Framing constructed action in British Sign Language narratives

Kearsy Cormier [a,*], Sandra Smith [b], Martine Zwets [c]

[a] *Deafness, Cognition and Language Research Centre, University College London, United Kingdom*
[b] *Centre for Deaf Studies, University of Bristol, 8 Woodland Road, Bristol BS8 1TN, United Kingdom*
[c] *Radboud University Nijmegen, Erasmusplein 1, 6525HT Nijmegen, The Netherlands*

Abstract

Constructed action is a discourse strategy, used widely within sign languages, in which the signer uses his/her face, head, body, hands, and/or other non-manual cues to represent a referent's actions, utterances, thoughts, feelings and/or attitudes. It is generally assumed that framing constructed action (i.e. identification of the referent) typically consists of a preceding noun phrase, but that this is optional (or even infelicitous), if the referent is understood in context. The current study tests these assumptions by examining the framing of constructed action within British Sign Language (BSL) narratives. We find that in cases of introduction or switch reference, local reference via a noun phrase is preferred, while in cases of maintenance of reference, omission of a noun phrase identifying the referent is preferred. This follows patterns found with framing of quotations and demonstrations in spoken languages and also with lexical verbs in both signed and spoken null subject/pro-drop languages. We argue that these patterns arise and are predictable based on accessibility of reference within the discourse.
© 2013 Elsevier B.V. All rights reserved.

Keywords: Constructed action; Role shift; Constructed dialogue; Quotation; Demonstration; Accessibility

1. Introduction

Constructed action is a discourse strategy used widely within sign languages in which the signer uses his/her face, head, body, hands, and/or other non-manual cues to represent the actions, utterances, thoughts, feelings and/or attitudes of a referent (Metzger, 1995). Constructed action is also known as role shift (Padden, 1986), referential shift (Emmorey, 2002; Engberg-Pedersen, 1993), or point of view predicate (Lillo-Martin, 1995). Constructed action can occur on its own within a stretch of discourse, without any lexical signs co-occurring with it (as in Fig. 1) or simultaneously with lexical signs as in Fig. 2.[1]

It is generally assumed that framing constructed action (i.e. identification of the referent of constructed action) typically consists of a preceding noun phrase, but that this is optional (or even infelicitous), if the referent is understood in context (e.g., Emmorey, 2002; Emmorey and Reilly, 1998; Morgan, 2006; Reilly, 2000). The current study tests these

---

* Corresponding author at: Deafness, Cognition and Language Research Centre, University College London, 49 Gordon Square, London WC1H 0PD, United Kingdom. Tel.: +44 020 7679 8674; fax: +44 020 7679 8691.

E-mail addresses: k.cormier@ucl.ac.uk (K. Cormier), Sandra.D.Smith@bristol.ac.uk (S. Smith), m.zwets@let.ru.nl (M. Zwets).

[1] As is conventional in the sign linguistics literature, lexical signs (i.e. productions that are highly conventionalised in form and meaning) are glossed in all capitals. Glosses requiring more than one English word for a translation are hyphenated. A token of constructed action used alone is indicated with ''CA:'' followed by a brief description in lower case letters. A stretch of CA that co-occurs with lexical/classifier/SASS constructions is indicated with angled brackets at the beginning and end of the CA, and CA:x at the start, where x is the referent being portrayed by the CA. Entity classifier constructions (i.e. verbs of location and motion) are indicated with ''CL:'', and size and shape specifier constructions (i.e. verbs which trace an outline of an object depicting its size and shape) are indicated with ''SASS:''; each of these is followed by a brief description in lower case letters. Italics is used to indicate the concepts that are portrayed using/within CA. Tokens of conventional emblematic gestures (i.e. gestures also used by non-signers that are often culture-specific) are indicated with ''G:'' followed by approximate meaning.

Fig. 1. Constructed action representing a bear, with no simultaneous use of lexical signs (Woll et al., 2004).

assumptions by examining the framing of constructed action within British Sign Language (BSL) narratives. We begin by providing background about constructed action in sign languages, in both its quotative and non-quotative uses.

2. Background

While Metzger (1995) considers constructed action to be a signer's representation of a referent's actual or imagined actions, utterances, thoughts, feelings or attitudes, other researchers have sought to distinguish quotative uses of constructed action (representing dialogue) versus non-quotative uses of constructed action (representing action) (Lillo-Martin, 2012; Pfau and Quer, 2010). However, it can be difficult to distinguish each of these types of representations from each other.

(1)   MAN SASS:moustache <$_{CA:man}$ *CA:swinging-arms WANT COOK SOMETHING*>
       The man with the moustache approaches and is like ''*I want to cook something*''

Fig. 2. Constructed action and BSL sign LAUGH produced simultaneously (Woll et al., 2004).

The token of manual CA in (1) (CA:swinging-arms) is clearly a representation of action – i.e. the man as he is walking, approaching a campfire. However, the string WANT COOK SOMETHING produced directly afterwards within the same stretch of constructed action represents neither action nor dialogue but instead the thoughts of the man, as they are imagined/constructed by the signer. Therefore this stretch of CA in (1) is a representation of a combination of different types of behaviour; it cannot be considered a token of constructed action or a token of constructed thought/dialogue, because it is both.

Metzger's (1995) description of constructed action was based on American Sign Language (ASL). However, constructed action of these types shown above has been described for many sign languages. Although the lexical material that can co-occur with constructed action clearly varies across sign languages, the constructed action itself (i.e. manual and/or non-manual representation of a referent's actions, utterances, thoughts, feelings or attitudes) appears to be the same across even unrelated sign languages (Lillo-Martin, 2012; Quinto-Pozos et al., 2009).

2.1. Framing quotation in spoken language

At first glance, the concept of constructed action might seem like something unique to sign languages. This could be the case if constructed dialogue in spoken languages (i.e. quotation) were limited to representation of utterances. However, it is clear that in spoken language, speakers quote not only utterances but thoughts, actions, and/or feelings of referents as well. Furthermore, these representations may be composed of words, non-lexical sounds, or visible gestures (or any combination of these) (Clark and Gerrig, 1990; Streeck, 2002). This has led Clark and Gerrig to consider quotations to be better considered as *demonstrations* – i.e. demonstrations of what someone did, said, or thought. An example of a quotation that is a visible demonstration is shown in (2). Audible demonstrations do not necessarily have to represent utterances but may indicate non-lexical sounds, as in (3). These demonstrations may be multimodal. Indeed, various studies have shown that in conversation, speakers coordinate their use of prosody, gesture and eyegaze along with syntactic resources when producing quotations (de Brabanter, 2010; Park, 2009; Sidnell, 2006). These devices can also be used to help frame quotations – i.e. to mark when a quotation begins and ends (Bolden, 2004; Sams, 2010), as shown below in (4), where in (d), the speaker Ivy indicates the quotation of the father with a louder voice.

(2)   from Clark and Gerrig (1990:782)
        I got out of the car, and I just [demonstration of turning around and bumping his head on an invisible telephone pole].

(3)   from Hudson (1985), cited in Clark and Gerrig (1990:781)
        The car engine went [brmbrm], and we were off.

(4)   from Sams (2010: 3150)
        a. Mary: and Jason's like <<high>> Papa Mike, we're not going up towards the mountain anymore
        b. (Ivy and Mary laugh)
        c. Mary: [my dad
        d. Ivy: [<<louder>> kid we got to the top okay?
        e. Mary: my dad about died

Examples (2) to (4) show how quotations can be framed prosodically – i.e. where intonation and/or gestures help mark the beginning and/or end point of the quotation. There are other ways of framing quotations in spoken languages as well. Quotations may be introduced by a report verb (or quotative verb). Traditionally such verbs in English have included verbs such as 'say', 'tell', 'ask', etc. More recently other verbs and phrases have additionally taken on quotative properties such as 'go', 'be like', and 'be all' (Blyth et al., 1990; Clark and Gerrig, 1990; Rickford et al., 2007), as in (3) and (4a) above, and also and (5) below. 'Be like' has been shown to favour use of mimetic enactment, either via changes in prosody or use of visible gesture (Buchstaller and D'Arcy, 2009), as shown in (4a) above.

