Lidil

Revue de linguistique et de didactique des langues

60 | 2019

Langues des signes et genres discursifs

The Use of Signing Space in Signed News Broadcasts

L'utilisation de l'espace de signation dans les émissions signées

Pia Simper-Allen and Johanna Mesch

Electronic version

URL: <http://journals.openedition.org/lidil/6824>

DOI: 10.4000/lidil.6824

ISSN: 1960-6052

Publisher

UGA Éditions/Université Grenoble Alpes

Printed version

ISBN: 978-2-37747-164-5

ISSN: 1146-6480

Electronic reference

Pia Simper-Allen and Johanna Mesch, « The Use of Signing Space in Signed News Broadcasts », *Lidil* [Online], 60 | 2019, Online since 01 November 2019, connection on 16 April 2020. URL : <http://journals.openedition.org/lidil/6824> ; DOI : <https://doi.org/10.4000/lidil.6824>

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The Use of Signing Space in Signed News Broadcasts

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Acknowledgments

The authors would like to thank SVT, UR and the nine STS signers for the contribution of the data as well as the anonymous reviewers for their useful comments.

1. Introduction

- 1 With the advent of sign language television, sign language usage has expanded from only face-to-face to being used without receiver/s or interlocutor/s being physically present. In Swedish Sign Language (*Svenskt teckenspråk*, STS) research, the only discourse that has been annotated and analyzed so far is narratives and dialogues (from studio settings) in the Swedish Sign Language Corpus (Mesch, Wallin, Nilsson & Bergman, 2012). To understand STS in a wider context it is necessary to broaden the current sign language corpus to other types of sign language data. In the conversational Swedish Sign Language Corpus, signers have feedback in the form of manual and non-manual backchannels while the news data lacks feedback, as no audience is present.
- 2 The use of language in the media is complex in terms of its accessibility and communicative context. Spoken language in the media has been studied for some time (Talbot, 2007), but for sign language this has only recently begun. Sign language in television has been under development for over 30 years. Presenters in signed news broadcasts have no face-to-face contact with their audience. From that point of view it is interesting to study the signed “media” after the presenter has made an adaption of a Swedish text to Swedish notations/glosses for memoranda in the studio prompter. This requires its own corpus construction (with its selection, annotation, and analysis issues) comparable to the construction of a corpus, like the Swedish Language Bank

(*Språkbanken*) (Borin, Forsberg & Roxendal, 2012). This preliminary study looks at the use of space for making reference to referents in a text from news broadcasts in STS. As this initial study analyzes only a small amount of data, it can give us an indication for further analysis of the use of signing space for referents in other media discourses.

- 3 This study analyzes the creation and use of tokens in token blends in two news broadcasts for deaf school aged children and deaf adults. It also aims at providing an understanding of the use of signing space in the genre of media discourse.

2. Background

- 4 Signed languages use space in two different ways: referentially and topographically (Emmorey, Corina & Reilly, 1995; Engberg-Pedersen, 1995). Signs, specifically verbs, can be modified in space in order to identify different referents, but also to identify place. These verbs with spatial modification are traditionally described as *agreement verbs* (see the overview in Mathur & Rathmann, 2012), or as *indicating verbs* (Liddell, 2000). The referential use of space is when a location in the signing space indicates e.g. a woman as the signer utters the noun WOMAN before/while pointing to the left. This choice of the leftward point to the referent, in this case the woman, is arbitrary and contains no information as to the referent's actual location in the real world. Liddell (2003) claims that there is no difference in how signing space is used within indicating verbs, pronouns and depicting verbs: this claim is confirmed in a corpus-based study of directional verbs (Schembri, Cormier & Fenlon, 2018). Using signing space topographically, signers display the iconic spatial relationship between referents, e.g. when signers use two entity classifiers (index hand) and depict a real world location, e.g. when depicting two women standing opposite each other. Each hand represents one of the women, each oriented towards the other (Fenlon, 2016). The use of signing space also has other functions such as coordinating two clauses, for example signalling a state of opposition or comparison (Fig. 1).
- 5 News broadcasts in TV settings by a presenter at a specific time, place and specific situation are known as enunciation situations (Gripsrud, 2010). Signed news broadcasts are an enunciation situation that has not so far been studied in the scientific literature. The use of signing space is more limited in TV settings compared to formal settings on stage, where the signer presents a talk to an audience using a larger signing space (e.g. Zimmer, 1989). Stone (2011) shows that signers of British Sign Language (BSL) use signing space differently to the space size in informal and formal registers and points out that an analysis of different registers in sign language in a variety of situations is needed.
- 6 Liddell (2003) developed a cognitive theoretical model to describe how American Sign Language (ASL), creates meaning through the use of signing space. This model is based on Mental Space Theory and Conceptual Blend Theory (Fauconnier, 1985; Fauconnier & Turner, 1998). The mental spaces consist of several conceptual entities, "structured by frames and cognitive models" (Fauconnier & Turner, 2006, p.307). The conceptual entities map onto linguistic expressions, as described in the Theory of Conceptual Integration, called Conceptual Blend Theory. The mental spaces are in steady connection with each other and a mapping between the entities in the spaces changes as the conversation advances, and new meanings and therefore many mental spaces are continuously created (Svanlund, 2001).

