Title: The Development of Narrative Skills in British Sign Language[*]

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Introduction

By the end of the preschool period, children have acquired a generative language system commensurate with that of the adult. Despite this ability there are still many challenges that remain in learning how to use language in different pragmatic contexts. This chapter focuses on the continued developments and refinements that occur in the production of Deaf school-age children's narratives in British Sign Language (BSL). Although the data and psycholinguistic models discussed are based on narratives produced in BSL, it is intended that this work can be applied to other signed languages.

The chapter is organised as follows: first a general description of spoken language narrative development in typically developing hearing children is provided. Following this background the chapter turns to the exploration of two different pragmatic components of narrative: a) the organisation of reference forms in BSL for particular referential functions (Morgan, 1998; Morgan, 2000, Morgan & Woll, 2003) and b) the sequencing of episodes in complicated narrative scenes (Aarons & Morgan, 2003; Morgan, 1999; Morgan, 2003). In order to interpret the BSL developmental data, background on reference and event sequencing in adult English and BSL is first discussed. The chapter concludes with an exploration of the issues surrounding Deaf children's mastery of the extended uses of signed language narrative (such as those needed for academic discourse). It is argued that these developments revolve around the bilingual relationship between literacy in signed and spoken language. School-based activities involving comparative narrative analysis are outlined at the end of the chapter.

From first words to first stories

Children start to link sentences together in narrative only after a prolonged period of mastering the sentence level linguistic devices of their language. Ruth Berman has described this as one 'paradox' of language development in that children progress from mature use of their language at one level to a complete lack of awareness of the new pragmatic demands made of the same linguistic forms at the level of discourse (Berman, 1988; 2002). Michael Bamberg, also writing about this transition argued that,

> 'Linguistic knowledge of lexical semantics and syntactic rules forms the building blocks out of which narrative is constructed; we expect the child first to acquire linguistic knowledge and then to apply this knowledge (in the form of semantics/syntactic building blocks) when acquiring the ability to tell narratives'. (1986, 1)

The production of narrative involves the coordination of at least three major cognitive domains: a) many linguistic devices are used within and across sentences and bigger discourse units (such as in episodes and settings). Some of these include the correct use of gender, number and tense agreement, the use of markers for direct discourse, as well as correct anaphoric and cataphoric reference (Peterson & McCabe, 1990); b) pragmatic abilities are central in narrative production and comprehension. Which includes the awareness of a conversation partner or addressee's information needs. (Hudson & Shapiro, 1991) and c) domain general cognitive abilities are involved in narrative such as working memory and information processing for the sequencing of large amounts of information (Eisenberg, 1985).

These domains are also involved in the construction of extended discourse (such as narrative) in signed languages. Although less well documented than in spoken languages, work on sign language discourse has revealed how modality specific devices (e.g. eye-gaze shifts) are used to organise and structure extended signed texts (Bahan & Supalla, 1995; Gee & Kegl, 1983; Roy, 1989). The structure of narrative in signed language is probably more akin to similar texts produced in non-written languages with 'oral' traditions (Bahan & Supalla, 1995). This difference between BSL and English will become more salient in the final section of the chapter.

The development of the cognitive abilities necessary for narrative begins with children's first attempts at moving from sentence level descriptions of the 'here and now' to talking about past or fictional events in narrative. Narrative has its origins in the first proto-narratives that stem from children's experiences of picture book 'reading' and play involving toys and other objects that occur in most homes in the years preceding entry to school. As abilities in sequencing events increase proto-narratives get larger (Applebee, 1978). Once children begin school, narrative gets entwined in other important developmental milestones such as theory of mind (Eaton, Collis & Lewis, 1999).

What goes into a narrative?

The narratives produced by typically developing 3-5 year olds are generally vague and not well constructed. They frequently centre on some event of personal and immediate significance. Often different character's actions in different episodes are not linked across the narrative; rather the child describes each successive scene independently. By early school age (5-6 years) children are already able to consistently produce stories with certain key elements, such as where the narrative is

set and sometimes more optional and alternative information is provided (Applebee, 1978). At this age children can narrate with a basic story grammar and attempt to organise the flow of information in a hierarchical fashion. Other story elements such as the internal responses of characters including their motivations, intentions, goals, and plans for resolving conflicts emerge much later in development.

It is after 6 years that more appropriate narratives begin to develop; these contain plots, character development and a logical sequence of episodes. As children mature, their narratives become longer, more detailed, better organised and contain a greater number of episodes. The episodes are also more likely to be complete and to be embedded within larger discourse units (sub-plotting). At around the age of 8 or 9 years, children can link stories internally and obey the linguistic and pragmatic constraints imposed on them for telling a story to another person (Kemper, 1984). It is also around this age that the introduction of detail and variation through differential linguistic markers such as pronouns and the linking devices 'and', 'so' and 'when' start to occur. More effort is also evident with increasing age, to engage and keep the listener's attention. This is related to the child's development of discourse pragmatics.

