L2b

During the whole recording session interpreter, L2b frequently did *not* rewind the tape, but she decides to do so for this segment. Despite this, the end result is far from satisfactory. She begins by saying the following as she is watching the tape:

25: "And the dying patient... eh... Well, who was going to die any time. Eh... they would answer questions..." (L2b)

Having said this she is almost ready to give up and quietly asks herself whether she should do that. When she rewinds the tape, she encounters technical problems as well and rewinds too far (all the way back to chunk 20). She silently watches the video tape from chunk 20 onwards and adds some information to her interpretation of chunk 24. However, when she watches chunk 25 again she does not add anything but starts interpreting when chunk 26 appears:

26: *“And many have truly been helped by being able to ask these questions and become more aware of themselves. And that one doesn’t want to... save lives at any cost but accepts death. She has met many others, who think in a different way...”* (L2b)

The fact that questions are not asked at first but are only asked after a period of hesitation, is not mentioned in her rendition of chunk 25. In chunk 26, the very general “many” is used for both the audience and the doctors. Additionally, it is not clear in the second sentence of this example who “one” (*man*) refers to. Finally, “she” (EKR) is said to be the one who has met people who think differently, whereas in the source discourse it is the doctors in the audience. Interpreter L2b thus only renders 3 content units, 2 entities and 1 relation correctly in her interpretation.

Interpreter L2a

Interpreter L2a first starts to watch the segment saying nothing and halfway through chunk 25 rewinds the tape. Then she watches the segment from the beginning again, while interpreting:

25: *“And eh these patients, who are going to die... they have received a lot of questions, but you don’t know exactly when they... (giggle) when they are going to die, so they may have been... sort of... been really... eh nonplussed by these questions.”*

26: *“But then it has sort of sunk in and then they have been helped by it. To, to talk and wonder out loud about these kinds of things. To just, well see how others think, and so on.”* (L2a)

Despite rewinding to see the segment from the beginning, this interpreter’s rendition of chunk 25 is more of an attempt to capture it from a helicopter perspective. The audience is not mentioned (which results in it seeming that it is the dying patients who are the ones who are nonplussed), nor is EKR; the hesitation that precedes many questions is not mentioned either. The interpreter continues with chunk 26, where even more details are lost, as neither the audience (and the doctors in it) nor the patients of these doctors are mentioned. The whole issue of encountering a new way of thinking, and

it being time for somebody to die is also lost. In all, interpreter L2a only renders one content unit correctly: the dying patients.

As we have seen, these eight interpreters deal with the task of simultaneously interpreting the same piece of signed discourse in different ways. In addition to the translations of their spoken Swedish target discourse, descriptions have been added regarding whether an interpreter stops the video tape, whether she rewinds it, if she decides to add information, etc. However, with no access to key aspects of spoken language as, e.g., intonation, this still gives a far from complete picture of the impression each interpreted version would have on a listener.

Interestingly, all of the L2-interpreters, who have learned Swedish Sign Language as adults, seem to have more problems understanding the source text than do the L1-interpreters, something which will be discussed in greater detail below.

Concluding discussion

The importance of the addressee properly conceptualizing space in order to understand the signer is discussed by Liddell & Vogt-Svendsen, describing Norwegian Sign Language:

“Many of the spatial conceptualizations ahead of the signer that we describe in this paper contain invisible elements. An addressee’s ability to properly conceptualize these invisible elements is crucial in order to understand what the signer is expressing.” (2007:177)

Thus, according to this view, if an addressee is to understand what the signer is expressing, a key concern is that the addressee constructs the same mental spaces containing the same discourse entities as the speaker constructs. In the discourse analyzed for this study, many of the spatial conceptualizations ahead of the signer are also invisible. The identity of both visible and invisible Real Space blends is more or less explicitly expressed by the signer, making the addressees’ task of identifying them more or less easy. However, as stated by Liddell & Vogt-Svendsen: “[a]lthough the clues provided by the signer are minimal, they are sufficient...” (2007:193)

The discussion below will focus on some aspects of how discourse entities and perspectives can be identified. Some additional characteristics of interpreting will also be discussed, thereby touching on the fact that what constitutes “sufficient” clues for the ordinary addressee may not be enough for a person whose task it is to simultaneously interpret the same discourse.

Identifying discourse entities and perspectives

As we have seen, the signer introduces, describes the actions of, and reintroduces discourse entities in different ways. On the one hand, several different noun phrases (including pronominal pointing signs) are used about a single discourse entity, repeatedly mentioning this entity mainly from signer’s perspective using token blends. In the material analyzed for this study we see the signer doing this for EKR in segment 1. The same strategy is also used, e.g., in segment 2, when the concept *lessons in life* is introduced with several different noun phrases. In such sequences where the signer mainly refers to entities with noun phrases and from signer’s perspective, the result is compa-

ratively few Real Space blends and a relatively simple discourse structure. The interpreters in this study have no, or very few, problems rendering the source discourse of segment 1, in which the signer mainly refers to discourse entities in this way and creates only three RSBs.