- 7 In developing Mental Space Theory and the Theory of Conceptual Integration, Liddell (2003) developed a new mental space, which he calls *real space*. Real space is “a person’s current conceptualization of the immediate environment based on sensory input” (2003, p. 82, citing Liddell, 1995). The entities in real space are “grounded in that its elements are conceptualized as existing in the immediate environment” (2003, p. 82), which the signer can have a dialogue with, and refer to. In sign language one can direct signs, e.g. pronouns towards present entities in real space to create meaning. For example, if a signer points towards a present wallet to indicate that “the wallet over there is mine”. The wallet exists in real space. When entities from one mental space (i.e. an event space), which consists of conceptual entities involved in an event, map onto entities in real space (the signs in a signed sentence) a new mental space arises. This new mental space is a blend of two mental spaces, i.e. a *real-space blend*. This study concerns token blend which is a real-space blend (Liddell, 2003). Entities in a real-space blend are called blended entities and are notated with a word in vertical brackets, e.g. [wallet]. When entities from an event space map onto a signer’s hand/-s in real space, it becomes a visible blended entity in the blend, e.g. the right flat hand in Figure 1a and represents a one-dimensional entity (a sheet of paper). This entity does not exist physically in this ‘here and now’ situation, i.e. real space, but becomes visible in the blend in the form of a physical representation as a flat handshape. In Figure 1 the depicting sign (flat handshape) is articulated at the token [Human rights organization], i.e. placed on the right side of the signer that will indicate a token for [Human rights organization]. Not all entities in the event space are mapped onto a signer’s hand or body, but we conceptualize it as they exist in the blend, e.g. the areas towards which the right hand in Figures 1a and 1d directs. The right hand, i.e. index finger handshape, directs towards a token at the left side of the signer, and identifies the blended entity [Human rights organization]. There is no physical representation of this blended entity in this token blend. In Figure 1d the right hand, i.e. little finger handshape, is directed towards a token at the right side of the signer, and identifies the blended entity [Burma]. These blended entities are not visible but are invisible blended entities in the real-space blend. They are tokens. These invisible blended entities are mapped onto “empty physical locations in signing space, and signs produced in other parts of the discourse provide evidence for their existence” (Nilsson, 2010, p. 9). As it appears, the signer integrates visible and invisible entities in different real-space blends. A token is an invisible blended entity in the blend.

Figure 1. – ‘The human rights organization has in their report written/said how the situation is in Burma.’ (LAT 2017-11-24)¹