The development of more complex narrative and pragmatic skills is interwoven into children's educational experience. As literacy abilities grow, so the links between 'oral' narrative skills encouraged in earlier classroom activities such as 'show and tell' or fictional story telling, and the new extended, decontextualised uses of language encountered in written texts become more evident (Westby, 1998). Narrative has long been considered important for later reading readiness and literacy in general (Debaryshe, 1995), so much so, that in the United Kingdom, narrative development features in the Government's 'Early Learning Goals' (Botting, 2002).

These guidelines suggest that prior to starting school, children should be able to use language to 'imagine and recreate roles and experiences'.

Some studies also point out that the cultural biases in certain narrative skills are more preferable in mainstream education than others (Heath, 1983). Different cultures define and value varieties of narrative skills in different ways, meaning that while,

> 'Children from some backgrounds enter school with pre-existing knowledge of the type of narrative structure that is valued in school; children from other backgrounds do not' (Peterson, Jesso & McCabe, 1997, p1).

The development of discourse pragmatics

Pragmatic competence involves the ability to use language appropriately in different social contexts. Most of what is discussed in this chapter will concentrate on the pragmatic abilities involved in retelling events from storybooks. One part of pragmatics is knowing the principles that govern how information should be organised across a series of interrelated utterances in order to make the parts of a narrative cohesive or connected. There are two main aspects to this: a) marking with the appropriate reference form, the relative newness of information as a function of a specific referential function and b) controlling the flow of information as a function of both the passing external plot time and also internal episode sequences.

Marking reference forms and referential functions

All languages use linguistic devices to pick out or refer to entities within discourse. English has a continuum of reference forms with different referential saliencies or dependencies. These include: indefinite noun phrases e.g. 'a little boy'; definite noun

phrases e.g. ‘the dog’; pronouns e.g. ‘the boy and the dog looked for the frog, they found some trees’; and zero or ellipsed forms e.g. ‘, he climbed up the tree and zero looked in the hole’. These forms carry out several referential functions during the telling of a story including: the introduction of a character as the discourse topic into the narrative for the first time; the reintroduction of a character into the narrative after leaving or after being replaced as the discourse topic by another character; and the maintenance of a character in the narrative as the discourse topic over stretches of several linked utterances.

Narrative involves the building up of layers of information about characters, places and events. Givòn (1983) established the principle that the choice of form used in narrative is related to its function (e.g. introduction, reintroductionor maintenance of reference). Narrators when retelling stories make choices about how a character will be focused on in the narrative (Slobin, 1996). The first time a character is introduced into the story, this is new information and so reference is made through a salient or referentially unambiguous reference form e.g. ‘a little boy’. There are two options available following an introduction: the character may stay as the discourse topic and hence be maintained, or may leave the focus of attention temporarily, needing to be re-introduced at some later time. In these latter contexts more subtle, less salient reference forms are used, through, for example pronouns or zero forms. Previously given information for identifying the antecedent of the anaphoric form is assumed to be implicitly shared by both the narrator and the addressee. The use of reduced reference forms function as a pragmatic signal or marker of this implicitness or Relevance (Sperber & Wilson, 1995). The relationship between form and function can be shown as a hierarchy of explicitness shown in table 1.

Insert table 1 here please

Person reference in BSL[i]

While the reference forms in BSL differ, it appears that they perform similar referential functions to those described for English (Morgan, 2000). The 3 relevant forms described here are noun phrases, entity or semantic classifiers and role-shift.

a) Noun phrases. As in many spoken languages (e.g. Russian) there is no lexical difference between indefinite and definite noun phrases in BSL. The distinction is marked in other ways through discourse pragmatics. Noun phrases can also be expressed through a finger spelt word e.g. t-o-m, or a name for one of the characters e.g. BIG-NOSE.

b) Entity classifiers. In narrative entity or semantic classifiers (Supalla, 1990) mark the semantic category or the size and shape of the referent noun and are used for establishing referent identity, as well as describing topographical information (see Emmorey, 2003). For example the classifier for vehicle is articulated in BSL with a B handshape (a flat hand with the palm face down). In most narrative cases a classifier is used to maintain reference to an entity previously mentioned through a noun phrase antecedent. The example shown in figure 1 relies on the signer previously signing CAR so that in the succeeding sentence the classifier for vehicle and its movement are clearly understood.

Please insert figure 1 here

c) Role-shift. In BSL narratives it is often the case that the words, actions and thoughts of a character are described through direct discourse. This reference form is referred to in the literature by various terms such as: ‘role-shift’ (Loew, 1984);

'referential shift' (Emmorey & Reilly, 1998) and 'constructed action' (Metzger 1994; Winston, 1995) amongst others. Metzger (1994) points out that when the signer switches to role-shift to describe what someone said, did or thought, the narrator's actions are not a direct copy of what the third person did but a constructed version of these actions. Role-shift is used in narrative to maintain reference as its use relies on previous identification thorough a noun phrase antecedent. The example in figure 2 shows the signer describing the actions of a dog jumping up at a beehive.

Insert figure 2 here please

Reference forms in BSL can be placed on a hierarchy of explicitness related to the amount of information they carry. This is shown in table 2.