On the other hand, there are sequences where the signer uses comparatively few noun phrases to refer to discourse entities, using several directionally modified verbs and surrogate blends instead. As a result, the signer frequently switches between different discourse entities' perspectives, as well as signer's perspective. This is reflected, e.g., in the sixth column of the RSB tables, where we find glosses for the expressions used about discourse entities. When the signer uses many directionally modified verbs and surrogate blends, we often find only a few glosses in that column. As mentioned earlier, directionally modified verbs are not glossed in that column, as they will only help the addressee identify discourse entities if s/he has identified them correctly earlier in the discourse. This kind of signing, with many surrogate blends and directionally modified verbs, can be more difficult to follow, as it may be harder to know who the signer is talking about, as well as who is doing what to whom. In this study, segment 3 contains much signing of this kind. Segment 3 is equal in length to segment 1 but contains fifteen Real Space blends as opposed to three, with only four of them being token blends. This segment creates many problems for several of the interpreters, who have problems identifying both the discourse entities in the segment and the relations between them.

When the signer is about to create a surrogate blend, she often indicates the identity of the visible surrogate in the coming surrogate blend with the use of a noun phrase. This noun phrase can be produced towards the end of a sequence produced from signer's perspective, or in a non-blended sequence. Such indications of whom the signer will become a visible instance of in the coming surrogate blend can consist of an explicit mention of the discourse entity, like the noun phrase *MANY DOCTOR* in the non-blended sequence before RSB3:10. But, they can also consist of one or several signs that only indicate the frame necessary for identifying the surrogate, like the signs *MEDICAL-SERVICE TODAY*, which occur in RSB2:3. Next, in RSB2:4, the signer is a visible instance of (somebody working in) today's health care. The invisible surrogate [dying patient], in the same Real Space blend, is never explicitly referred to with any sign. That discourse entity has to be identified from the current frame, and from other signals such as the fact that the visible surrogate [today's health care] is addressing it. That the invisible surrogate is located in front of and slightly lower than [today's health care], possibly in an equally invisible [hospital bed], can also be regarded as a clue. Liddell & Vogt-Svendsen, in their study on Norwegian Sign Language, describe four sources of information that allow the addressee to create the appropriate RSB: "shared knowledge of NSL grammar", "the directional signs produced by the signer", "shared knowledge of the world", and "shared

knowledge of current discourse” (2007:182–183). They do not use the concept frame, though shared knowledge of the world of course covers parts of the same kind of knowledge.³⁶

The [audience] in RSB3:4 is another instance of an invisible surrogate that is never explicitly mentioned by the signer. Despite this, the signer builds upon it for the identification of another discourse entity; many in the audience, indicated only with MANY in RSB3:6. To identify this surrogate, an addressee must have conceptualized [the audience] properly already in RSB3:4, with the aid of the context and the current lecture frame.³⁷

As mentioned previously, Liddell & Vogt-Svendsen state that despite what has been widely accepted, signers do not have to “identify every spatial element *prior* to making use of it” (2007:193, my emphasis). In RSB2:2–2:3, the addressee has to identify the invisible surrogate [dying patient] with the aid of several signs, e.g. cl-PERSONx2 PATIENT, which are produced *after* the surrogate blend where the verb DISCUSS-WITH^{>[dying person]} is used. (The visible surrogate in this blend is [EKR], who was indeed identified prior to the blend, with the sign NON-1st-SING^{>[EKR]}.) In another surrogate blend (RSB2:7), the explicitly mentioned discourse entity is invisible; the inanimate entity [lessons of life], which is the current discourse topic. The visible surrogate [person doing lessons], on the other hand, is never explicitly mentioned but has to be identified from the context. Thus, the signer actually does not identify this spatial element at all, completely relying on the addressee’s ability to identify it from previous cues provided by the signer, as well as from the current frame.

A complicating factor during the work with this study has been that no analysis has been made of verbs like DISCUSS-WITH^{>[dying person]} and LEAF-THROUGH^{>[lessons of life]} for Swedish Sign Language. They are instances of a kind of verb where the signer’s gaze and/or hands indicate the direction where an entity being acted upon/with is located. When such verbs are used, it can be more or less clear whether the signer really creates a surrogate blend or not, as the signer’s gaze is directed towards an area in signing space where the signer potentially conceptualizes a discourse entity as being located. An analysis of these verbs lies outside the scope of this study. However, one way of treating the surrogate blends they possibly create could be to describe them as existing on a continuum, ranging from *thin* or maybe *weak* surrogate blends to *full* surrogate blends. For a detailed description of such verbs in ASL cf. Liddell (2003:117–119).