- 8 Knowledge of the different types of real-space blends which signers create in ASL can be applied to how signers create blends in STS (Nilsson, 2016; Simper-Allen, 2016). This study shows how presenters in news broadcasts construct tokens in token spaces (Figs 1a and d). A token space is “a non-topographical real-space blend separate from the signer. Entities within a token space are tokens” (Liddell, 2003, p.367). Liddell (2003) argues that within a token space, the token is non-topographical: “concepts like near, far, above and below are not relevant” (p.190). When a signer directs a sign towards an empty location that is not perceived as topographical, a token is created in that location. In the following text, the signer refers to the token with different signs.
- 9 This study also makes reference to buoys (a real-space blend), specifically list buoy (Fig. 6). Liddell (2003) describes four types of buoys: list buoy, THEME buoy, fragment buoy and pointer buoy. Liddell describes buoys as situations in which the “signers frequently produce signs with the weak hand that are held in a stationary configuration as the strong hand continues producing signs.” A buoy guides the addressee through a discourse “since they maintain a physical presence that helps guide the discourse as it proceeds” (Liddell, 2003, p. 223). In list buoy the weak hand produces handshapes that resemble digits. Digits are normally produced by the strong hand, where the fingers are oriented upwards (ibid., p. 224). In list buoy the weak hand’s fingers are slightly oriented forwards, and an index finger on the strong hand points on one of the weak hand’s fingers (ibid.). Each finger in a list buoy represents a conceptual entity, i.e. blended entity. In our data, list buoy is used to make associations with ordered sets of entities, which is recurrent in the introductory part in the broadcast for adults.
- 10 This study also focuses on token blends in two news broadcasts. A study in STS (Lyxell, 2016) shows that the use of tokens in token blends in the first production sets by the rising deaf generation is common in editorial texts within news broadcasts. Two results arise from Lyxell’s study; firstly that the presenters’ supporting material in written Swedish (albeit more like memos than full prose) does not seem to interfere with the use of tokens in token blends in news broadcasts, secondly in the context of the

frequency of token blend within the news delivered by the news presenters with an ordinary spontaneous produced text without a written manuscript. It shows among other things that the news presenters' eye gaze when presenting news stories is mostly directed towards the camera and not towards a token, as would be expected in a conversational text in STS.

3. Data and methodology

- 11 Our approach focuses on a discourse-level element, i.e. token blend, in one particular genre, namely the explanatory category with absence of face-to-face interlocutors in media discourse. Two different news broadcasts were selected, one for an adult audience and one for a young audience, produced by nine native or near-native STS signers. With respect to tokens our research questions are the following:
 - a. Which areas in the signing space are common for creating a token and what types of signs are directed towards a token in news broadcasts?
 - b. Does the number of token blends in the two broadcasts differ? That is, do the broadcasts for a younger audience for example more frequently create token blends than the broadcasts for an older audience?
 - c. In what ways does the use of tokens influence the structure of a signed media discourse?

3.1. News broadcasts for an adult audience

- 12 In 1987 the state-owned broadcaster *Swedish Television* initiated a news broadcast *Nyhetsstecken* (henceforth NT) in STS for deaf adults. The major public function of the NT is to distribute news in STS. NT distributes signed news on both television and the internet, as well as written news on the internet and social media regarding sign language and the deaf community. The accessibility to news in STS has improved considerably in recent years since streaming services became available on the internet. NT distributes its news every weekday and the news broadcasts are 10 minutes long. It has essentially had the same format for 30 years.
- 13 The editorial office consists of two deaf presenters (also reporters and editors) and two bilingual (Swedish and STS) editors who also perform the function of web editors.
- 14 Each episode of the news has one presenter signing in STS and the episodes have pictures relating to the news which the presenter delivers. When the presenter signs, the pictures first emerge and are then still, in order to not disturb the focus on the presenter's signing (Fig. 2). The presenter occasionally points to the still picture on the screen but this pointing is not regarded as a token according to Liddell's (2003) definition of a token. A token is an empty location to which the signer points or directs signs in signing space, whereas a still picture is not an empty space in front of the signer. However, the signer does occasionally shift from pointing towards a still picture on the screen to pointing towards a token even though the entity in the still picture and token are referring to the same entity. This shifting does have an overall impact on the distribution of tokens in token blends in comparison with news without a still picture on the screen.
- 15 The presenters in NT receive a script of the news which will be read in the broadcast in written Swedish from the producer in the morning the same day the recording will be

done (late afternoon). The presenter works with the script, i.e. adapts it to Swedish notations for memoranda that will be shown in the teleprompter. In parallel, the presenter adapts the memo notations to STS for news broadcasts and occasionally briefs it with another presenter. The first presenter's memoranda are uploaded onto a teleprompter. In this memo, which is also given to technicians in the control room, there are marks for when the still pictures should emerge on the screen next to the presenter. The presenter can see herself on a screen under the prompter and in that way knows when to point to a still picture. The original written script is used for a co-presenting voice presenter who reads it directly during the recording. The recording of the news is distributed live. As there is no language support in the studio during the live recording, the presenters cannot break off to make any adjustment or correct any fault, either in the language or the news content.