Insert table 2 here please

The development of the organisation of reference forms

a) English

Bamberg (1986) proposed stages in the development of reference form organisation. Initially children choose overt reference forms that unambiguously pick out characters even though they are maintaining reference rather than introducing or reintroducing e.g. (1) '…the boy fell-out and the bees were flying after the dog, the boy…' (5 year old example, from Wigglesworth, 1997, p295)

At the next stage of development, Bamberg described children as focusing on the organisation of reference at the level of the sentence by using one character as the main or 'thematic subject' perspective. In this way within small narrative units, the

main character can be maintained as the discourse topic through reduced forms e.g. pronouns, but in a rigid, formulaic way e.g. (2) '…the dog's sitting down, and he finds the beehive, and he's looking at it, and the boy's looking through a hole, and then he goes to the branch, and the dog is sitting down…' (6 year old example from Wigglesworth, 1997, p298)

Bamberg's final stage is reached when children choose a form based not only on the nearness of an immediate mention, but also by taking into consideration what is going on in the bigger discourse unit. In this way pronouns and zero forms can be used with full anaphoric functions stretching across intervening referents but relying on wider pragmatic relevance to complete coherence e.g. (3) '…and the boy looked down a hole, and a beaver came out, and the dog was shaking the tree where the beehive was, and he made the beehive fall, and the boy was looking in a tree…hole, and the owl, an owl came out and pushed him down…' (10 year old example from Wigglesworth, 1997, p294).

Adult-like use of this pragmatic knowledge continues to develop in the teenage years. The control of reference in order to carry out more complicated referential functions coincides with a major growth in the child's pragmatic abilities to assess the knowledge of the listener as well as monitor the narrative for ambiguity (Bamberg, 1986; Gillam & Johnston, 1985). The development of literacy is important in making these connections clear through overt text analysis tasks. By seeing reference across static written texts children can more easily build up knowledge of how a narrative is made up from layers of information about characters, places and events. Consequently children are expected in school to construct their oral narratives and extended uses of language (debating, answering questions or constructing explanations) based on the written narrative template. This way of speaking like you

write, but also thinking like you write (Olson, 1994, 2001) becomes one of the more preferred and valued types of narrative skills in the school context (Peterson, Jesso & McCabe, 1997)

b) British Sign Language

In studies of BSL narrative development e.g. Morgan (1998, 2000; 2003) and Morgan & Woll (2003), reference forms appearing in narratives were coded for whether they introduced, reintroduced, or maintained reference to a character. This means that an introduction was the first mention of a character in the story. If a character went out of discourse focus because of an intervening referent, then when it was referred to again it was coded as a reintroduction. Maintenance constituted the continued reference to a character that remained in discourse focus. The ability to judge which reference forms are needed for which referential function is a pragmatic skill based on assessing the conversation partner's needs. Children developing BSL need to master this level of pragmatic knowledge in order to tell clear and interesting signed narratives. Before outlining the development of BSL narrative it is worth mentioning that much of the literature on signed language narrative development has concentrated on production rather than story comprehension.

Understanding the language background of Deaf children

In studying the development of signed language narrative it is important to know the profile of the Deaf children upon whose narratives the research is based. This is because there are numerous intervening variables, which will affect the development of narrative, such as the degree and aetiology of deafness, the parental hearing status and the extent of children's exposure to rich language models (Strong & Prinz, 2000). A clearly influential variable is that many Deaf children will be involved in English

literacy programmes but have very little experience of fluent adult models of extended discourse in a signed language.

The narratives analysed and presented here were collected from 12 Deaf children and 2 Deaf adults exposed to BSL from infancy from their Deaf parents or in early childhood from their hearing parents. All the children attended a Deaf only day school, which had adopted a bilingual BSL/English policy. The hearing parents all signed with their children and were enrolled in adult sign language courses. In the school setting all the children had good models of fluent adult BSL including extensive examples of narratives and had been informally assessed as having age-appropriate levels of BSL.[ii] The age of the children ranged from 4;3 – 13;4 and none of the children had any developmental impairments. For comparison the children were grouped into three age groups as shown in table 3.

Please insert table 3 here

Collecting narratives

The narratives were elicited through a picture book retell task. The book, 'Frog, where are you?' (Mayer 1969) consists of 24 wordless pictures of various scenes depicting the adventures of a young boy and his dog, as they search for an escaped frog. After familiarizing themselves with the book, children re-told narratives from memory in BSL to their Deaf class teacher. During the retell the picture book was not present. This method for collecting the story was chosen, because previous studies have shown that, if the book is present, young children use the surface of the picture book rather than sign space when telling the story (Baker, Bogaerde, Coerts & Woll 1999; Morgan, 2003). The narratives were recorded on a video camera positioned

next to the addressee. Trained Deaf and hearing signers transcribed the signed narratives.

General narrative organisation

Looking at the development of narrative across the twelve children and two adults, the number of episodes produced in the narratives increased across the different age groups. The use of increasingly more episodes across the groups reflects the development of memory and planning processes. The percentage of reference forms classified as ambiguous conversely shows a uniform decrease across the groups. This information is summarised in table 4.