(5)　Quotative 'be all' and 'be like' in English
　　　a. Mary was all ''You're not getting away with that.''
　　　b. Peter was like ''What am I supposed to do with this?''

Quotative verbs are not always required. 'Zero quotatives' (also known as 'free-standing quotations') also occur. These types of quotations lack both a quotative verb and a nominal identifying who the quote is attributed to as in (6) where Ø is used ''to coincide with structurally determined changes of reported speaker'' (Mathis and Yule, 1994:64). Zero quotatives have been described for English and also for Spanish and Greek (Cameron, 1998; Tannen, 1986).

(6)　Zero quotative (Mathis and Yule, 1994:64)
　　　she's like: ''So what time did you get in?''
　　　We got in like at two-thirty. Ø: ''Well I got home around a little after one.''
　　　Cause they sleep like the dead, they don't hear us come in anyway and uh so Ø: ''Did you all have a
　　　nice time?''
　　　Ø: ''Yeah.''

Cameron (1998) reports that quotation in Spanish and Italian may additionally be introduced with a bare noun phrase with no report verb (which he refers to as a 'partially framed quotation'), particularly in informal styles, as in (7). In his study of Puerto Rican Spanish, Cameron found that, when the preceding clause was not a report of speech (i.e. was neither a direct quotation nor an instance of indirect speech), partially framed quotations were preferred when there was a switch in reference between the previous and target clause, while freestanding quotes were preferred when the referent of the previous clause and the target clause remained the same. Furthermore, this pattern held not only for quoted utterance as in (7) but also for quoted visible gestures (see e.g. (2) above) and for quoted non-lexical sounds.

(7)　Partially framed quotation (Cameron, 1998: 49)
　　　Y ella, ''¡Ah no, mi'jo!''
　　　And she, ''Ah no, kiddo!''

Based on these findings, Cameron (1998) suggests a broader concept of quotation than just the representation of utterances and thoughts; it should include the representation of any communicative expression (including actions, visible or audible gestures, etc.). If the representation of actions is really best analysed as being a type of quotation (or, following Clark and Gerrig (1990), demonstration), then constructed action in sign language discourse is best analysed as quotation/demonstration as well, since in this account there is no need to distinguish between utterances/thoughts and actions at the most fundamental level, as has been argued before (Metzger, 1995).

2.2. Variable subject presence in spoken and signed languages

Cameron (1998) notes that the pattern he found with partially framed and unframed quotations in Spanish parallels findings with pro-drop languages where an overt NP subject is not required when verbs are inflected with agreement morphology, as in (8). Cameron cites Flores-Ferran (2007) who identified the following factors as influential in affecting subject omission in Spanish: (1) person and number of the subject referent, (2) verb semantics and (3) 'discourse connectedness' (that is, a subject NP is more likely to be expressed if it is further away from its antecedent, and a switch in reference is more likely to result in overt subject expression). Languages like Chinese do not require an overt NP subject but do not have agreement morphology for subject identification (as shown in (9)); in these cases, subject reference is retrieved contextually. Discourse and pragmatic factors appear to be important for retrieving the

correct referent for pro-drop languages with rich morphology like Spanish (Silva-Corvalan, 1994) but even more so in languages like Chinese (Huang, 1984).

(8) Spanish (Flores-Ferran, 2007:625)
a. Yo trabajo.
 'I work.'
b. Trabajo.
 '(I) work.'

(9) Chinese (Huang, 1984:533)
kanjian ta le.
see he LE
'He/she/it saw him.'

Sign languages also allow null subjects (Lillo-Martin, 1986, 1991). Most sign languages studied to date have been identified as having three main classes of verbs: plain verbs, agreement or indicating verbs and depicting/spatial verbs (Liddell, 2003; Padden, 1983). Agreement/indicating verbs and depicting/spatial verbs are spatially marked for subject/object or source/goal information.[2] Therefore subject omission with these verbs is similar to what occurs in pro-drop languages like Spanish. Plain verbs do not morphologically mark subject/object or source/goal information at all, so subject omission with these verbs is more similar to subject omission in languages like Chinese. Several studies have investigated the circumstances under which subjects are present or omitted in sign languages. In studies on American Sign Language (ASL) (Wulf et al., 2002) and Australian and New Zealand Sign Languages (McKee et al., 2011), overt subject expression with all three types of verb (plain, agreement/indicating and depicting/spatial) was favoured in switch reference environments while subject omission was favoured when the subject was co-referent with the subject of the preceding clause.

Thus it seems clear that this pattern of overt subject expression in switch reference contexts and subject omission in cases of co-reference with preceding clause is common in both signed and spoken languages with various types of morphological verb marking. Furthermore, Cameron (1998) finds the same pattern with subjects of quotative verbs introducing quotations, and additionally with 'subjects' of quotations that lack a quotative verb.

In fact, this is a general tendency of referring expressions in discourse. Ariel (1991) reports that the kind of referring expression is highly influenced by the accessibility of a referent in (spoken language) discourse. When a referent is not accessible (for instance because it has not yet been introduced, or because another referent is currently active) the referring expression has to be informative, as opposed to instances where a referent is highly accessible and a less informative expression (e.g., pronoun) is sufficient to refer back to it. Factors that play a role in deciding which form of reference is best from the speaker's perspective are the distance between explicit identification of the referent and the referring expression, the prominence of the referent in the discourse, and other referents that are competing with the intended one (cf. Ariel, 1991). Likewise, Chafe (1975) uses the term *givenness* to distinguish between referents that are, according to the speaker, either *given* or *new* in the addressee's mind. According to Chafe, given information ''is conveyed in a weaker and more attenuated manner than new information'' (p. 31). Similarly, Givon (1983) adds that in general, topic continuity is the unmarked case in human discourse. Discourse participants by default predict the next topic based on the topic of the previous sentence; thus, when a new topic is introduced, the addressee needs more information to be able to retrieve this referent. Therefore, discourse discontinuity should be marked.

2.3. Framing constructed action in sign languages

The current study examines how constructed action is framed in sign languages – specifically in British Sign Language narratives produced by deaf signers. It is generally assumed that the way signers typically introduce constructed dialogue or constructed action is with a noun or noun phrase identifying the referent of the CA (e.g., Morgan, 2006; Reilly, 2000), but that if the referent is already salient in the discourse, such a noun or noun phrase is not necessary. Regarding example

---

[2] There is considerable debate in the sign linguistics literature about whether the spatial marking on these two classes of verbs is morphological or not – see Schembri (2003) and Liddell (2003).

(10), Emmorey (2002: 66) claims: "It is not necessary to use a phrase like 'she said'[3] to indicate the quotation. The quoted referent is indicated by the direction of the body/head shift (towards the location associated with the student) and the direction of eye gaze."

(10) from Emmorey (2002)
TEACHER$_a$ STUDENT$_b$ ARGUE CONNECT-WITH PAPER.
<div style="text-align:center"><u>student's expression</u></div>
<$_{CA:student}$ PRO1st HATE THAT PAPER>
"The teacher and student were arguing about a paper. (The student said) 'I hate that paper'."

In support of the argument that explicit referent identification is not required with constructed action, McKee et al. (2011) and Wulf et al. (2002) found that subject omission was favoured in clauses which co-occurred with constructed action, compared to clauses that did not co-occur with constructed action. Following work by Liddell and Metzger (1998) within mental space theory (Fauconnier and Turner, 1996), McKee et al. attribute this to the referential properties of constructed action on their own. That is, constructed action triggers for the signer an image in which (parts of) the referent within the signer's conception of the event are mapped onto the signer's hands/body, who is present in what Liddell and Metzger (1998) refer to as Real Space (i.e. the signer's mental representation of their immediate environment). As a result, within a narrative, the body of the signer is a direct representation of the referent (Liddell and Metzger, 1998).

Thus it appears that explicit referent identification is not required with constructed action. However, some have argued that explicit referent identification when the referent is already known is infelicitous (Emmorey and Reilly, 1998).

Furthermore, Lillo-Martin (2012) has argued that the referential properties of constructed action do not appear to allow for a referent to be identified explicitly during CA:

"it seems to be a more general property of non-quotational constructed action that rules out the use of any pronoun (or noun phrase), referring to the character whose point of view is being portrayed" (p.18)

However, the question of whether, how and in what circumstances signers explicitly identify (or do not identify) the referent of constructed action/constructed dialogue has not been investigated in any depth with empirical data for any sign language.