Figure 2. – Point to still picture on the screen. (NT 2018-10-11)

3.2. News broadcasts for a young audience

- 16 *Utbildningsradion*, UR (Swedish Educational Broadcasting Company), has since 2013 regularly published society-oriented news for young deaf people of school age in STS, called *Lilla Aktuellt Teckenspråk* (henceforth LAT). LAT distributes signed news on the Children's Channel on Friday afternoons during the school term. The distributions are accessible for two years through the play function on the internet. The broadcasts are filmed in a studio with a background that is in use in other news broadcasts. The editorial office has deaf presenters employed from the rising deaf generation but also commissions other deaf presenters from other companies, e.g. to add factual material to a broadcast, and are filmed in another location by other camera operators.
- 17 The presenter receives a script of the news which will be read in the broadcast in written Swedish from the producer the evening before a recording, as does a language supporter for the presenter. The presenter adapts the text to Swedish notations for memoranda, which is then uploaded onto the teleprompter (Fig. 3). In Figure 3, the presenter has written "FULL PICTURE" which refers to where the presenter points to the still picture behind him/her. In parallel, the presenter adapts the memo notations

to STS for news broadcasts and briefs it with the language supporter before the actual recording starts. The language supporter sits in the same room as the presenter but with a TV screen before her opposite the news presenter. The supporter watches the presenter deliver news in the TV screen but can interrupt the presenter's signing if s/he digresses to a new topic. The written Swedish script is used for a voice interpreter who reads it directly during the recording in the same studio as the presenter.

Figure 3. – Extract from a memorandum in LAT.

Camera 2
1) START
Camera 3
2) VIGNETT + TEXT
STORM IN SOUTHEAST AFRICA – MANY AFFECTED
MAJOR SORROW IN NEW ZEALAND AFTER POINT TERROR ATTACK
OVER 2000 CLIMATE DEMONSTRATION IN WORLD
Camera 2
3) INTRODUCTORY
HI AND WELCOME TO LILLA AKTUELLT TECKENSPRÅK!! MY NAME EDWIN
AND WE DRIVE START WITH WEEK'S NEWS!
Camera 3
4) ON TROPICAL STORM
WE FIRST TAKE UP THERE SOUTHEAST AFRICA – HAS ENORMOUS STORM
5) CONTRIBUTION TROPICAL STORM
(FULL PICTURE)

3.3. Participants

- 18 The participants in the study consist of five presenters and four reporters on commission. NT has two full-time employed presenters (one female, one male) aged 28 and 40 and does not take presenters on commission. LAT has seven presenters (three females, four males), aged 20-30. All presenters are native or near-native signers in STS and have an average of two years' experience of broadcasting news. The data consists of 59:38 minutes of data from the sets of NT and 1:14:06 minutes from the sets of LAT (Table 1).

Table 1. – Data.

Data	Minute	Presenter
NT1	10:02	F1
NT2	10:02	M1
NT3	10:02	F1
NT4	09:48	F1
NT5	09:52	M1

NT6	09:52	M1
LAT1	14:35	M2, F2
LAT2	14:54	M2, M3
LAT3	14:54	F3, M4
LAT4	14:50	F3, F2, M2
LAT5	14:53	M5, F4
Total	2:13:44	

3.4. Annotation of token

- 19 Tokens were annotated and analyzed using the multimodal annotation tool ELAN (Crasborn & Sloetjes, 2008). The sets of NT and LAT were coded for tokens that the presenter was using (Table 2). ID(entification)-glosses for signs were taken from the annotation conventions for the Swedish Sign Language Corpus (Mesch & Wallin, 2015). Multiple tiers were created (Fig. 4); a ‘token’ tier for marking tokens; ‘sign type’ for identifying which sign type, e.g. depicting sign (UPLOAD-IMAGE-ON-MOBILE), fingerspelling (spelling letters e.g. BURMA), indicating sign (lexical sign directed towards a location in signing space and identify a blended entity), lexical sign (directed towards a location in signing space), locative sign (directed towards a location in signing space to identify location e.g. GO-THERE), nominal determiner (e.g. noun classifier), numeral sign (e.g. THREE), pointing (POINT), or pronoun (e.g. PRO[→][the injured boy]). The tier ‘token loc’ is for identifying the location where the presenter directs his signing towards a token: forward (in front of presenter), ipsi (the side of presenter’s dominant hand), contra (the opposite side to presenter’s dominant hand), down or up is added if necessary, stacked (two or more layers) and ‘token appearance’ for identifying if a token appeared for the first time or was re-used (see Fig. 7). The sample includes altogether 1,084 tokens (in token blends). List buoy is not included as it is not a sign a presenter directs to a token. A list buoy is not a directional sign, or token, but function as a discursive marker.