Verbs can be produced both from signer’s perspective and from the perspective of a discourse entity. Regardless of which, the addressee must identi-

³⁶ See Napier (2002:23) for a summary of how *frame theory*, or *schema theory*, has been used in relation to discourse and interpretation.

³⁷ As mentioned above, a possible additional difficulty is that this instance of the sign MANY is produced very quickly, only lasting 5 frames (≈0.2 seconds).

fy all the discourse entities correctly, in order to be able to conceptualize the discourse content in a similar way to how the signer has conceptualized it. We see one particularly clear example of this when the signer uses a verb to change the location of an invisible surrogate: INVITE^{>|dying patients|forward/right-new location in front of |EKR|}. To understand which discourse entity is located where in signing space after the production of this verb, it is of course necessary for the addressee to have identified the invisible surrogates correctly *before* the verb was produced.

Though gaze direction and the position of the signer's head and body have not been the focus of this analysis, they still deserve to be mentioned. They are instrumental in indicating whether signs are produced from signer's perspective or from the perspective of a discourse entity, and in the latter case from the perspective of which discourse entity they are produced. In RSB3:7 and RSB3:9 for example, changed posture and gaze direction indicate that the signer has become a visible instance of one of |many in audience|. Resuming eye contact with the addressee is often a signal that the signer is resuming her role as signer/narrator.

Based on the analysis for this study, there appears to be a correlation, indicating support for the hypothesis, in that the more Real Space blends a segment contains, the more problems the interpreters experience in producing an equivalent target language discourse in terms of content units. Segment 1, which was the least complex segment in that it contained only three RSBs, does not seem to cause any major problems for the interpreters in rendering the content units. Only one interpreter failed to render one (1) of the discourse units in segment 1, a relation. The Real Space blend structure of segment 2 contains more RSBs than that of segment 1, eight compared to three, and even though there are fewer discourse entities and fewer relations than in segment 1, several of the interpreters have difficulty rendering segment 2 correctly. In the interpretations of this segment, there is a clear tendency for discourse entities to be easier to render correctly than relations. Segment 3, which is the most complex segment, with a total of fifteen RSBs, causes the most problems for the interpreters. Here, the number of content units rendered by the interpreters varies from 12 to only 1, out of a total of 13. There is no clear tendency to be found regarding any difference in difficulty between rendering discourse entities and relations in this highly complex segment.

Interpreting unexpected content

The general characteristics of a discourse, and how it is structured, affect whether the discourse is easy to understand or not. Naturally, this will affect an interpreter's understanding of the discourse, as well. Unlike ordinary addressees, however, an interpreter cannot just wait and see in the hope that

things will become clearer or easier to understand. Interpreting entails having to make do with what you have received from the speaker up until the time when you are expected to deliver your product, and for simultaneous interpretation, that time is basically *now*. What is not there yet is not there, and the interpreter may at times have to anticipate what will come, if the language she is working into requires that information (Chernov, 1994).

One of the impressions formed during this first attempt at analyzing the recorded simultaneous interpretations of this discourse was that unexpected content often seemed to cause problems for the interpreters. Since becoming aware of this tendency, I have frequently seen examples of it when watching interpreters at work. Similar observations were made by Selin-Grönlund in her description of interpreting in work place settings:

“It is easy to distinguish the contents of a speech that proceeds systematically, whereas it may require more processing both linguistically and cognitively to understand a ‘spur of the moment comment’.” (2007:68)³⁸

Characteristic of segment 3 is, among other things, its unexpected and to some extent drastic content, whereby, e.g., EKR is reported to say that the dying patients that are present during her lecture can die any time, “maybe during this lecture”. The unexpected nature of this content may be part of the reason so many of the interpreters have more problems with this segment than they do with segment 1 and 2.

As we can see from the more detailed description of the interpretations of segment 3, above, all of the L2-interpreters, who have learned Swedish Sign Language as adults, seem to have more problems understanding the source text than do the L1-interpreters. The L2-interpreters seem to struggle harder to make sense of what they see and to make the text less dramatic. It is as if they do not really believe the signer can actually say what she is saying and thus have problems delivering an interpretation with that content. This is particularly evident, e.g., in segment 2, when the signer says that “today’s health care is too focused on life” and that “some people need to die”. Possibly, the general tendency for unexpected discourse content to cause problems for interpreters is in turn aggravated by a weaker sign language competence in the L2-interpreters. As no assessment of the language skills of any of the interpreters was made, in either of the two languages, no firm conclusions can be drawn regarding this. Considering the fact that a majority of the students in signed language interpreter training programs in Sweden are second language learners of Swedish Sign Language, more research on the language skills of interpreters would be welcome.³⁹

³⁸ My translation of a Swedish version of her text, which was originally published in Finnish.