2.4. Research questions

Here we address the issue of framing constructed action in sign language discourse with evidence from British Sign Language narratives. Given the patterns noted above regarding variable subject presence with lexical verbs in signed and spoken languages and claims from previous sign language literature about how constructed action does not require explicit reference beforehand, we propose two main hypotheses, H1 and H2:

H1. Overt subject presence will be preferred in switch reference contexts but subject omission will be preferred in contexts of co-reference with a previous clause – that is, constructed action will pattern like lexical verbs in spoken and signed languages and like quotations with or without quotative verbs.

H2. Subject omission will be preferred in both switch reference contexts and in contexts of co-reference with previous clause, on the assumption that constructed action carries enough referential information on its own to allow referent identification.

Both hypotheses predict that subject omission in BSL will be preferred in cases of co-reference with the preceding clause. The hypotheses differ in what they predict for switch reference, i.e. a change from one referent to another. Furthermore, it is expected that BSL signers would strongly prefer overt subject presence versus subject omission in the first introduction of a referent in a discourse.

---

[3] Several researchers have noted that the use of a quotative verb like SAY within constructed dialogue is optional (e.g. Engberg-Pedersen, 1993; Liddell, 2003; Morgan, 2006) though this has not been studied empirically to our knowledge. It is not clear whether true quotative verbs are possible at all with non-quotative constructed action, in any sign language – this could potentially include verbs corresponding to 'go', 'be like' and 'be all' which are used commonly in English to introduce gestural demonstrations. It has been suggested that a sign meaning 'like' or 'same' can be used when introducing constructed action in some sign languages. However, it seems more likely that this form (at least in BSL) can be used as a filler or placeholder in the same way as 'like' can be used in English (Amiridze et al., 2010) and may be a borrowing. We thank Carlo Geraci, Carol Padden, Christian Rathmann and Adam Schembri for helpful discussions about this. In the current study, no quotative verbs were used to introduce constructed action; it is likely this is because the CA in this study was all non-quotative.

Table 1
Participants.

	Language background	AoA	N
Native	Deaf from deaf families	Birth	5
Early	Deaf from hearing families	3–8	5
Late	Deaf from hearing families	12+	5

3. Methods

3.1. Participants

Data were collected from 15 deaf adult signers in the south of England, as shown in Table 1. All were British-born, between ages 19 and 75, with BSL as their preferred language. Many studies have shown effects of age of sign language acquisition at various levels of grammar (e.g. Boudreault and Mayberry, 2006; Cormier et al., 2012; Emmorey et al., 1995; Mayberry and Fischer, 1989). We therefore distinguished between three groups of participants: native, early and late learners. Table 1 shows the age of BSL acquisition (AoA) of each group.

3.2. Task

The stimuli consisted of four short film clips: an excerpt from the Pink Panther cartoon *Keep Our Forests Pink* (45 s long), and also three short excerpts from the Wallace and Gromit film *The Wrong Trousers*, 25 s long on average. The Pink Panther clip contained three characters: a man, the Pink Panther and a dog. The Wallace and Gromit clips contained Wallace and Gromit in each, as well as a penguin in one and an evil dog in another.

Participants were given a set of 3 practice clips. Once it was clear the participants understood the procedure, they were asked to watch each of the clips and were asked to describe each to another Deaf native signer of British Sign Language (the second author, SS). All signed productions were filmed for later analysis.

3.3. Coding/annotation

Signed productions of the narratives (which varied in length from 15.4 s to 93.8 s) were coded using the software package ELAN (http://www.lat-mpi.eu/tools/elan) for constructed action (CA), including which role(s) the signer was taking on and which body part(s) were representing each role. Signed productions were also coded for lexical signs and partly-lexical signs such as classifier constructions (verbs of motion and location). The CA articulator tiers, role tiers and gloss tiers were coded by Deaf, fluent signers of BSL, who are native signers of either BSL or another sign language. Annotations were cross-checked by the first author (a hearing, fluent signer of BSL) and second author (a Deaf, native signer of BSL) to ensure reliability of coding decisions, based on the coding guidelines outlined below.

The first set of tiers that were coded were tiers for the various articulators that were used to mark constructed action (CA tiers, as shown below in Table 2), as well as role tiers – i.e. to indicate which role the signer was representing with the CA. Separate tiers for lexical signs and classifier constructions were also annotated. The final set of tiers coded were the reference tiers (i.e. Subject-CA Reference sequence and Reference function), which were the tiers that were analysed for

Table 2
CA articulator tiers.

Name of tier	Purpose
Eyegaze	Break of eyegaze with addressee for purpose of enacting referent
Face	Signer's use of his/her facial expression to represent face of referent
Head	Signer's use of his/her head to represent head movement/posture of referent
Torso	Signer's use of his/her torso to represent torso movement/posture of referent
Dom-arm/hand	Signer's use of his/her dominant arm/hand to represent arm/hand of referent
Ndom-arm/hand	Signer's use of his/her nondominant arm/hand to represent arm/hand of referent
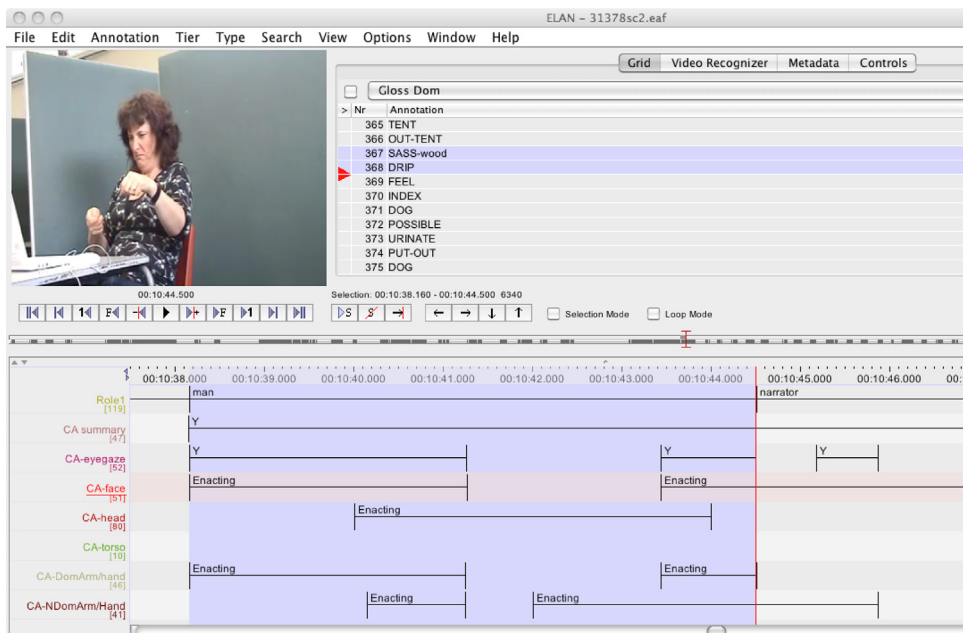
Fig. 3. One token of CA with multiple, overlapping CA articulators within a single role.

the purposes of the current study. Coders followed a set of annotation guidelines describing the coding procedure for every tier to ensure consistency.

Because different CA articulators can be used simultaneously and/or sequentially with each other, we additionally had a *CA-summary* tier, which identified stretches where CA was continuously used with one or more articulator to represent the same referent (i.e. within the same character role). Fig. 3 shows a highlighted stretch of narrative where the participant is using various articulators (eyegaze, face, head and arms/hands) to represent the character of the man in the cartoon. There is no single articulator that she uses constantly throughout this entire token of CA as delimited by the annotation (highlighted in Fig. 3) in the *CA-summary* tier – it is only these articulators in simultaneous and sequential combination, and the fact that they are all a representation of a single role (i.e. the man) that make this whole stretch a single CA token.

3.3.1. Role tiers and gloss tiers

As a way of ensuring consistency in the coding of CA articulators, Role tiers were used to identify the character being represented by constructed action. The default Role was narrator; if one or more articulators were coded as enacting, then coders had to identify which role(s) were being represented by that articulator/those articulators.