Table 2. – Token tiers.

Tier	Description
Token	xxx
Sign type	Depicting sign, fingerspelling, indicating sign, lexical sign, locative sign, nominal determiner, non-locative sign, numeral sign, point, pronoun
Token loc	Forward, ipsi, contra, down, up and stacked
Token appearance	First time or re-using

Figure 4. – ELAN screenshot of token tiers.

4. Results

- 20 The following sections present the distribution and qualitative analysis of tokens in token blends. The order of the sections follows the layout arrangement of the news broadcasts, which are composed of three sections: introduction, main body and conclusion.

4.1. Distribution of tokens in token blends

- 21 Table 3 shows the distribution of which location tokens appears in token blends i.e. a token located at ipsi side or contra side.

Table 3. – Number and percentage (of total) of location for tokens.

	NT	NT%	LAT	LAT%	NT+LAT	TOTAL
centre	10	3.4%	24	3.0%	34	3.1%
contra	180	60.6%	320	40.7%	500	46.1%
forward	24	8.1%	139	17.7%	163	15.0%
ipsi	82	27.6%	303	38.5%	385	35.6%
stacked	1	0.3%	1	0.1%	2	0.2%

	297	100.0%	787	100.0%	1084	100.0%
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- 22 Table 3 indicates that *contra* is a primary location for a token in signed news broadcasts. *Ipsi* is the second most used, both in NT and LAT. A token used for the first time accounts for 34.5% of total usage in NT and 28.5% in LAT, after which the presenter will direct signs towards the same token the next time or several times.
- 23 Figure 5 shows the distribution of signs such as lexical signs, point, and indicating signs that are directed towards or placed at a token. Fingerspelling e.g. manual letters of proper nouns and nouns referring to e.g. new concepts in the news, and are in the data often articulated at a token, e.g. USA. Lexical signs are often directed towards or placed at tokens in signing space. In these cases, the signer's torso is often turned towards a token. Depicting signs depict an event or a state and are partly unlexicalized (Liddell, 2003) and their location in signing space depends on the event it depicts. In a depicting blend the signing space is topographical where a token blend is not. Therefore, to direct a depicting sign towards a token is rare, which accounts for the low number of findings of depicting signs towards a token in our data. Although depicting signs may be in use in a news broadcast more or less to describe an event or a state they are not used as a sign directed towards a token. However, signers in this data tend to direct their head and torso towards a token.

Figure 5. – Sign types directed towards tokens in NT and LAT news broadcasts.

- 24 The presenters refer to an established token frequently (69.8%) and the most frequent sign types used to indicate a presence of a token are lexical signs (48.1%), pointing (15.5%) and indicating signs (11.2%). The arrangement/set-up of a news episode in the LAT broadcasts is essentially composed of three parts: introduction, main body and conclusion. The set-up of a news episode in the NT broadcasts has a similar composition as LAT, except NT does not include a conclusion part. Creation of tokens in

the conclusion is infrequent and recalls the rare creation of tokens in the introductory part. Therefore, the lack of conclusion part in the NT broadcasts does not have an impact on the distribution of tokens between the two broadcasts.