Insert table 4 here please

Use of reference forms for particular referential functions

A comparison of which referential function the noun phrases e.g. BOY, DOG or FROG in the narrative were performing revealed that in all age groups both children and adults used them mainly to introduce and reintroduce characters. There were differences across the groups however, the lowest percentage of use for maintenance was in the adults (6%) and the highest percentage use was in the youngest age group (22.5%). This is shown in figure 3. The inappropriate selection of information heavy forms for light referential functions was most salient in the youngest children.

Insert figure 3 here please

The use of repeated salient reference, through noun phrases, in the 4-6 years old for maintenance maps onto the first stage in Bamberg's developmental model (Bamberg, 1986). At this age children are concerned with overtly picking out referents at the

level of the sentence and are less able to balance demands for relevant reference across larger units of discourse. The more appropriate pattern of noun phrase use for referential function is clearer in the 7 -10 year olds. Interestingly even the oldest children in the groups (11-13 years) used noun phrase forms for reintroduction and maintenance in a different way to the two adults suggesting that narrative skills are still developing at this late age.

Turning to the other referential forms, in the narratives produced by adults, nearly 1/3 (31 percent) of the total number of tokens of reference maintenance was through entity classifiers while only 4 percent of the total number of reference introductions was through this form. In cases where the classifier introduced a referent there was cataphoric reference, that is they were immediately followed by a noun phrase identifying the referent explicitly Entity classifiers because of their low information saliency are important therefore for reference maintenance and to report old or already talked about information in narratives.

This pattern of form and function contrasts with the use of the same entity classifiers in the same narratives produced by the children. The youngest children (4 to 6 year olds) used entity classifiers markedly less for maintenance than the two adult signers (12.5 percent of total reference maintainers compared to 31 percent in the adults) and this use increased with age (20 percent for 7 to 10 year olds, and 24 percent for the 11 to 13 year old group). Conversely, the youngest children were twice as likely to choose an entity classifier to introduce a character as the adults were (8 percent of introductions in 4 to 6 year olds compared to 4 percent in adult narratives); what is more, the children did not clarify the identity of the referent through a cataphoric or following noun phrase. These differences in patterns of reference form and function are shown in figure 4.

Insert figure 4 here please

These results suggest that while the youngest children have good control of entity classifiers at the single sentence level, they are still developing the necessary pragmatic knowledge for their use in narrative. Adults and the oldest children (11 – 13 years) reserve their use mostly to maintain reference to characters in a narrative, thus their use is anaphoric. This is pragmatically appropriate as they carry very little identifying information. The youngest children (4 – 6 years) did not show this level of pragmatic awareness. Classifiers in the youngest children appeared across the three referential functions fairly uniformly.

The second reference form used for maintenance was role-shift. The use of role-shift was coded for the functions of introduction, reintroduction, and maintenance of reference. Role-shift to refer to a character follows a similar functional distribution to that for classifiers. This is shown in figure 5 below. Across all age groups, it was used most predominantly for maintenance of discourse topic (59 percent of total reference maintainers in the adults). Role-shift was used more than classifiers for maintenance of reference. The adult narrators repeated role-shifts several times in parts of their narratives in order to maintain a focus on a particular referent. None of the adult narratives included role-shift for introduction of referents, whereas in the 4 to 6-year old group, a significant percentage of reference introductions (11.25 percent) were made through this form. This was often the cause of referential ambiguity (see table 5), as the form does not carry enough referential information to successfully serve this function.

Insert figure 5 here please

Concerning these results it appears that even the youngest children understand that role-shift is a referential form appropriate for referential maintenance. What marks the difference between an adult and child use of role-shift is the subject of a separate chapter, but it appears that adult signers are able to keep track of where they are in a narrative and that this control triggers how overtly the role-shift is made. Role-shift can be signalled through overt or discreet changes in head, face and body posture. The further into a narrative the adult narrator is, the more often role-shift can be used to identify a referent but also the less overt these shifts to role-shift can be (Morgan, 1999). This is not the case for child narrators who produced overt role-shifts at all points in their narratives.

In general, control of the pragmatic role of entity classifiers and role-shift in discourse develops gradually with initial mastery at the sentential level, where young children may use these constructions correctly but fail to use them appropriately in relation to their new referential functions in discourse (see also Loew, 1984 for American Sign Language).

Controlling the sequencing of episodes

The second important pragmatic ability considered here, is the setting out of episodes in the narrative clearly enough so that the conversation partner may follow what has happened as a logical series of related events across time (Peterson & McCabe, 1990). There are two overlapping times in a narrative: the external plot time and the passage of the internal episode sequences.

While in the canonical story, the plot time passes from the start of the story to some sort of completion, within the internal discourse units (parts of the story)

episodes are not always sequentially organized. The ordering of single episodes through the course of the narrative may involve some overlapping, repetition or adjustment of time forward or backwards within the overall plot time.

Controlling plot and episode time

English

Within the overarching plot time, individual parts of the narrative being re-told may contain overlapping pieces of information, for example where two referents are involved in separate co-occurring activities. An example of this type of episode time overlap is depicted in the events in figures 6a and 6b.