Gloss tiers – one for the dominant hand and another for the non-dominant hand – were used to annotate all meaningful manual productions (including lexical signs, entity or size-and-shape-specifier classifier constructions, conventionalised gestures also used by non-signers, etc.), except for constructed action of the arm/hand, which was annotated on separate tiers.[4]

3.3.2. Clause tiers

Using annotations from the gloss tiers, clauses (including predicates and any subjects) were identified following methods used by Johnston et al. (2007):

---

[4] The Arm/hand tiers were coded for constructed action when the arm and/or hand of the participant was used to depict the arm and/or hand of the referent. This included any productive uses of handling or manipulative constructions that were depictive of the hand(s) of the referent handling or manipulating an object and any other depictive movements of the referent's arm(s) or hand(s). This did not include lexical signs like BSL COOK which have a handling handshape but which are fully lexicalised – these were annotated in the gloss tiers instead.

. . .we applied one basic criterion for 'clause-hood': the nucleus of each clause should be some kind of predicating element, often a verb (Van Valin and LaPolla, 1997). In other words, each individual verb represented a separate clause, even if there were no explicit and separate signs for the various arguments of the verb (pp. 169–170).

We identified the subject of each predicate, if there was one, on the Subject tier. Our notion of 'subject' here corresponds to Van Valin and LaPolla's (1997) semantic macrorole 'actor'.[5] 'Subject' or 'actor' in our analysis is to be interpreted as the animate character executing the action in the predicate. For the stimulus clip used for this study, the characters included a man, a dog, and the Pink Panther (from the Pink Panther cartoon), and Wallace, Gromit, a penguin and an evil dog (from the Wallace and Gromit clips). Coding on this tier was done for all clauses, i.e. for clauses with and without constructed action, in order to account for all instances in which one of the protagonists functioned as subject. This was important for the CA-reference tiers, described below.

3.3.3. CA-Reference tiers

The tiers described thus far were used to annotate the *Subject-CA reference sequence* and *Reference function* tiers. These are the two tiers that were analysed for the purposes of this study.

3.3.3.1. Subject-CA reference sequence. For each signed production containing CA (as identified by the *CA summary* tier) we coded the preceding subject NP (that was referring to the character portrayed by the CA) and any intervening material as contiguous reference, non-contiguous reference, or subject omission. Contiguous reference (NP CA) consists of a noun phrase followed immediately by constructed action of the same referent, as in (11). Non-contiguous reference (NP. . .CA) consists of a noun phrase followed by lexical predicate(s) and/or classifier construction(s) followed by constructed action of the same referent, as in (12).[6] Subject omission (ZeroNP CA) is where the referent of the constructed action is not referred to by an NP first (as shown in (13)), or a separate token of CA intervenes between the subject NP referent and the target CA token (as in (14), where subject omission was coded for the second token of CA shown).

(11)   Contiguous reference (NP CA)
        DOG <$_{\text{CA:dog}}$ ME G:NO>
        'The dog (thinks) "*Me? No no!*"

DOG   <$_{\text{CA:dog}}$ ME   G:NO>

---

[5] Van Valin and LaPolla (1997) propose two main semantic macroroles: 'actor' (which may include agent, expeiencer, possessor, etc., depending on the verb) and 'undergoer' (which may include patient, theme, recipient, etc., depending on the verb).

[6] For the purposes of showing predicates with constructed action and without constructed action, here we have combined all the predicates without co-occurring CA into one verb phrase as long as they had the same subject. Although some of these may be better analysed as serial verbs (cf. Johnston et al., 2007), the question of whether such chunks consist of one or more predicates does not affect the analysis proposed here.

(12)   Non-contiguous reference (NP. . .CA)
[INDEX:man MAN]$_{NP}$ [CL:upright-being-approach BRING FROM TENT OUT]$_{VP}$
<$_{CA:man}$ *CA:hold-saucepan CA:pick-up-stick*>
'The man comes out of the tent *with his saucepan; confused, he picks up the wet stick.*'

[INDEX:man   MAN]$_{NP}$ [CL:upright-being   BRING

FROM   TENT   OUT]$_{VP}$ <$_{CA:man}$ *CA:hold-pan*

CA:pick-up-stick>

(13) Subject omission (ZeroNP CA)

[INDEX:dog]NP [CL:bent-legged-being SEE]VP <CA:man *CA:chop-sign CA:light-match*>

'He (the dog) is walking along and sees (the man) chopping the sign down and lighting it.'

[INDEX:dog]NP   [CL:bent-legged-being   CL:dog SEE]VP

<CA:man *CA:chop-sign*   *CA:light-match*>

(14) Subject omission (ZeroNP CA)

[MAN]NP <CA:man *CL:upright-being-approach*> [COOK READY]VP <CA:man *CA:hold-saucepan G:WELL INDEX:dog*>

'The man comes back, ready to cook, walking along holding the pan, wondering why the fire is gone and blames the dog.'

[MAN]NP   <CA:man *CL:upright-being*>   [COOK   READY]VP

<CA:man *CA:holding-pan*   *G:WELL*   *INDEX:dog*>

3.3.3.2. Reference function. In addition to reference sequence, clauses were also coded for reference function – specifically: introduction, reintroduction and maintenance. Introduction is the first mention of an actor, meaning that no other mention of that same actor has preceded it within the narrative. Reintroduction and maintenance both indicate a further mention of an actor. With reintroduction the actor has been mentioned before, but a predicate or predicates with a different actor(s) occurred in between. For example, in (15) below, the dog is mentioned, followed by the man, followed again by the dog. The second time the dog appears here is reintroduction.

(15)   Reintroduction
        [DOG _{CA:dog} *LOOK SMILE CA:walk-with-paws*>] [MAN _{CA:man} *LOOK OK CL:upright-being-leave*>]
        [DOG _{CA:dog} *CA:dog-stance OK CL:lie-down SLEEP*>]
        'The dog *looks (at the fire)*, *smiles and approaches*. The man *looks down (at the fire) thinking 'ok' and walks away.* The dog *is like 'ok', lies down and falls asleep*.'

DOG   _{CA:dog} *LOOK*   *SMILE*   *CA:walk-with-paws* >

MAN   _{CA:man} *LOOK*   *OK*   *CL:upright-being*>

DOG   _{CA:dog} *CA:dog-stance*   *OK*   *CL:lie-down*   *SLEEP*>

Maintenance, on the other hand, assumes a preceding mention of the same actor as well, but no change in actor has occurred in between. For example, in (16) below, the sign FRYING-PAN without co-occurring CA intervenes in between,

but the frying pan is not an actor in the story. Therefore, the second chunk of constructed action is maintenance. In determining reference function, the Reference tier was also important, as this indicates if there are any actors occurring in between a referent when no CA is involved. For example, the second token of CA:man in (14) above was coded as 'maintenance' and not as 'introduction' or 'reintroduction' because of the preceding predicate with the same subject [COOK READY], even though this predicate does not co-occur with constructed action.

(16)   Maintenance
    [INDEX:man MAN $<_{CA:man}$ *CL:upright-being-approach*>] [FRYING-PAN] [$<_{CA:man}$ *CA:holding-pan DISAPPOINTED DISAPPEAR INDEX:fire*>][7]
    'The man *approaches*, with a frying-pan, *and looks disappointed at it (the fire).*'

INDEX:man   MAN $<_{CA:man}$ *CL:upright-being* >   FRYING-PAN

$<_{CA:man}$ *CA:holding-pan*   *DISAPPOINTED*   *DISAPPEAR*   *INDEX:fire*>

4. Results

The annotation of the narratives as described above allows us to analyse the type of framing used with constructed action (Subject-CA reference sequence) based on its function in the narrative (reference function). Fig. 4 shows the distribution of reference sequence type by reference function. The major patterns (NP CA preferred in over half the tokens in reintroduction, and ZeroNP CA preferred in over half the tokens in maintenance) were the same for each narrative and were the same within each group; therefore Fig. 4 includes all four narratives (the Pink Panther narrative and Wallace and Gromit narratives) and three groups of signers (native signers, early learners and late learners). For comparison across groups and distribution within each group, see Figs. A1–A4 in the Appendix.