4.2. The introductory part of the news story

- 25 The introductory part in every episode of the news broadcasts LAT and NT starts with a short presentation of news stories (generally three topics) the current episode will present. In this part, some token blends are sparingly created and further references in this introductory part to the tokens in these blends are not pursued. In contrast with LAT broadcasts, the presenters in the NT broadcast introduce the first news story/topic in the introductory part by means of list buoys. Interestingly, neither of the presenters in NT develop this list buoy further, i.e. into TWO-LIST and THREE-LIST although there are two further news stories to present. The digit (D1) in Figure 6 represents the first news story the presenters are about to present, clearly and concisely. The news story associated with digits consists sometimes of a token blend, which mostly comprises only one token. Just as for LAT broadcasts, the presenters do not refer to the token any further in the news.
- 26 For a presenter in a news broadcast, it is important to distribute the news with sufficient clarity, which requires a presenter to have a self-assured presence on the screen. It also requires the presenter to produce signs clearly and consistently, and the movement of the signs is at a leisurely rate, so the signs are clearly articulated with distinct handshapes and movement. A vital way of gaining clarity in understanding and following a text in sign language is to create tokens and refer to them frequently by directing or placing different signs towards or at tokens in the signing space. The presenters in both the LAT and NT broadcasts stand still at a news desk, which gives them the means of turning their bodies towards the tokens, either to the left or the right side of their chest, which would be limited if a presenter sat on a chair behind the news desk. The freelance presenters who deliver news during intermissions, usually stand without a news desk, and in that way, they are also encouraged to turn their bodies towards tokens they create.

Figure 6. – List buoy: point to D1 in ONE-LIST. (NT 2018-12-06)

4.3. Main part of the news story

- 27 After the introduction, the news presenter unfolds the news stories, during which several token blends are created, and different types of signs are directed toward these tokens. The positions of tokens in NT and LAT broadcasts are mostly on the contra and ipsi sides. This finding may be contrary to the placement of tokens in other types of sign language discourses. For example, in a narrative discourse a token is often placed straight ahead in front of the signer rather than on ipsi and contra sides, but needs to be investigated further. Lyxell (2016) observed in his study of tokens in news broadcast (LAT) that the presenter's eye gaze was directed towards a camera rather than towards a token more often than appropriate in a narrative discourse. The photos in Figure 7 illustrate signs that are meaningfully directed in signing space to the token [Human rights organization] at contra. The presenter is directing her eye gaze on the camera (behind a teleprompter). However, the presenters in LAT and NT occasionally direct their eye gaze towards a token. The function of gaze has not been pursued in this study.

Figure 7. – Lexical signs and pointing directed towards the tokens ‘This human rights organization...’ (LAT 2017-11-24)

- 28 Note that the presenter's chest in Figures 7 and 8 is turned towards the same direction as the sign is directed: towards the token. Turning of the chest towards a token occurs frequently in LAT broadcasts but less so in NT broadcasts. It may depend on providing clearer information for a younger audience. The presenter's chest is frequently turned towards a token although the sign itself is not articulated at a token, since it is a body anchored sign albeit orientated towards a token. An example of a body-anchored sign is [SEXUAL] illustrated in Figures 8a and d. In this example the presenter's chest is towards the area in front of the left side. This gives the addressee a clue that the presenter is about to create a token, in this case consisting of |sexual assault| in the area ahead on the left side of the presenter. The following signs [ASSAULT]→|ahead left side of the chest| create |sexual assault| for this area in front of the left side of the presenter's chest. Later the presenter signs AS-WELL ahead in front of their chest in Figure 8c before he turns towards the area on the right side of his chest and signs [SEXUAL] [HARASSMENT]. The presenter has now created a token blend with token |sexual harassment| for the area on his right side. The episode illustrated in Figure 8 is an example of something that frequently appears in the data, i.e. two subjects which here are referred to by four sign whereas two signs in the noun phrase [SEXUAL] and [ASSAULT] towards left side (contra) and two signs in the noun phrase [SEXUAL] and [HARASSMENT] towards right side (ipsi) of the presenter's chest to form a coordination of these two pairs of signs. In this way, the presenter is able to use one or more signs that can be directed towards any of these two tokens |sexual-assault| and |sexual-harassment|.

Figure 8. – Presenter's chest turns towards a token. (LAT 2017-10-27)