These two pictures come from the storybook, 'Frog, where are you?' In the complete story the plot revolves around two characters (a boy and a dog) and their eventful search and eventual discovery of an escaped frog. The plot time progresses through the picture book from an introduction of the main characters and initial realisation of the frog's disappearance to the final re-discovery of the frog and the happy ending. Figures 6a and 6b show one complicated sub-part of the story where in figure 6a the two main characters are seen searching for the frog in separate trees at the same time. Following this in figure 6b the two characters are involved in overlapping events where the boy discovers an own in the hole he was looking into while the dog is chased by a swarm of bees. Across the 'Frog story' there are several complicated episodes like the 'owl and beehive scene' where events when retold in a narrative unfold in a non-linear way. Describing this scene requires the narrator to express a sequence of events by overlapping, repeating or moving parts of the episode backwards in time while keeping the plot flowing forward.

Insert figures 6a and 6b here please

In order to do this successfully a narrator chooses particular strategies to describe overlapping events that will make the description both internally consistent and understandable. An adult English speaker described the events in figure 6a in the following way: 'To the dog's amazement, he knocked the beehive off the tree while the boy was searching the trunk'. (example comes from Berman & Slobin, 1994).

The speaker's description of the two parts of the episode is sequential, as speakers (naturally) can only talk about one part at a time, yet we interpret the two subparts of the event as taking place simultaneously or in overlapped episode time because of the connective 'while'. The ordering of the two events in the episode in this way allows the listener to move attention between the two character's actions sequentially but still take from the description an appreciation of the simultaneity.

BSL

The devices available to users of signed languages offer other possible strategies for talking about simultaneity:

> 'One of the advantages of sign languages is that the visual-spatial modality enables the simultaneous presentation of not only more than one piece of information but also the information that these things are happening simultaneously.' (Aarons & Morgan, 2003, p125)

In analysing how a series of episodes are laid out in BSL narrative, Morgan (1999, 2002) describes how adult signers divide up the discourse between two types of linguistic sign space: a) the FRS or fixed referential space and b) the SRS or shifted referential space (See also Aarons & Morgan, 2003; van Hoek, Norman, & O' Grady-Batch, 1987). During a signed narrative these sign spaces are continually changing

and being re-used for reference to characters, to describe the physical layout of a scene and for expressing the passage of episode and plot time. The set of reference forms described in the previous section get used within with these two sign spaces.

The Fixed Referential Space (FRS)

The FRS is the traditionally labelled 'sign-space'. In narrative signers may index locations in this sign space to particular noun phrases and subsequently link pronouns and verb inflections to these indexes (Lillo-Martin, 2002). Signers also use the FRS to describe anaphoric and spatial relationships with entity classifiers (e.g. Emmorey & Flagier 1999). The important feature of the FRS is its fixedness during a set-part of a narrative episode. The locations of noun phrase indexes or the classifier entities placed within the FRS may change through the duration of a narrative but this re-use of the space is clearly indicated by the narrator.

The shifted referential space (SRS)

In the SRS the space extends to include the signer's own body as a character in the narrative and not just as the articulator of the sign message (the narrator). In this chapter this use of space has been referred to as role-shift. The SRS is active when the narrator uses direct discourse. A common marker of the SRS is a brief disengagement of eye-gaze by the signer from his conversation partner.

Telling stories using the FRS and SRS

When describing a complicated sequence of events, such as in the owl and beehive scene, adult signers organize the narrative episodes by moving between the FRS and SRS. Some of the information is laid down in the FRS for character identity or particular locations and relations between objects and characters. More information about character's actions from that character's or another character's perspective may be linked into this FRS space through direct discourse in the SRS. In this way the

narrator describes how different episodes are to be understood as following a particular sequence and allows the signer to move between particular perspectives (both physical and temporal) on a scene. During the laying out of this information it is common to see the narrator looking intently back and forwards between areas of space relevant in the narrative and directed gaze to the conversation partner. Gaze to the conversation partner when identifying particular characters and transitions between spaces points out that pieces of information in the narrative will be important for understanding the passage of events. In this way the narrator gains attention in a similar way that intonation marks stress in spoken language narratives.

BSL has different ways of organising episodes to that in English (see also Engberg-Pedersen, 1995; Miller 1994 for similar devices in other signed languages). In narrative, switching between or even overlapping referential forms in the FRS and SRS allows the signer to refer to two characters acting in the same episode. The use of duel perspectives on one scene has been described in the literature as 'SAME-TIME-WHILE' (e.g. Valli, 1987).

To illustrate this, in figure 7, the signer describes two characters engaged in the same activity. First the boy is mentioned, followed by a direct discourse description of his actions LOOK-DOWN(1) through role-shift in the SRS. Then the dog is mentioned overtly and an entity classifier for small animal is placed in the FRS on the signer's non-dominant left hand. The signer holds the left hand in sign space while returning to the action of the boy looking down LOOK-DOWN(2). The second utterance of LOOK-DOWN is understood as an anaphoric reference to the boy. The two parts of the episode overlap in the time frame but also in their articulation between the two sign spaces. The black arrow indicates the passage of narrative time over the gloss.