---

[7] The only marker of CA during the sign DISAPPOINTED is the signer's right hand representing the holding of the frying pan, thus the CA here is relatively subtle. Signers use CA with varying levels of degree and the degree can change even over the course of a single stretch of CA, between more overt and more subtle degrees (Cormier and Smith, 2011).
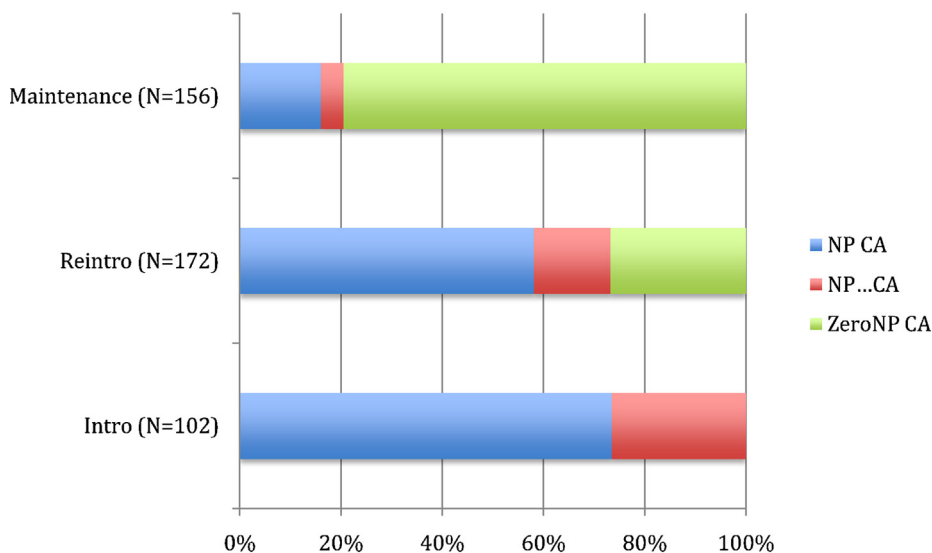
Fig. 4. Distribution of CA framing types.

Fig. 4 shows that at first mention (in introduction), constructed action was explicitly introduced by at least a noun phrase identifying the referent (NP CA) and often other constituents after the NP with the same actor as well (NP. . .CA). Contiguous reference (NP CA) was preferred in introduction over half the time (65% of introduction tokens). Reintroducing a referent after the first mention in the narrative, i.e. a switch in reference, shows more or less the same picture: that is, contiguous reference was preferred over half the time (68% of reintroduction tokens). The primary difference between introduction and reintroduction in Fig. 4 is that reintroduction includes some ZeroNP CA (12%) while introduction does not include any. This is not surprising if we consider the importance of establishing reference at first mention. In later mentions, even if the reference changes, contextual and other cues can help the addressee recover the previously mentioned referent.

With maintenance we see a very different pattern compared to introduction and reintroduction: subject omission is preferred most of the time (75% of maintenance tokens). Thus, when a referent is already activated, the preferred option is to not identify the referent again. This is consistent with previous claims in the literature which note that referent identification is not necessary if it is clear from context. Although this pattern was preferred, however, the remaining 25% of the time in maintenance, signers did explicitly identify the referent either with contiguous reference (NP CA, 14%) or non-contiguous reference (NP. . .CA, 12%). This suggests that subject omission in maintenance is not necessarily obligatory in BSL. This is contrary to claims for ASL that overt subject expression in maintenance is infelicitous (e.g., Emmorey and Reilly, 1998). It is possible that this may be due to a difference between BSL and ASL. However, given crosslinguistic similarities that have been identified thus far with constructed action (Lillo-Martin, 2012; Quinto-Pozos et al., 2009), more evidence from ASL about subject expression with CA in maintenance may be needed.

In order to investigate referent accessibility via noun signs versus pronominal signs, we also examined the types of NPs that occurred in NP and NP. . .CA contexts. Previous research on accessibility would predict less attenuated forms for introduction (i.e. more nouns rather than pronouns in introduction), since the character to which the signer is referring is not yet established in the addressee's mind and is therefore not given and not accessible (Ariel, 1991; Chafe, 1975). In cases of maintenance, we would expect the reverse pattern. That is, in maintenance we expect more pronouns than nouns, since the referent is given and highly accessible. We observed the use of nouns and/or pronouns in reintroduction, while pronouns never occurred in the introduction of a referent (only NPs which included a noun). However, the number of pronouns produced was very low (only 9 out of 260 tokens of NPs were pronouns: 4 in reintroduction and 5 in maintenance). Instead, the vast majority of NPs when they were used (i.e. in NP CA or NP. . .CA), whether in introduction, reintroduction or maintenance, included a noun. Thus it appears that BSL signers, when expressing the referent in these narratives, choose to do so fairly explicitly. It could be that the number of referents in each narrative (2–3) and their complex spatial arrangement within the cartoons resulted in more explicit nominal reference rather than less explicit pronominal reference which may have been difficult to disambiguate.

4.1. Contiguous reference: sequential vs simultaneous

Upon closer inspection of the contiguous reference category (NP CA in Fig. 4), we found that actually there were a few subtypes. By far, most of the tokens of NP CA occurred such that the NP was produced at the start of a clause, before the
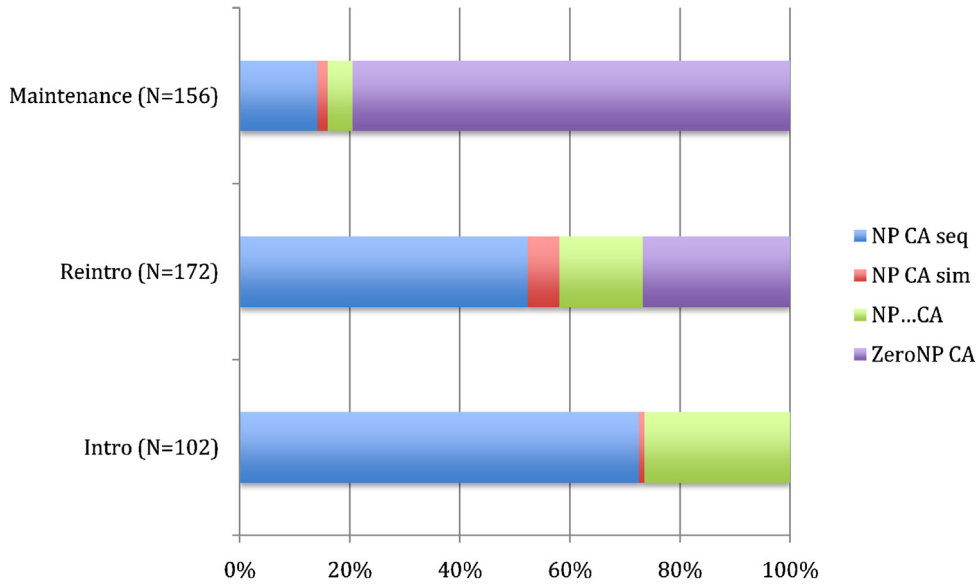
Fig. 5. Distribution of CA framing types with sequential vs simultaneous NP CA.

constructed action began, but we found a few exceptions to this. Fig. 5 shows NP CA from Fig. 4 broken down into two categories: NP CA seq(uential) and NP CA sim(ultaneous). NP CA seq is the contiguous reference of the type [DOG <CA: dog>] such that the NP and CA are produced sequentially, first the NP and then the CA.

NP CA sim is the use of an NP identifying the referent after constructed action has already begun (i.e. simultaneous expression of the NP referent and the CA). As noted in section 2.3, Lillo-Martin (2012) has argued that in ASL, the referential properties of constructed action do not appear to allow for a referent to be identified explicitly during CA. However, in our BSL data, we did find instances of these constructions that included referent identification within a stretch of CA (i.e. NP CA sim). For example, in (17) the signer narrates the part of the story where the man has just lit the fire and is now looking down at it. While representing the man looking down, thereby constructing the action of the man, the signer identifies the actor of the CA by signing MAN. This was a token of reintroduction of the man, a switch in reference from the previous actor which was the dog.

(17) Referent identification within CA
INDEX:man <$_{CA:man}$ *MAN* CA:light-match FIRE>
'The *man lights the fire*.'