³⁹ For several of the interpreter training programs, fluency in Swedish Sign Language is not a prerequisite, but something you are expected to learn while attending the program.

Final comments on interpreting

The present study, with its focus on Real Space blends, only scratches the surface of all of the various issues that need to be taken into consideration for a proper analysis of simultaneous interpretation from signed to spoken language. There are, however, some interesting points to be discussed even regarding this preliminary analysis, where the content of the end product of the work of these interpreters has been compared to the content of the source discourse.

Deciding which discourse entities and relations to list as key content units turned out not to be a simple matter of looking at who and what was mentioned, and who was doing what to whom, and then listing that. A particularly clear example of the kind of issues faced here can be seen in a sequence in segment 3 (RSB3:2) in which the signer as |EKR| introduces the dying patients to an audience, which she does not explicitly refer to. The audience is thus not explicitly mentioned, but it will play a key part in the coming discourse, since the signer will blend with one of its members to become a visible surrogate of one of |many in audience|. In Table, 8 the audience as a whole is therefore not listed as a discourse entity, but EKR and dying patients are. However, when the signer explicitly mentions many in the audience later, they are listed as a discourse entity.

When the signer describes how EKR invites the audience to ask the dying patients questions, she chooses to do this with a surrogate blend and uses constructed dialogue to show the addressee how it may have taken place. Constructed dialogue can be used in spoken language as well and could therefore be part of the product delivered by the interpreters. A more idiomatic way to express this content in a spoken language can, however, be found, e.g., in the rendition of interpreter L1e: “*and people are allowed to ask questions.*” From her formulation we understand that the audience has been invited to ask questions, even though we are not explicitly told how it was done. Most of the interpreters do not use constructed dialogue, and quite rightly so, but use other ways of expressing this content in Swedish. Tables of the kind used in this study, to illustrate whether content units are rendered or not, are not suited for capturing this kind of structural difference between two languages.

Listening through all of the interpretations several times while watching the video recordings of what the interpreters were seeing made me aware of one interesting difference between the two groups of interpreters. When the L2-interpreters in this study stop the video tape and rewind it, they seem to do so because they have not understood what the signer just said. Watching the sequence again will sometimes, but not always, help, and they will then render that part of the discourse. The L1-interpreters, on the other hand, seem to stop the video tape because they need more time to say everything they have seen and understood. They frequently choose *not* to rewind after

they have finished interpreting, and as a consequence they may fail to render parts of what the signer said just before they stopped the tape. They have forgotten it, and since they did not rewind and refresh their memory, it is not present in the final product of their work. When the recordings were originally made, I had no idea I would later be using them for another purpose. Otherwise, an interview after each recording session, looking through the video tape and discussing it with the interpreter could have provided me with interesting insights into what was happening. Such an interview could also have given an indication as to whether any of the interpreters used omission strategically.

There is one more complicating factor that is neither mentioned in the RSB-descriptions of the discourse nor in the above discussion of the interpretations, but which still deserves to be mentioned. Not only do the analyzed segments (as well as the rest of the discourse) differ when it comes to the number of RSBs and discourse entities, but time also needs to be factored in. First of all, the longer into the discourse one gets, the larger is the total number of discourse units and Real Space blends that have occurred and need to be correctly conceptualized and remembered by an addressee. Secondly, and particular to interpreters as opposed to ordinary addressees, the longer one has interpreted the more tired one is from the cognitive efforts required for simultaneous interpretation.⁴⁰ This means not only that the aggregated number of RSBs and content units increases the cognitive load but that the effort of simultaneously interpreting in and of itself contributes to making the interpreter more tired. Possibly, this additional cognitive effort is the reason that even though the clues provided by the signer may be sufficient for an ordinary addressee (cf. Liddell & Vogt-Svendsen, 2007:193, quoted above), these cues are not sufficient for an interpreter who is faced with producing a simultaneous interpretation of the discourse.

⁴⁰ For detailed discussions about the *Effort Model* of simultaneous interpretation, see e.g. Gile, 1995 and 2002.