Insert figure 7 here please

As well as combining the FRS and SRS simultaneously adult signers often show the temporal flow of episodes sequentially through repeating different subparts. In this way the episode time moves backwards. The completion of the first activity is not shown until the second referent is mentioned (Engberg-Pedersen, 2003; Morgan, 1999, 2002). This final discourse devise is akin to a 'flash-back' in cinematic terms. In the next example in figure 8 the first mention of the boy's fall through an entity classifier ENTITY-FALL(1) in the FRS was held in the air momentarily before the role-shift to the dog in the SRS. The second fall ENTITY-FALL(2) is articulated completely.

Insert figure 8 here please

During these types of signing it is common to see adult signer's pay great attention to their conversation partner's uptake of the message (i.e. they look at their interlocutor more than in other parts of the narrative).

Development of episode sequencing

English

In children's English narrative development, the overlapping of episode time through the use of 'while' appears only after the associated concept of sequentiality and its markers, e.g. 'then', 'and' or 'next' (Bamberg 1986; Costerman & Bestgen 1991) e.g. (3) '…the boy fell-out and the bees were flying after the dog…' (5 year old example, from Wigglesworth, 1997, p295). This is thought to be because tracking more than

one character in the same episode is more cognitively demanding in a narrative task (Acsu-Koç & von Stutterheim 1994; Chen 2002; Silva 1991). Switching between characters influences the continuity of the narrative both at the episode level and the overall plot level. It is the ability to manage both these types of narrative time that identifies the mature user of a language. In older aged children more detail is provided for each part of the sub-part of the episode but combining the two different sub-episodes is still rare before 8 years e.g. (4) '…the dog's sitting down, and he finds the beehive, and he's looking at it, and the boy's looking through a hole, and then he goes to the branch, and the dog is sitting down…'(6 year old example from Wigglesworth, 1997, p298)

In the next development children become more able to move back and forward between the two parts of the episode and attempt to embed the actions of the characters in one overlapped time. However even 10 year olds find it difficult to organise the sequence of events in a way that allows an overlapped interpretation of the different parts of the episode while at the same time not disturbing the overarching flow of the plot e.g. (5) '…and the boy looked down a hole, and a beaver came out, and the dog was shaking the tree where the beehive was, and he made the beehive fall, and the boy was looking in a tree…hole, and the owl, an owl came out and pushed him down…'(10 year old example from Wigglesworth, 1997, p294)

Development of episode sequencing

BSL

There are obvious differences between English and BSL in the form of the linguistic devices at narrators' disposal for organising sequences of events in complicated narrative episodes. Despite these differences, mastery of this narrative skill poses a

very similar problem for children developing BSL and across different aged children presents clear developmental trends.

There have been few studies of children's development of this aspect of signed language narrative (Engberg-Pedersen, 2003; Morgan, 2002). In Morgan (2002) narratives produced by the same children and adults as described in the previous section were analysed for the use of the FRS and SRS. In the youngest children's narratives (aged 4-6 years) the owl and the beehive scene was retold as a sequence of actions with no attempt to overlap or encode the simultaneity of the different parts of the episode. Typical examples from two children aged 5;6 and 5;7 are shown in English translations in (6) and (7), respectively. In both examples, it is only the dog's actions that are referred to.

(6) '...the dog is walking along and he sees a tree fall, and the bees are coming out of the hive, the dog is biting and pushing at the bee hive, it falls down and they try to catch the dog…'

(7) '...the dog sees a tree with something hanging on the branch of the tree, the dog pushes at the tree which sways back and forward, the hive moves and falls off onto the ground and breaks, really gets squashed, the bees come flying out, the dog is scared and runs away...'

The difficult task of overlapping the two parts of the episode means the youngest children focus on only one of the two parts of the beehive and owl event. This parallels findings on same age children's abilities in constructing spoken language narratives, e.g. Aksu-Koç (1994). The difficulty in sequencing co-occurring events at

this age appears therefore to be a general developmental issue, which includes children acquiring a signed language. When telling stories children at this age use many of the linguistic devices available in BSL for person reference, e.g. entity classifiers, pronouns, verb inflections and role-shift, but all at the sentential level. They do not link these devices across their narratives.

In the narratives of the 7 –10 year old children there continued to be a sequential description of the two parts of the scene, although by this age the children were able to include both characters involved in the episodes and switch between them. As the conversation partner finds out about what happened to the boy, the dog's actions (pushing at the hive) are not recounted. When we return to the dog we see his actions not from where we left him, but from further into the narrative. This is seen in example (8) from a child aged 7; 8, again translated from BSL into English.

(8) '...so over there the dog is walking and there is a hive and bees are coming out; the mouse, the man , I mean the boy, is looking into the hole on the tree; yes looking into the hole; an owl comes flying out which scares the boy; the dog runs past; the bees are following him…'

The combination of the FRS and SRS and the 'flash-back' devices first appeared in the BSL narratives of the oldest children (11-13 years). An example from a child aged 11;10 of the 'flash-back' device is shown in (9). The two repeated events are underlined in the translation.