INDEX:man   <$_{CA:man}$ *MAN* *CA:light-match*   *FIRE*>

We found 14 of these constructions overall (across introduction, reintroduction and maintenance) in which reference to the character occurred within CA: 9 by native signers, 3 by early learners and 2 by late learners. Most of these 14 constructions were similar to (17) above. Intuitively it seems like in these cases the signer goes into character a bit early

Table 3

Number of tokens of CA produced by each participant, by participant ID code, with group means and standard deviations.

Native		Early		Late		Late, 31348 omitted	
ID	CA tokens	ID	CA tokens	ID	CA tokens	ID	CA tokens
31162	32	31081	24	31345	17	31345	17
31384	16	31201	29	31348	55	31348	–
31393	23	31378	38	31381	24	31381	24
31411	26	31399	19	31390	20	31390	20
31426	37	31402	32	31429	38	31429	38
Range	16–37	Range	19–38	Range	17–55	Range	17–38
Mean	26.8	Mean	28.6	Mean	30.8	Mean	24.8
SD	8.1	SD	7.3	SD	15.7	SD	9.3

and then identifies the referent during the CA, almost as an afterthought.[8] Although these tokens did not occur frequently in our data (only 3% of all the CA tokens) and it is possible that these are repair strategies for what was intended to be NP followed by CA, the fact that they occur at all, when it has been claimed that they should not, is important for understanding how reference works with CA and within sign language grammar in general. Clearly more empirical research with CA is needed.

4.2. CA tokens produced by groups and individuals

As noted above, there were no differences in distribution across the groups of native signers, early learners and late learners – that is, each group preferred contiguous reference for introduction and reintroduction (over half of the time) and subject omission in maintenance (over half of the time). Table 3 shows the number of CA tokens produced across all 4 narratives by each participant, along with the range, mean and standard deviation for each group. The ranges, means and standard deviations for the native signers and early learners are similar. The range and standard deviation for the late learners is quite a bit higher in comparison. One of the late learners (31348) produced many more CA tokens than the other participants. As it appears that 31348 is an outlier, if we omit this participant, the range, mean and standard deviation of the remaining late learners is similar to the other groups. Note that even with 31348 included, the overall distribution (i.e. contiguous reference preferred in introduction and reintroduction and subject omission preferred in maintenance) still holds; see Appendix.

5. Discussion and conclusion

The results show a clear pattern of preference for overt subject presence in introduction and reintroduction (switch reference) but subject omission in maintenance. This supports our first hypothesis, H1 from section 2.4. This is consistent with variable expression of subjects of various types of quotations in Spanish, including not only quotations of utterances with quotative verbs but also quotations of visible gestures and non-lexical sounds. It also extends to quotations with a variety of framing types including partially framed quotations without a quotative verb and zero quotatives without NP subject or quotative verb (Cameron, 1998).

Interestingly, these patterns are similar to findings with variable expression of subjects with lexical verbs in both signed languages and spoken (particularly Romance) languages (Flores-Ferran, 2007; McKee et al., 2011; Silva-Corvalan, 1994; Wulf et al., 2002). As claimed in these previous studies, the shared patterning of variable subject presence with quotations and lexical verbs in the current study may be due to pragmatic factors. Changing a referent pragmatically requires some kind of indication of who the new referent is, because the accessibility of that referent is lower than in cases of maintenance. That is, when a referent is difficult to retrieve, the speaker expects the addressee to need more information to find out which referent is intended. One important factor that plays a role in deciding which form of reference is best is whether there are other referents that are competing with the intended one

---

[8] Morgan (2006) notes that similar patterns occurred in his adult data with classifier constructions, where signers would introduce a referent using a classifier construction and then immediately afterward, identify the referent of the classifier with an explicit noun phrase. Morgan considers this to be a case of cataphoric reference. We found one such instance in our data as well – i.e. a classifier construction introducing a referent followed immediately by a noun phrase identifying the referent.

(Ariel, 1991). This explains the preference for subject presence with lexical verbs, quotations in Spanish, and CA in the current study in the case of reintroduction and introduction. Even though one might argue that in the case of reintroduction the referent is *given*, and therefore it should be possible to refer back to it by either a pronoun or zero NP, Chafe (1975) argues that the amount of information that remains in the consciousness of the addressee over time is limited; as newer referents come in, older ones are 'forgotten'. As was mentioned in section 2.2, Givon (1983) similarly claims that reintroduction is a case of discourse discontinuity, and should therefore be marked. On the other hand, maintaining the same (already highly accessible) referent does not require explicit re-identification, which explains the preference for subject omission with lexical verbs, quotations in Spanish, and CA in the current study.

The fact that this pattern was found across all three groups of signers (native signers, early learners and most of the late learners) is interesting, given that differential age of acquisition effects have been found on so many levels of sign language grammar, including phonology, morphology, the lexicon, and syntax (e.g., Boudreault and Mayberry, 2006; Mayberry and Fischer, 1989): specifically, these studies show that earlier sign language acquisition leads to better grammatical comprehension and production at these various levels. One could speculate that pragmatic factors are not affected by age of acquisition effects in adult signers to the same extent that other grammatical levels are. However, a recent study by Ferrara and Johnston (2012) investigating how CA is framed within narratives as part of a corpus of Auslan (Australian Sign Language) suggests this might not be the case. Out of 1202 tokens of CA in narrative and conversation (nearly 3 times the CA tokens reported here), Ferrara and Johnston found that native signers significantly favoured the use of NP-framed CA compared to non-native signers, though the effect was weak. This is clearly an interesting area for future research.

While the first hypothesis was supported, the second one was not (H2 from section 2.4). That is, subject omission was not preferred in either switch reference contexts or contexts of co-reference with previous clause. This prediction was based on work by McKee et al. (2011) and Wulf et al. (2002) where subject omission was favoured in clauses with constructed action compared to clauses without constructed action. McKee et al. (2011) suggested that this pattern might be because the referential properties of constructed action on its own allow for referent information to be accessed in discourse. The findings from the current study – i.e. subject omission in maintenance but overt subject reference in introduction and reintroduction – suggest instead that referent accessibility is high enough in maintenance for subject omission to be preferred, but not in reintroduction.

There are several possible reasons why the second hypothesis was not confirmed. One issue is that, in the narrative data reported here, constructed action was so common that we were not able to compare variable subject presence in clauses with CA versus clauses without CA. There were simply too few clauses without CA for such a comparison. It could be that in a larger dataset with many more participants and/or more narratives and therefore more tokens of clauses both with and without constructed action, subject omission could be more common in clauses with constructed action (across introduction, reintroduction and maintenance) compared to clauses without constructed action.

Another possible reason for the difference in subject expression in reintroduction across the studies could be genre. The studies by McKee et al. (2011) and Wulf et al. (2002) were based on spontaneous personal narratives during conversation, while the narratives in the current study were retellings of a cartoon story. It may be that overt subjects are more common in reintroduction in fictional narratives than in personal experience narratives. This would not be surprising, considering research showing that children around age 5–6 are more accurately able to identify referents in personal experience narratives than in fictional stories (McCabe, 1996). Other related factors might include the length of the narrative (such that the longer the narrative, the more likely the subject may be dropped), and particularly the number of referents involved in a narrative (such that the larger the number of referents, the more likely the subject would not be omitted). A study comparing referent identification with CA and without - across genres and across narratives with different numbers of referents and of varying lengths - would be very useful in teasing apart these different factors. We leave these issues for future research.