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Appendix 1: Transcription key

General note: Glossing of signs is done in two different ways in this study. In the fifth and sixth columns in RSB tables, *Location of blended entity* and *Expressions used about the entities*, signs are represented with glosses. The three segments that have been analyzed in the study have also been glossed in full, with the text separated into numbered chunks, and these transcriptions are presented in Appendix 2. These transcriptions generally have only one line of glosses. When there are two lines of glosses, the top line represents the signer's dominant (right) hand and the lower line represents the non-dominant hand. A line of hyphens (---) is used to indicate the duration of a sign, when that is of particular interest.

To enhance readability of the glossing of whole chunks, full stops (.) and commas (,) have been added in some places to indicate major boundaries in the discourse. The signs that are found in the RSB tables are presented in **bold** in Appendix 2. POINTER buoys are only glossed with POINTER in the glossings of whole segments, but in tables the more precise term POINTER-buoy is used as it indicates that the sign is produced with the non-dominant hand.

General transcription notes:

LIVE	English words in capitals are used to represent Swedish Sign Language signs. Some glosses indicate the form of the sign and some the function, whereas most are chosen to represent the meaning of the sign. This does not imply that the sign has the same semantic, morphological or syntactic characteristics as the English word chosen. Compound signs are often loans from Swedish, and this tends to lead to glossing that could be confusing in English since it can be far removed from the English meaning of the sign. Compounding is therefore only indicated for a few signs, where a slash (/) has been used.
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HAVE-A-FEELING	Glosses containing hyphens indicate that more than one English word is used to represent a sign.
#THEN	A gloss preceded by a # indicates a fingerspelled item.
INDEX ^{>forward/high}	As the use of space is the main interest in this study, some pointing signs have not been analyzed further but are simply glossed with INDEX.
INDEX ^{>forward/high}	> followed by a direction (e.g. ^{>forward/high}) indicates that a specific instance of the sign is discussed.
NON-1st-SING ^{>x}	^{>x} indicates that the non-directed form of a sign is discussed.
dying person	Words enclosed in vertical brackets represent an entity in a Real Space blend.
POINTER ^{> EKR}	> followed by a notation representing a blended discourse entity (e.g. ^{> EKR}) indicates that a specific instance of the sign is discussed.
MOVE-FROM-TO ^{> EKR -forward/high}	> followed by a notation with more than one blended entity and/or location separated by a hyphen (-) indicate that a sign moves from one place in signing space to another.
INDEX-c? POINTER ^{>?}	A gloss followed by a ? indicates that it has not been possible to establish whether an instance of that sign is actually produced there or not. A > followed by a ? indicates that the identity of the entity pointed at is not identified yet.
INDEX-c	A pointing sign directed at the signer's chest that can either be a first person singular personal pronoun or the equivalent of the Swedish word <i>man</i> (Eng. 'one'), which is a non-specific third person personal pronoun (and can have both singular and plural reference).

NON-1st-SING	Non-first person singular pronoun.
NON-1st-PLUR	Non-first person plural pronoun.
POSS	Possessive pronoun.
cl-PERSON	A noun classifier, which uses a handshape where the thumb and index finger are both bent and opposed.
PERF	A perfect marker, which can be produced either with one hand or with both hands.
DET	A determiner consisting of a pointing sign.
PSY...	When the signer starts to produce a sign but does not finish it, this is marked with three full stops (...)
gesture	Some hand movements that might be signs or gestures have not been analyzed further. They are indicated with <i>gesture</i> in lower case letters.
chest rest	A rest position described in Nilsson (2007)
left of signer/mid	The locations of tokens and invisible surrogates are described in relation to the body of the signer as possible combinations of: to the left, to the right, above or in front of the signer; low, mid, mid-left, mid-right, left, high, remote or close. They are all described from her perspective.
BG	When a surrogate has been analyzed as backgrounded, this is marked with BG in the RSB tables.
+	+ is used in two different ways in the RSB tables. It is used in the fourth column to indicate that a visible surrogate and an invisible surrogate co-occur, and in the sixth column to indicate that two signs co-occur.

Appendix 2: Glossing and translation of the segments in the study.⁴¹

Segment 1, chunk 1–3:

1. #YES. PERF **INDEX-c** READ ONE BOOK BY, WRITE BY,
#ELISABETH #KUBLER #ROSS. SELF cl-PERSON^{>|EKR|} BORN IN
SWITZERLAND MOVE-FROM-TO^{>|EKR|-forward/high} TO **INDEX**^{>forward/high}
USA BECAUSE MARRY WITH ONE USA cl-PERSON DURING SECOND
WORLD-WAR AFTER PRECISELY AFTER #THEN MARRY
NON-1st-SING^{>|EKR|} chest rest

“Well, I have read a book by, written by, Elisabeth Kübler Ross. She was born in Switzerland, but moved to the US, because she married an American during WWII, well, right after, that’s when she married.”