- 29 The use of two tokens on the opposite side in front of the presenter as illustrated in Figure 8 is similar to what is seen in Figure 9, which is from an NT broadcast. In this episode, the presenter has earlier created tokens on the opposite sides in front of her chest, one for |Germany's hockey team| on the right side of her chest and one for |Swedish hockey team| on the left side of her chest (Figs 9a and c). The presenter turns her torso slightly towards her right side for |Germany's hockey team| and signs [GERMANY]. This sign is a body anchored sign and is orientated towards |Germany's hockey team| as the presenter turns her torso to the right side and she uses the token |Germany's hockey team|. As we now know, the presenter has used two tokens on her left and right side, she can in the following token blend (Fig. 9k) use the sign [BEAT]. This sign starts first at |Germany's hockey team| and is thereafter directed towards |Swedish hockey team|. The presenter then produces a numeral sign [FOUR][↓] |Germany's hockey team| and moves her hand towards |Swedish hockey team| and produces the sign [THREE][↓] |Swedish hockey team|. With the signs [FOUR][↓] |Germany's hockey team| and [THREE][↓] |Swedish hockey team| the presenter embodies the conceptual metaphor MORE-IS-UP and LESS-IS-DOWN (Nilsson, 2016), that is, the winner is placed in an upper location and the loser in a lower location.

Figure 9. – Presenter turns her torso to the left and right side towards tokens. (NT 2018-02-21)

- 30 Signers frequently produce or direct a two-handed sign at or towards a token in the signing space, and let one hand in this two-handed sign remain at the token, while the other hand produces one or more signs (Liddell, 2003; Nilsson, 2010). The sign fragments in our data have the function of a spatial reference point. In our data, one of the presenters frequently uses a sign we gloss as [GROUP], which is a two-handed sign. One of the hands in the sign [GROUP] often remains in place at a token while the strong hand produces signs and becomes a sign fragment (Liddell, 2003), e.g. the presenter places the two-handed sign [GROUP] at [ethnic group] on the right side ahead of the presenter, then lets the non-dominant hand remain in place.
- 31 Directing signs to a token on a level with the presenter's head occurs frequently in the data. For example, in one situation the presenter (LAT 2017-11-24) tells that Rohingya is an ethnic group and produces fingerspelled sign ROHINGYA@fs at token [Rohingya], which is located in a lower area in front of the signer than e.g. placement of sign USA at token [USA], located higher up in the area in front of the presenter. This phenomenon has been observed by Nilsson (2010): e.g. the verb MOVE, is produced with a movement that starts in the area to the presenter's left, associated with the main character's background, and ends in front of the presenter, directed forward/up and at this height, which indicates that something is located or takes place far away. In LAT, the placement of [USA] higher up could indicate that the USA possesses a great power. Another example which mirrors the example with USA and Rohingya is the token [Bangladesh] that is placed higher on the ipsi side of the presenter than token [Rohingya] which is placed lower in the signing space on presenter's contra side.

4.4. Concluding part of the news story

- 32 In every episode of LAT there is a conclusion. This conclusion consists of a short summary of the news stories, which were unfolded in the main part of the news broadcast. The use of tokens in the conclusion part bears similarities to the use of tokens in the introductory part, i.e. the presenters do not refer to the tokens in these blends again. NT broadcasts do not have a concluding part, and one speculative reason for this is that the LAT summary is intended for a young audience aged 9 to 12. Information needs to be repeated for them so that they can better digest the amount of information given and it may help a younger audience to recall the news that has been given. Another speculation is that younger children need to get used to this kind of program, because of the greater complexity of decoding this kind of signing which is not something they practice themselves in their daily lives. The intended audience of NT is adults aged 18 and older. This audience can be supposed to be familiar with some concepts, and their cognitive development is more advanced.
- 33 To return to the original question, the findings from the qualitative study of token in news broadcasts shows that tokens are mainly placed either to the left or right side of the presenter and less in the area straight ahead. The introduction and conclusion parts in news have fewer tokens. We conclude that these findings are characteristic of sign language in news broadcasts.

5. Conclusions

- 34 This study is a small-scale qualitative investigation. Tokens (empty non-topographical areas in front of the signer) are used in the news broadcasts frequently and seem to help the audience to follow the information given in the news topics. It would be interesting to see to what extent background pictures appearing on the screen help the younger viewer. The difference is that the signing space in token blends where the presenters create tokens seems to be larger than the signing space in informal settings. The genre for news broadcasts is a formal register compared to the more informal conversational data in the Swedish Sign Language Corpus. In the conversational and unplanned corpus, signers have direct feedback while the news data is absent of direct feedback, as the audience is not present.
- 35 Token blends and lexical signs occur frequently in news broadcasts. Indicating verbs and pointing seem to be the most frequently used type of signs that are directed towards a token in these texts. In news broadcasts the presenters frequently turn their body towards a token when directing a sign towards it at the same time. This can be considered a typical discourse feature for news broadcasts, as opposed to a narrative discourse in which a signer more often uses her/his eye gaze directing towards to a token, and to a lesser degree her/his torso. The presenter's eye gaze in news broadcasts is directed to a teleprompter in order to read the memos but sometimes they shift their eye gaze towards tokens, and specifically in the initial part to indicate a token. Further investigation of the possible role of the pictures on the screen (both still and moving) behind/next to the presenter is needed.
- 36 The news broadcast sets of NT (*Nyhetsstecken*) and LAT (*Lilla Aktuellt Teckenspråk*) are media-oriented discourses and the study of tokens in these discourses shows that token blends are created frequently. Token blends appear more frequently in LAT than in NT,