In summary, in the present study we have empirically examined reference establishment with constructed action in British Sign Language narratives. We have focussed on the way signers establish reference for the character that is represented by the constructed action. The fact that we found a preference for contiguous subject expression (NP CA) in introduction and reintroduction is directly comparable to the preference Cameron (1998) found in Spanish quotations with a switch in reference which occurred after non-quotations – i.e. partially framed quotations with an NP followed by the quoted material. Likewise, the fact that we found a preference for subject omission (ZeroNP CA) in maintenance is directly comparable to Cameron's finding of preference for freestanding or zero quotatives in quotations occurring after non-quotations in which there was no switch in reference with the previous clause. We suggest that these parallel findings emphasise the need for a unified account of quotations as demonstrations not only across languages but also across language modalities. It is clear from previous research that quotations (i.e. visible and/or audible demonstrations) by hearing non-signers are inherently multimodal in face-to-face communication (Clark and Gerrig, 1990). The current study shows that constructed action in sign languages follows the same patterns as quotations/demonstrations, suggesting that

the fundamental properties of constructed action are the same as quotations/demonstrations as used by non-signers. However, more cross-modal research is needed to better understand the similarities and differences between quotations/demonstrations in signers and non-signers.
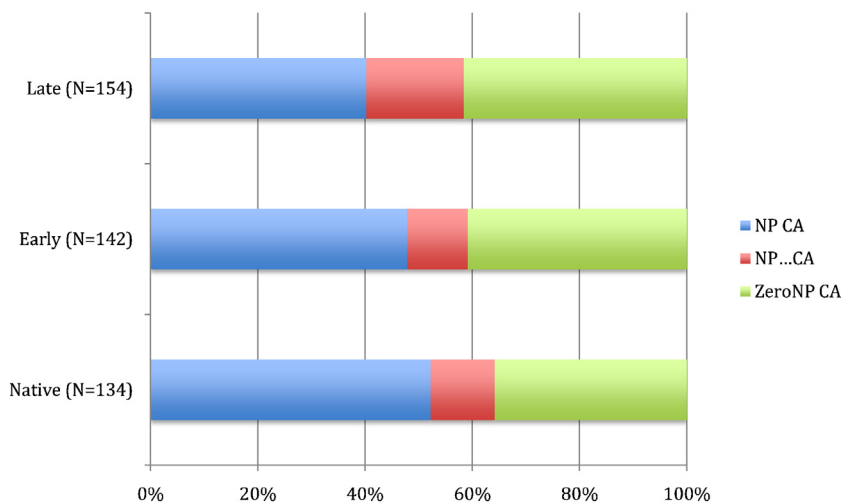
Acknowledgements

Appendix A

Figs. A1–A4

Fig. A1. Distribution of CA framing types by group.
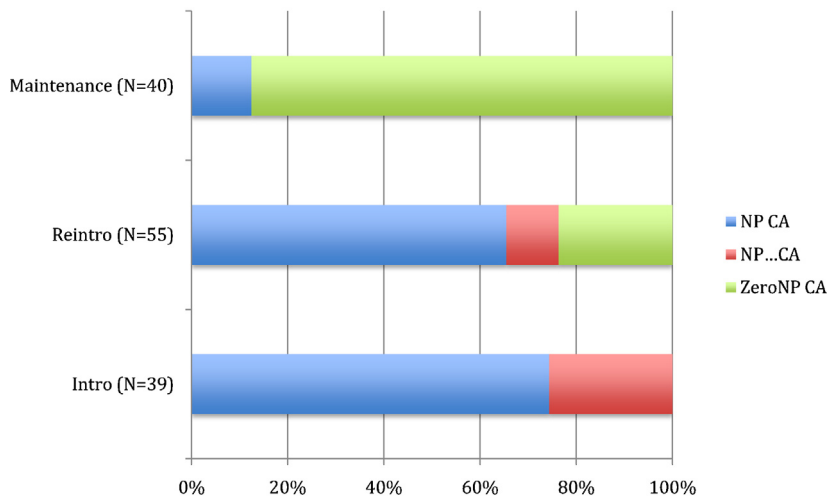
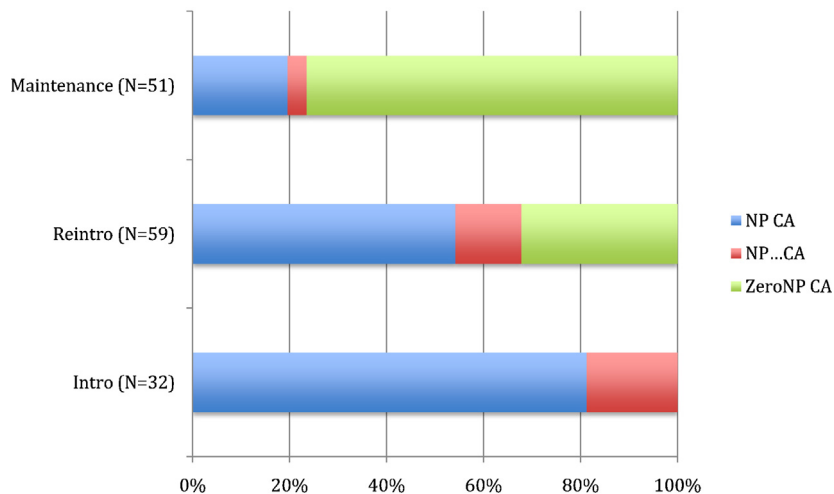Fig. A2. Distribution of CA framing types by reference function (native signers).

Fig. A3. Distribution of CA framing types by reference function (early learners).
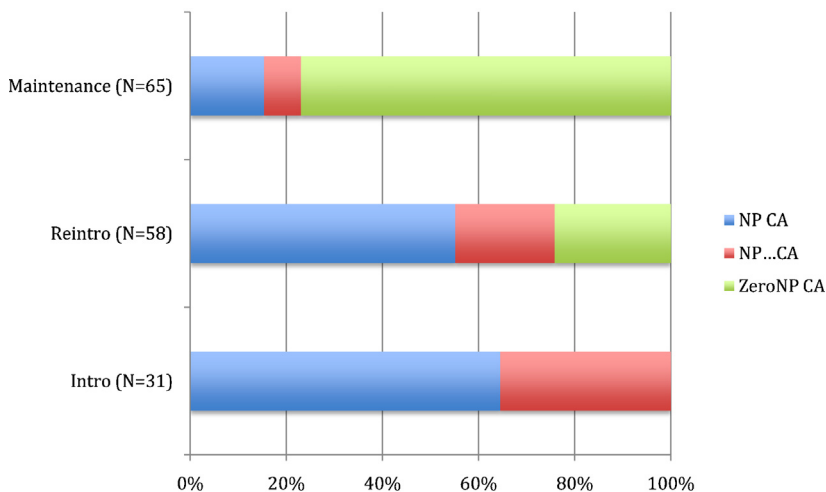
Fig. A4. Distribution of CA framing types by reference function (late learners).

References

Amiridze, N., Davis, B.H., Maclagan, M. (Eds.), 2010. Fillers, Pauses and Placeholders. John Benjamins, Amsterdam.

Ariel, M., 1991. The function of accessibility in a theory of grammar. Journal of Pragmatics 16, 443–463.

Blyth, C., Recktenwald, S., Wang, J., 1990. I'm like "Say what?!" A new quotative in American oral narrative. American Speech 65, 215–227.

Bolden, G., 2004. The quote and beyond: defining boundaries of reported speech in conversational Russian. Journal of Pragmatics 36, 1071–1118.

Boudreault, P., Mayberry, R.I., 2006. Grammatical processing in American Sign Language: age of first-language acquisition effects in relation to syntactic structure. Language and Cognitive Processes 21, 608–635.

Buchstaller, I., D'Arcy, A., 2009. Localized globalization: a multi-local, multivariate investigation of quotative be like. Journal of Sociolinguistics 13, 291–331.

Cameron, R., 1998. A variable syntax of speech, gesture, and sound effect: direct quotations in Spanish. Language Variation and Change 10, 43–83.

Chafe, W., 1975. Givenness, contrastiveness, definiteness, subjects and topics. In: Li, C.N. (Ed.), Subject and Topic. Academic Press, New York, pp. 22–56.

Clark, H., Gerrig, R.J., 1990. Quotations as demonstrations. Language 66, 764–805.

Cormier, K., Smith, S., 2011. Defining and annotating constructed action, constructed dialogue and role shift. In: 33rd Annual Meeting of the German Linguistic Society, Workshop on Sign Language Discourse, University of Gottingen, Germany.

Cormier, K., Schembri, A., Vinson, D., Orfanidou, E., 2012. First language acquisition differs from second language acquisition in prelingually deaf signers: Evidence from sensitivity to grammaticality judgement in British Sign Language. Cognition 124, 50–65.

de Brabanter, P., 2010. The semantics and pragmatics of hybrid quotations. Language and Linguistics Compass 4, 107–120.

Emmorey, K., 2002. Language, Cognition, and the Brain: Insights from Sign Language Research. Lawrence Erlbaum Associates, Mahwah, NJ.