2. **NON-1st-SING**^{>|EKR|} **SELF** STUDY TO DOCTOR **NON-1st-SING**^{>|EKR|}.
INDEX-c STUDY. CARRY-ON DIGRESS TO PSY...
NON-1st-SING^{>|EKR|} STUDY PSYCHOLOGY DIGRESS GRADUATE
PSYCHOLOGY/DOCTOR NON-1st-SING^{>|EKR|} chest rest

“She studied to be a doctor, but digressed from that, began to study psychology and became a psychiatrist instead.”

⁴¹ Glosses in bold face are found in the sixth column (*Expressions used about the entities*) in the Real Space blend tables.

3. NON-1st-SING^{>|EKR|} STRANGE **cl-PERSON**^{>|EKR|} WOMAN REALLY
 NON-1st-SING^{>|EKR|} chest rest NON-1st-SING^{>|EKR|} CALL QUOTATION
 FOR DEATH/LADY NON-1st-SING^{>|EKR|} chest rest BECAUSE
 NON-1st-SING^{>|EKR|} RESEARCH MUCH ABOUT DEAD, WHAT HAPPEN
 AFTER DEAD WHAT HAPPEN BEFORE DEAD WITH **HUMAN-BEING**
cl-PERSON^{>|dying person|} HOW THOUGHT-INSIDEx2 INDEX^{>|signer's head|},
 MAYBE AFTER gesture DIFFICULT RESEARCH gesture.
 NON-1st-SING^{>|EKR|} SEEMS^{>|EKR|} NON-1st-SING^{>|EKR|} PERF ARRIVE-AT
 TO SOMETHING WHAT HAPPEN AFTER DEAD LIKE chest rest.

“She is a truly remarkable woman. She is known as ”the lady of death”, as she does a lot of research on death.⁴² What happens after death, what happens to a person before death, what happens in their minds? Well, maybe it’s a bit difficult to tell what happens after death, but she at least seems to have found out some things.”

Segment 2, segment 4–6:

4. PLUS NON-1st-SING^{>|EKR|} GLADLY MUCH DISCUSS-WITH^{>|dying person|}
 WITH **cl-PERSONx2 PATIENT cl-PERSON-plur DIE PATIENT WILL**
ON WAY DIE chest rest
NON-1st-PLUR^{>|dying patients|} chest rest

“Moreover, she enjoys talking to patients, patients who are going to die soon.”

⁴² “The lady of death” is my translation into English from Swedish Sign Language; some other epithet may actually be used in English. Present tense is used, as EKR was still alive at the time of the video recording, though she has since passed away.

5. BECAUSE **NON-1st-SING**^{>|EKR|} HAVE-OPINION THAT

MEDICAL-SERVICE TODAY TOO MUCH FOCUS^{>|dying patients|} TO

LIVE!^{x3>|dying patients|} gesture LEAVE-IT gesture EXIST ONE PART

NEED DISCUSS PLUS **ONE PART** NEED TRULY ALSO DIE palms up

“She thinks that today’s health care is too focused on life and living. Even though some people may need someone to talk to, some people also need to die.”

6. **NON-1st-SING**^{>|EKR|} HAVE-OPINION LIKE EXIST SPECIAL DECIDE

RULES EXIST **ONE #LESSON IN LIFE NON-1st-SING**^{>|EKR|} CALL FOR

#LESSON IN LIFE. PERF DO **ALL #LESSONS #THAT** EXIST PERF **ONE**

LESSON PERF LEAF-THROUGH^{>|lessons of life|} FINISH FULL FINISH

#THEN #OK ACCEPT LIKE **UP**^{>|up|} **HEAVEN SOMEONE** ACCEPT

NON-1st-SING^{>|dying patient|} ALLOW DIE.

“According to her, there are certain rules; she calls it *lessons, the lessons of life*. And once you have done all your lessons, gone through all of them piece by piece, then somebody above will allow that you die.”

Segment 3, chunk 25–26:

25. **NON-1st-SING**^{>|EKR-f|} SAY #**SHE**^{>|EKR-f|} **THAT-IS**
POINTER^{>|EKR-f|} **POINTER**^{>?}

SICK cl-PERSON-PLUR^{>|patients|} **INDEX**^{>|patients|} **WILL ON WAY DIE**
POINTER^{>|dying patients|}---