possibly because the LAT broadcast is focused on a younger audience. The creation of tokens often seems to be important for the presenters in LAT as it makes the references to different entities clearer and contributes to a fuller understanding of the contents in the news stories for the younger audience. The second most frequent sign type after lexical signs directed towards tokens in LAT is pointing, whereas in NT it is indicating signs. Another question that arises in the study of token blends in NT is whether the reason for the lower number of token blends in NT is an effect of the presenter's work circumstances, as the preparation time before a broadcast is limited in NT. Another possible effect on numbers of tokens in NT and LAT concerns who the language supporter is. The LAT point out that the presenter often delivers a higher quality sign language in news broadcast if the cooperation with the language supporter works well. A further conclusion arising from the study is that pointing to a still picture on a screen can be distinguished from pointing towards a token. In future study, we would like to investigate the distribution of pointing towards a screen and if it is prompted as soon as the picture is displayed, and if and when it refers to the picture.

- 37 Further study could also explore token blends in different news broadcasts as well as perform a deeper syntactic analysis: it would be worthwhile to pursue the question of the ways in which the use of tokens in token blends influence the clause structure in sign language.

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NOTES

1. Permission is granted for use of all figures from Lilla Aktuellt Teckenspråk and Nyhetstecken.

ABSTRACTS

This study focuses on the use of tokens, that is, empty non-topographical areas in front of the signer, in two different production sets of Swedish news broadcasts in Swedish Sign Language, one for deaf adults and another for deaf upper school-aged children. The sample includes altogether 1,084 tokens in token blends. The presenters refer to an earlier established token frequently, and the most frequent sign types used to indicate a presence of a token are lexical signs, pointing and indicating signs. The tokens are mainly placed either to the left or right side of the presenter and to a lesser degree in the area straight ahead. The introduction and conclusion parts in news have fewer tokens. Interestingly, the signing space in token blends seems to be larger than the signing space in informal settings. We suggest these findings may be characteristic of the media genre. We also take into consideration the use of pictures on the screen and what effect they have on the creation of tokens.

Cet article étudie l'utilisation des *tokens* dans deux types de journaux télévisés, l'un pour un public sourd adulte et l'autre pour un public sourd jeune, en langue des signes suédoise. Un *token* est un point vide et non topographique dans l'espace de signation qui se situe devant le présentateur. Notre échantillon contient 1084 *tokens* qui ont été placés à un point précis de cet espace de signation pour faire référence au concept introduit par chaque *token* au cours du discours. Les présentateurs exploitent ce mécanisme de référence fréquemment et les types de signes les plus utilisés à ce propos sont des signes lexicaux, des pointages et des verbes directionnels. La plupart des *tokens* sont placés dans l'espace de signation gauche ou droit du présentateur, tandis que l'espace de signation frontal est moins utilisé. Le nombre de *tokens* est plus réduit dans l'introduction et la conclusion des informations télévisées. Nous pensons que ces résultats pourraient être des spécificités des programmes d'information en langue des signes. Dans notre analyse, nous avons aussi tenu compte de l'utilisation des images à l'écran et de l'effet de celles-ci sur la création des *tokens*.

INDEX

Mots-clés: Conceptual Blend Theory, tokens, token blends, journal télévisé, discours médiatique signé, langue des signes suédoise

Keywords: Conceptual Blend Theory, tokens, token blends, news broadcasts, signed media discourse, Swedish Sign Language

AUTHORS

PIA SIMPER-ALLEN

Stockholm University

JOHANNA MESCH

Stockholm University