Emmorey, K., Reilly, J., 1998. The development of quotation and reported action: conveying perspective in ASL. In: Clark, E. (Ed.), Proceedings of the Twenty-ninth Annual Child Language Research Forum. CSLI Press, Stanford, CA, pp. 81–90.

Emmorey, K., Bellugi, U., Friederici, A., Horn, P., 1995. Effects of age of acquisition on grammatical sensitivity: evidence from on-line and off-line tasks. Applied Psycholinguistics 16, 1–23.

Engberg-Pedersen, E., 1993. Space in Danish Sign Language. Signum Press, Hamburg.

Fauconnier, G., Turner, M., 1996. Blending as a central process of grammar. In: Goldberg, A. (Ed.), Conceptual Structure, Discourse and Language. CSLI Publications, Stanford, CA, pp. 113–130.

Ferrara, L., Johnston, T., 2012. Enactment in discourse: Conceptualization through language and gesture. In: Paper presented at Language, Culture and Mind V: Integrating Semiotic Resources in Communication and Creativity. Catholic University of Portugal, Lisbon, 27–29 June 2012.

Flores-Ferran, N., 2007. A bend in the road: subject personal pronoun expression in Spanish after 30 years of sociolinguistic research. Language and Linguistics Compass 1, 624–652.

Givon, T., 1983. Topic continuity in discourse: the functional domain of switch-reference. In: Haiman, J., Munro, P. (Eds.), Switch-reference and universal grammar. John Benjamins, Amsterdam, pp. 51–82.

Huang, C.T.J., 1984. On the distribution and reference of empty pronouns. Linguistic Inquiry 15, 531–574.

Hudson, R., 1985. The limits of subcategorization. Linguistic Analysis 1, 233–255.

Johnston, T., Vermeerbergen, M., Schembri, A., Leeson, L., 2007. 'Real data are messy': considering cross-linguistic analysis of constituent ordering in Auslan, VGT, and ISL. In: Perniss, P.M., Pfau, R., Steinbach, M. (Eds.), Visible Variation: Comparative Studies on Sign Language Structure. Mouton de Gruyter, Berlin, pp. 163–206.

Liddell, S.K., 2003. Grammar, gesture and meaning in American Sign Language. Cambridge University Press, Cambridge.

Liddell, S.K., Metzger, M., 1998. Gesture in sign language discourse. Journal of Pragmatics 30, 657–697.

Lillo-Martin, D., 1986. Two kinds of null arguments in American Sign Language. Natural Language and Linguistic Theory 4, 415–444.

Lillo-Martin, D., 1991. Universal Grammar and American Sign Language: Setting the Null Argument Parameters. Kluwer, Boston.

Lillo-Martin, D., 1995. The point of view predicate in American Sign Language. In: Emmorey, K., Reilley, J. (Eds.), Language, Gesture and Space. Lawrence Erlbaum Associates, Mahwah, NJ, pp. 155–170.

Lillo-Martin, D., 2012. Utterance reports and constructed action in sign and spoken languages. In: Pfau, R., Steinbach, M., Woll, B. (Eds.), Sign Language—An International Handbook. Mouton de Gruyter, Amsterdam, pp. 365–387.

Mathis, T., Yule, G., 1994. Zero quotatives. Discourse Processes 18, 63–76.

Mayberry, R.I., Fischer, S.D., 1989. Looking through phonological shape to lexical meaning: the bottleneck of non-native sign language processing. Memory and Cognition 17, 740–754.

McCabe, A., 1996. Evaluating narrative discourse skills. In: Cole, K.N., Dale, P.S., Thal, D.J. (Eds.), Communication and Language Intervention Series: Assessment of Communication and Language, vol. 6. Brookes, Baltimore, MD, pp. 121–141.

McKee, R., Schembri, A., McKee, D., Johnston, T., 2011. Variable 'subject' presence in Australian Sign Language and New Zealand Sign Language. Language Variation and Change 23, 375–398.

Metzger, M., 1995. Constructed dialogue and constructed action in American Sign Language. In: Lucas, C. (Ed.), Sociolinguistics in Deaf Communities. Gallaudet University Press, Washington, DC, pp. 255–271.

Morgan, G., 2006. The development of narrative skills in British Sign Language. In: Schick, B.S., Marschark, M., Spencer, P. (Eds.), Advances in the Development of Sign language by Deaf Children. Oxford University Press, Oxford, pp. 314–343.

Padden, C.A., 1983. Interaction of Morphology and Syntax in American Sign Language. University of California at San Diego, (Doctoral Dissertation).

Padden, C.A., 1986. Verbs and role shifting in American Sign Language. In: Padden, C. (Ed.), Proceedings of the Fourth National Symposium on Sign Language Research and Teaching. NAD, Silver Spring, MD, pp. 44–57.

Park, Y., 2009. Interaction between grammar and multimodal resources: quoting different characters in Korean multiparty conversation. Discourse Studies 11, 79–104.

Pfau, R., Quer, J., 2010. Nonmanuals: their grammatical and prosodic roles. In: Brentari, D. (Ed.), Sign Languages. Cambridge University Press, Cambridge.

Quinto-Pozos, D., Cormier, K., Ramsey, C., 2009. Constructed action of highly animate referents: evidence from American, British and Mexican Sign Languages. In: 35th Annual Meeting of the Berkeley Linguistics Society (Special Session on Non-Speech Modalities), Berkeley, CA.

Reilly, J., 2000. Bringing affective expression into the service of language: acquiring perspective marking in narratives. In: Emmorey, K., Lane, H. (Eds.), The Signs of Language Revisited: An Anthology to Honor Ursula Bellugi and Edward Klima. Lawrence Erlbaum Associates, Mahwah, NJ, pp. 415–433.

Rickford, J.R., Wasow, T.A., Zwicky, A., Buchstaller, I., 2007. Intensive and quotative all: something old, something new. American Speech 82, 3–31.

Sams, J., 2010. Quoting the unspoken: an analysis of quotations in spoken discourse. Journal of Pragmatics 42, 3147–3160.

Schembri, A., 2003. Rethinking "classifiers" in signed languages. In: Emmorey, K. (Ed.), Perspectives on Classifier Constructions in Sign Languages. Lawrence Erlbaum Associates, Mahwah, NJ, pp. 3–34.

Sidnell, J., 2006. Coordinating gesture, talk, and gaze in reenactments. Research on Language and Social Interaction 39, 377–409.

Silva-Corvalan, C., 1994. Language contact and change: Spanish in Los Angeles. Oxford University Press, Oxford.

Streeck, J., 2002. Grammars, words, and embodied meanings: on the uses and evolution of so and like. Journal of Communication 52, 581–596.

Tannen, D., 1986. That's Not What I Meant!: How Conversational Style Makes or Breaks Your Relations with Others William Morrow, New York.

Van Valin, R., LaPolla, R., 1997. Syntax, Structure, Meaning and Function. Cambridge University Press, Cambridge.

Woll, B., Sutton-Spence, R., Waters, D., 2004. ECHO Data Set for British Sign Language (BSL). Department of Language and Communication Science, City University, London, http://www.let.ru.nl/sign-lang/echo.

Wulf, A., Dudis, P., Bayley, R., Lucas, C., 2002. Variable subject presence in ASL narratives. Sign Language Studies 3, 54–76.

Kearsy Cormier is Senior Researcher at the Deafness, Cognition and Language Research Centre at University College London. She is a sign language linguist interested in grammaticalisation, lexicalisation and nativisation processes in signed and spoken languages, and the relationship between language and gesture. Areas of research include sign language documentation and corpora, morphosyntax, fingerspelling, constructed action, and language acquisition.

Sandra Smith is Senior Lecturer at the Centre for Deaf Studies at the University of Bristol. A Deaf native signer of British Sign Language, she has taught and conducted research on deaf children's language and education. Her research interests focus on language and cognitive development in deaf children, and the use of bilingual education for deaf children.

Martine Zwets is a Ph.D. student at Radboud University Nijmegen, The Netherlands. Her research focuses on the comparison of co-speech pointing gestures in Dutch and pointing signs in Sign Language of the Netherlands in the framework of Mental Space Theory. Other research interests include embodied cognition, information structure and imperative marking in Sign Language of the Netherlands (NGT).