INDEX-c? LECTURE FINISH ONE-HOUR rest on **POINTER**^{>|dying patients|}

INVITE^{>|dying patients|forward/right-new location in front of |EKR|}

gesture **START ASK-QUESTIONS**^{>|audience|-|dying patients|}

NON-1st-SING^{>|dying patients|} WILL DIE WHEN ANY-TIME, TOMORROW

THE-DAY-AFTER-TOMORROW EVERY-DAY TODAY gesture OR DURING

THERE^{>|the place of the lecture|} **LECTURE** gesture

INVITE^{>|dying patients|forward/right-new location in front of |EKR|}

ASK-QUESTIONS^{>|audience|-|dying patients|}

MANY NONPLUSSED DON'T-WANT ASK NONPLUSSED GRADUALLY
NONPLUSSED-----

BEGIN ASK-QUESTIONSx6^{>|dying patients|}

“Then, she will say that these people are patients who are about to die. After that one-hour lecture, she will invite the audience to ask questions. She will say ‘Go ahead, ask questions, they are about to die any time now, maybe tomorrow, the day after tomorrow, or today - maybe during this lecture... Feel free to ask them questions.’ But the audience is usually completely nonplussed, not wanting to ask anything. Then, gradually, they start, and more and more questions will be asked.”

26. PLUS MANY PERF BECOME HELP DURING TIME HAVE-A-FEELING

AHA **INDEX-c** HOW FEEL-INSIDE. **MANY DOCTOR** ALSO

AFRAID MEET **POSS-c** PATIENT **INDEX-c** TRY SAVE LIFE OF **INDEX-c**

gesture DIE BE-IN-DESPAIR OFTEN. **INDEX**^{>forward/high} MEET

ARRIVE-AT^{>|the lecture|} DURING LECTURE MEET OTHER THINK.

FAIL LEAVE-IT THOUGHT-INSIDE LEAVE-IT #TURN

NON-1st-SING^{>|doctor's patient who dies|} FLOAT-AWAY-HIGH AWAY BE TIME

gesture LIKE

“And a lot of people have also been helped during her lectures, thinking ‘So, this is me, these are my feelings...’ And many doctors are afraid to face the fact that even though they try to save the life of a patient, that patient may still die, this may happen quite often... However, her lectures will introduce them to a different way of thinking. If somebody dies, it’s not such a big deal, it’s because it was time for him or her to die.”

Appendix 3: Translation of the whole discourse.

1. Well, I have read a book by, written by, Elisabeth Kübler Ross. She was born in Switzerland, but moved to the US, because she married an American during WWII, well, right after, that's when she married.

2. She studied to be a doctor, but digressed from that, began to study psychology and became a psychiatrist instead.

3. She is a truly remarkable woman. She is known as "the lady of death", as she does a lot of research on death.⁴³ What happens after death, what happens to a person before death, what happens in their minds? Well, maybe it's a bit difficult to tell what happens after death, but she at least seems to have found out some things.

4. Moreover, she enjoys talking to patients, patients who are going to die soon.

5. She thinks that today's health care is too focused on life and living. Even though some people may need someone to talk to, some people also need to die.

6. According to her, there are certain rules; she calls it *lessons, the lessons of life*. And once you have done all your lessons, gone through all of them piece by piece, then somebody above will allow that you die.

7. She had a strange childhood, too. She was one of a set of triplets, the oldest of them. But, she only weighed one kilo when she was born, and therefore she really fought hard, to achieve her goals. Since she was the smallest, the expectations of her were a bit special.

8. She has done research in different hospitals, about death.

⁴³ "The lady of death" is my translation into English from Swedish Sign Language; some other epithet may actually be used in English. I am using present tense, as Elisabeth Kübler Ross was still alive at the time of the video recording, though she has since passed away.

9. But she says that her research is not about death, but about life... what it is like to live knowing you are soon going to die. Because that's when people are truly alive – that's her view of things.

10. What does she mean by that? Well, it is when death is nearing that people often start to wonder about who they are. They start living intensely, they look into themselves, they quite simply start living.

11. She has interviewed many patients, especially those dying from cancer. And it is difficult for her to get in touch with dying patients, because the hospitals are opposed to the work she is doing.

12. Hospitals, especially the doctors, think she is weird, doing research on death and recruiting patients for that. Such a weird person really needed to be stopped. So it has been really hard for her, but she continued struggling anyway.

13. And the patients she was interviewing, she noticed one thing about them – they didn't fear death. To begin with, you go through different phases. First, you're in a state of chock, then you're in denial, the third phase is when you're coming to grips, then you accept and finally, in the fifth phase, you need to get those around you to accept it.

14. That's the hard bit, to get others to accept it. Of course, as a relative of a person who is going to die, it is hard to accept that, really hard. But you have to, because when you do, it is easier to move on.

15. She also says that there is a better world after death. She says that most people say there is a new life, another life after this, so that once this life is over with, there is another life. It's not that we get to be dead, and are just gone, but there's a new life.