(9) '…well, he climbs up and is looking into the hole; all of a sudden <u>he falls back</u> from the tree; in the hole there is an owl flapping away. The dog later on is over by

the hive which has fallen from the branch on the tree and the bees are angrily coming out of the hive; the dog runs right through there, being chased by the swarm of bees who are colliding with him and stinging him. The boy lands on the ground and carries on walking, calling "where is my dog"?…'

In another example from a child aged 13;4, the simultaneous movement of the running dog and the falling boy are shown through several sequences of overlapped sign space. The utterance begins with the noun-phrase reintroduction DOG and an entity classifier showing the direction of the animal as it runs, the 13 year old signer then indicates that the dog sees the boy falling, at the same time the signer in role-shift depicts the perspective of the dog running past the falling boy. The role-shift to show the dog's perspective in the SRS is articulated simultaneously with an entity classifier in the FRS to show the trajectory of the boy falling. Finally, the 13 year old switches to show the boy's constructed action during his fall through role-shift in the SRS. An attempt to capture the complexity of this string of utterances is given in a sign gloss in figure 9. The part of the example where the 13 year old describes the running dog through role-shift, watching the falling boy, is shown by overlapping the semi (SRS) and oval (FRS) circles in the gloss.

Insert figure 9 here please.

One of the reasons only the oldest children manage this aspect of sign narrative is to do with the cognitive demands of recounting a sequence of events involving the tracking of more than one character. In narrative, children have to remember and sequence the whole narrative plot as well as get the particular sequence of events in

the right order. This information processing load explains the youngest children's preference for omitting one of the character's actions and the middle group of children (7-10 years) rigidly sticking to a sequential rather than simultaneous sequencing of this parts of the episode. These simplification strategies presumably reduce the cognitive demands.

The sequencing of episodes in signed narrative involves overlaying perspectives through the FRS and SRS articulated both simultaneously and sequentially. The signing strategies needed to recount narratives with complicated sequences of episodes, requires children to interactively create (through negotiation with their conversation partner) a rich textured set of perspectives on an event (Aarons & Morgan, 2003). Although not described in detail here, the younger children often fail while narrating to indicate how to interpret the switches they make between the FRS and SRS. This was achieved by the adult narrators looking frequently to their conversation partner (Morgan, 2002). The children on the other hand frequently tell the whole of this part of the narrative without looking once at their conversation partner.

Further development of narrative based language skills

Summarising the reviewed research on BSL narrative development and the pragmatic control of reference and episode sequencing, it seems that children can have mastery of linguistic devices at the level of individual sentences but continue to have great difficulty using these same forms in appropriate (adult-like) ways when they are recruited for narrative. The main reasons for this stems from the development of the pragmatic awareness of the functions of reference, i.e. telling a story for another, and also the child's still developing cognitive abilities in handling large stretches of information 'on-line'. The studies reviewed in this chapter point towards similar

underlying patterns of development in English and BSL which is interesting in itself when considering the major typological differences between signed and spoken languages. Withstanding these similarities however, there are some major differences in narrative development and later uses of extended language between the two modalities that need to be discussed further.

It is often assumed in the literature on spoken language development that the development of extended uses of language is greatly influenced by the child's emerging literacy (e.g. Bamberg, 1986; Gillam & Johnston, 1985). What is more it is also claimed that literacy has an effect on not only language use but on thinking itself (e.g. Olson, (1994; 2003). It is often argued that this influence is because becoming literate involves developing metalinguistic awareness. Metalinguistic awareness allows the child to focus on and reflect on language as a 'de-contextualised object'. De-contextualised language is characterised by the fact that the speaker and listener do not directly share the experience being communicated. Expanding literacy affects the child's skill in creating cohesive de-contextualised language in both spoken and written modes (Norris & Bunning, 1988). The uses of oral language skills in school revolve around constructing complex texts with a heavy bias from written language organisation (e.g. answering questions, debating, arguing, describing routines etc).

Taking these factors into account it would seem important to understand how extended uses of signed language could develop fully, if Deaf children have less success in developing age-appropriate literacy skills. In the typical scenario, literacy in a given language grows out of the child's abilities in oral language skills in the same language. Because there is no agreed upon written version of BSL, in the case of many Deaf children, they have less of an understandable mapping between the first language (e.g. BSL) and the written version of a different language (e.g. English).