16. And those who have had an out-of-body, near-death experience, they have told her about it... She has done research on that all over the world... in Asia, America, Europe, down in Australia, well, in different countries all over the world. And she's found a common pattern for all near-death experiences.

17. And she says that children are the best to interview, talk to, etc. They are simple and straightforward, and never try to be evasive.

18. She also says that people know, they know when they are about to die. When the moment is there, they know.

19. That's why you mustn't... if, for example, you have a patient, who is dying... who has that feeling, and demands to meet somebody to talk, now. That's what s/he would want. Then, you mustn't say "No, wait till tomorrow", because then it will be too late. That's why, if they say now, then now it is, and nothing else.

20. Today, she's eighty, or over? Well... she's about eighty now. She lives in Arizona, in the US.

21. How come she moved there? She had traveled around the US, moved around... She had divorced her husband, and moved around quite a lot in the US.

22. She had set up different centers, dealing with research, healing, spiritual rebirth, and such strange things.

23. A lot of people fear her research, the things she does, etc. Her lectures are really popular, lots of people gather to listen to her.

24. And she always asks dying people if they want to come to her lectures, so that after an hour about death, fear, relations, not being afraid to face these issues, these people who are sick and dying, the phases they go through, that you have to face this...

25. Then, she will say that these people are patients who are about to die. After that one-hour lecture, she will invite the audience to ask questions. She will say "Go ahead, ask questions, they are about to die any time now, maybe tomorrow, the day after tomorrow, or today - maybe during this lecture... Feel free to ask them questions." But the audience is usually completely nonplussed, not wanting to ask anything. Then, gradually, they start, and more and more questions will be asked.

26. And a lot of people have also been helped during her lectures, thinking "So, this is me, these are my feelings..." And many doctors are afraid to face the fact that even though they try to save the life of a patient, that patient may still die, this may happen quite often... However, her lectures will introduce them to a different way of thinking. If somebody dies, it's not such a big deal, it's because it was time for him or her to die.

27. She has received threats to her life, attempts have been made to kill her several times, etc., and so she's become pretty hardened by now.

28. When she was moving around the US, she wanted to set up a center, where she could hold different workshops, or whatever it's called... that's what she wanted.

29. So, she looked around, and she found a place in Virginia, in the south east of the US.

30. She found a big farm... and lots of people came there as volunteers, to help build, plant, fix the house and animals. Lots of people kept coming there.

31. Then, after a while, she started to think about something else... what about AIDS? [Yes, AIDS.]⁴⁴ What about AIDS? She had done research on cancer, but what about AIDS.

32. Therefore, she met her first AIDS-patient, and she said she was shocked, and all she wanted was for that person to go away, to get out of her field of vision sort of... The person had an air of death, the body was full of marks, and she was really shocked.

33. But, then she realized that, if she, she of all people, reacted like that... how would others react? How would the whole world react? That thought really made her feel ashamed, and she decided to meet with them anyway, and to start working with AIDS-patients, too. So, when she was lecturing in different places, she would bring them too.

34. Then, after a while, she started thinking about something else... she saw it in the papers, in interviews, in medical journals, etc.... And that was the AIDS-children, who had contracted AIDS e.g. via blood transfusions, or who were born with AIDS because their parents had it.

35. Back then; people were hysterical, afraid of an epidemic breaking out, etc. They would get rid of these children, throw them in trash cans, leave them to an orphanage, or anything.

36. Therefore, she was wondering what could be done for these children, who were unwanted only because they had AIDS. It was regarded as a punishment for one's sins, the will of God, etc. But she didn't think that was true.

⁴⁴ The signer used a sign for AIDS that the addressee was not familiar with. This is the signer's answer to the addressee's question "Do you mean AIDS?" and AIDS was now fingerspelled.

37. Therefore, she decided to make that big farm she had into an AIDS-center, a kind of adoption center... for children nobody wanted, simply because they had AIDS. Those children, she would take care of and let them stay on her farm.

38. She also said that she would bring them up...⁴⁵ Well... she never got around to that. Her taking on these AIDS-children made the neighbors really upset. Somebody set her farm on fire, and it burnt down completely. Fortunately, the children had not been taken there yet. So, she decided to give up her plan of bringing up the children on the farm, and to start an adoption center instead, where people could call if they wanted to take care of an AIDS-child.

39. That's why she's in Arizona now. She says in her last book... she's had a massive stroke, she's been seriously ill, and she can't walk. She says that this will be her last book, and that the only thing she regrets is that the AIDS-center never came to exist.

40. And what will happen in the future, nobody knows...

⁴⁵ The addressee signals that the signer has to finish soon, since the recording was only supposed to be some 6–7 minutes long. The signer is distracted by this for a while, before she starts signing again, now with the aim to wrap things up.