These two factors are closely linked through feedback with each other. The full development of extended language use is influenced by literacy skills and literacy skills are themselves built on previous abilities in the same language in the oral mode. For the full extended uses of signed language to develop (e.g. using BSL to describe the sequence of steps when carrying out an experiment in laboratory chemistry) further learning about discourse construction may have to come from literacy based activities. Currently it is not clear how literacy skills in signed or written language impact on the development of extended uses of signed language development. The transfer between BSL literacy skills (e.g. narrative) and English literacy skills may happen in both directions. BSL could facilitate the start of English literacy but later English literacy would influence the further development of BSL narrative skills. In this concluding section, two issues are mapped out for further research: a) transfer of first language skills into the start of literacy and b) the continued development of extended signed language skills through the influence of literacy (in signed and spoken language)

Transfer

There is much work describing Deaf children's development of literacy as a difficult process (Allen, 1992) but not impossible (Mayberry, 1992; Mayberry & Chamberlain, 1994). What counts as literacy in these studies is not always clear, for example is it the reading of single words or simple sentences or the writing of extended expositions? It emerges that Deaf children with more first language abilities generally do better at developing English literacy. Presumably because they are coming from a 'position of strength' (Hoffmeister, 2000) although exactly how first language abilities in ASL facilitate English literacy is not yet established (Mayberry, 1992; Singleton, Supalla & Schley, 1998).

Although there are some studies that propose no useful transfer of sign abilities to written English development (e.g. Mayer & Wells, 1996), many more studies propose that underlying skills will transfer from extended signed language abilities to English literacy development. Lichtenstein (1998) argued that working memory and metalinguistic knowledge are important in learning to read for deaf children. Knowing how to construct a good, long and interesting narrative in BSL, in part, involves knowledge of the pragmatic dependencies that licence the use of certain reference forms over others. From the research reviewed previously it was argued that the hierarchy of explicitness for forms and functions is organised similarly for BSL and English. It follows then that children with good narrative skills in sign therefore have the necessary underlying pragmatic and cognitive abilities to be able to understand and produce written narratives. This will follow if, and this is a big if, the written language code is clearly understood.

If there are shared processes underlying both BSL and English narrative production then transfer from first language to second is possible. It would seem important therefore to ensure that a Deaf child has exposure to examples of extended uses of BSL (e.g. debate, theatre, explanation of scientific reasoning etc) in enough quantities and from fluent adult models. This will provide the child with the opportunity to develop potential cognitive flexibility and metalinguistic abilities in order to facilitate the development of English literacy skills.

Continued development of extended uses of signed language

In order to promote the full development of extended signed language abilities and facilitate the transfer of potential common underlying abilities between the languages it is important to work on special narrative-based classroom practices within Bi-Bi (Bilingual Bicultural) programmes (e.g. Hoffmeister, 2000; Kuntze, 1998; 2000;

Mashie, 1995). Progress in this area can benefit from signed language research. There is a growing literature on the analysis of signed language texts (Bahan & Supalla, 1995; Gee & Kegl, 1983). More is being found out about the linguistic structures inherent in different genres of extended sign language use, e.g. formal lectures, theatre, jokes, frozen texts, anecdotes and poetry (Valli, 1987). There are narrative assessment batteries for children under development (Herman, 2002). There is even some developmental work on the use of written signed language (Gangel-Vasquez, 1997). On the negative side, however, it is still not widely recognised that signed language literacy skills (abilities in producing extended narrative texts) are useful for developing English written language skills.

If children are to see how their skills in signed narration transfer to written narratives in English, comparative narrative devices need to be taught explicitly to children by age 6 or 7 years, once they have some sign language narrative skills and some knowledge about how the written English code works (e.g. Bailes, 1999; 2001). Explicit narrative analysis tasks involve children analysing video recordings of BSL narratives and carrying out text analysis of written English narratives. This is followed by activities focusing on translation between languages.

Bialystock (1991) argued that there are three stages in children's development of literacy a) the oral/conversational stage b) a learning to read stage and c) a metalinguistic stage where children learn how to manipulate language. It is this third stage that is important to stimulate so that transfer skills between BSL and English can take place. Deaf children's metalinguistic knowledge of BSL has to be stimulated through overt BSL literacy classes. In this way teachers can begin to point out the relationships between how narrative is BSL and English are differently organised. Contrastive narrative analysis classes would build on previous translation/decoding

skills learned from initial reading classes. Contrastive text analysis is currently used in signed language interpreter training programs for hearing adults but is not in wide use in schools. Some research on comparative narrative analysis in schools has already suggested practical pedagogic strategies (e.g. Kuntze, 2000; Mather & Thibeault, 2000).

Currently the educational system is asking Deaf children to become bilingual users of extended texts but is not always providing the necessary metalinguistic skills with which to facilitate this movement to bilingualism. There is a lost opportunity here. Potentially, skills in written English such as constructing narratives, theatre and poetry could benefit greatly from properly informed Deaf bilingual writers bringing another perspective into their English writing from BSL in a creative and truly bilingual way.

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[i] Signed sentences that appear in the text follow standard notation conventions. Signs are represented by upper-case English glosses. Repetition of signs is marked by '+'.

Above the glosses, eyegaze markers such as blinks (∅∅), direction (left/right or neutral space) and gaze towards the addressee (><) are indicated by a vertical line across the affected segment. In later sections semicircles represent the fixed referential space with the flat edge nearest to the signer's perspective. The location of an entity classifier is shown by an 'X' in the semicircle. A full circle represents the shifted referential space. Arrows indicate the direction of a sign's movement.

[ii] At the time these data were collected, there was no standardized BSL assessment battery (see Herman, 2002). Deaf teachers carried out all language assessment through informal measures.