

# **Expressing Existence in Flemish Sign Language**

Danny De Weerdt

Master thesis

Finnish Sign Language

Department of Languages

University of Jyväskylä

Autumn 2008

## JYVÄSKYLÄN YLIOPISTO

Faculty Faculty of Humanities	Department Department of Languages
Author Danny De Weerd	
Title Expressing Existence in Flemish Sign Language	
Subject Finnish Sign Language	Level Master's thesis
Month and year November 2008	Number of pages 59 + 5
<p>Abstract</p> <p>This Master's thesis describes how Flemish signers express the function <i>existence</i> in Flemish Sign Language and how signs are ordered in an existential construction. Existential constructions have the function of introducing new, important referents in a discourse. These constructions are semantically related to locative and possessive ones as they all express a certain place of a certain object. Using this locative approach, research on both spoken and signed languages has shown that these constructions are also related syntactically.</p> <p>This Master's study consists of data elicited from four native signers of Flemish Sign Language and comprises about 40 minutes of videotaped interactions that were transcribed with ELAN and Word. The data were approached from the functional point of view.</p> <p>The analysis shows that Flemish Sign Language can express existence by means of 1) the sign HAVE, 2) a Verb Construction 3) a localized lexical sign, 4) pointing, or 5) a combination of the above ways. In general, existential constructions in Flemish Sign Language have the order of Location preceding Located Element. Locative Relation within these constructions is marked by a preposition sign, a Verb Construction or a localized lexical sign. The choice of these markers affects the place of Locative Relation within the construction. Verb Constructions and localized lexical signs appear at the final position of the construction, whereas preposition signs can occur both at the initial position of the construction as well as right after the Location.</p>	
Keywords: Flemish Sign Language, sign language, existence, existential construction, functionalism, grammar, word order	
Depository	
Additional information: CD with Finnish Sign Language abstract	

## TABLE OF CONTENT

1. INTRODUCTION.....	3
2. FLEMISH SIGN LANGUAGE .....	5
3. EXISTENTIAL CONSTRUCTIONS IN SPOKEN LANGUAGES .....	10
3.1. The locative approach .....	10
3.2. Typological surveys .....	12
3.2.1. Clark's typological survey.....	12
3.2.2. Freeze's typological survey.....	16
4. EXISTENTIAL CONSTRUCTIONS IN SIGNED LANGUAGES.....	19
4.1. British Sign Language.....	19
4.2. Danish Sign Language .....	20
4.3. Finnish Sign Language and Flemish Sign Language .....	22
5. METHODOLOGY .....	26
6. WAYS OF EXPRESSING EXISTENCE IN FLEMISH SIGN LANGUAGE .....	29
6.1. The sign HAVE .....	30
6.2. Verb Construction .....	36
6.3. Localized lexical sign.....	42
6.4. Pointing .....	44
6.5. Combination of previous types 1-4 .....	46
7. DISCUSSION .....	48
8. CONCLUSION .....	52
BIBLIOGRAPHY .....	56

Appendix 1.

Appendix 2.

Appendix 3.

Appendix 4.

Appendix 5.

# 1. INTRODUCTION

During my studies in sign linguistics, I received a questionnaire concerning possessive and existential constructions in sign languages (Zeshan 2006) as a part of the course SVKS 117 ‘Research Methods of Sign Languages’. I had to fill in the questionnaire and consider how possession and existence can be expressed in my mother tongue, Flemish Sign Language. While answering the questions, it amazed me that several objects with different semantic features (i.e. alienable - inalienable objects, animate - inanimate objects etc.) can affect the ways in which possessive and existential utterances are constructed. Also, the whole idea that possession and existence can be encoded in various ways caught my attention.

The questionnaire led me to conduct a cross-linguistic research together with Professor Ritva Takkinen. The aim of our research was to find out how existence can be expressed in both Finnish and Flemish Sign Language, and what similarities and differences there are between the two languages (De Weerd & Takkinen 2006). In the mean time, I continued reconsidering and answering questions from the questionnaire together with Dr. Myriam Vermeerbergen in order to write an article about observations on possessive and existential constructions in Flemish Sign Language (De Weerd & Vermeerbergen in print).

Existential constructions are a kind of ‘hot potato’ within linguistic research in general as they are looked at in different ways. Little is known about this construction within sign linguistics although there are some studies aiming at categorizing existential and possessive constructions (e.g. Perniss & Zeshan in print) and at investigating the relation between existential, possessive and locative constructions (e.g. Kristoffersen 2003). Most studies explore existential constructions in relation with other constructions proceeding from form to function (e.g. Kristoffersen 2003).

My main interest for this thesis arises from the question how the function *existence* can be encoded in Flemish Sign Language. In his framework of functionalism, Givón (2001b: 255) defines the function of existential construction as those constructions “that are typically used to introduce important new referents into the discourse”. These referents are indefinite (ibid.).

This thesis aims at describing existential constructions in Flemish Sign Language and is preoccupied with two main research questions:

1. What different ways are there to express existence in Flemish Sign Language?
2. How are signs ordered in an existential construction?

The theoretical framework used for the description is the Basic Linguistic Theory from R.M.W. Dixon. Dryer (2001, 2006) explains this theory as a theoretical framework widely used in descriptive work on languages, particularly in grammatical descriptions of entire languages. He also notes that describing a language cannot proceed without a theory. According to Dryer (2006), descriptive theory differs from explanatory theory that the former describes *what* languages are like while the latter explains *why* a language looks the way it does.

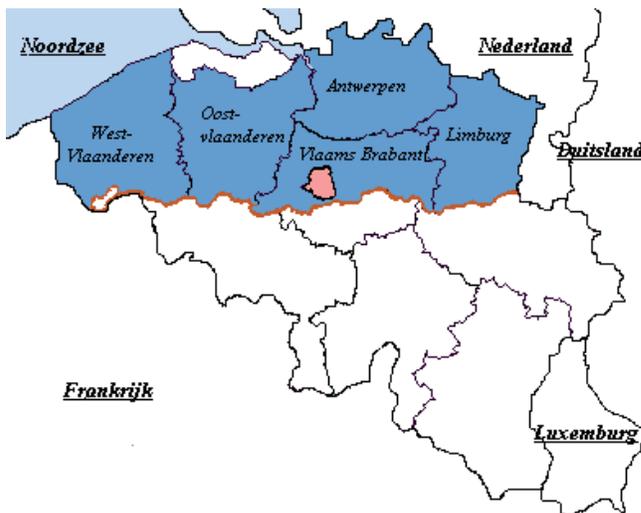
For the analysis of existential constructions in the data, I follow Givón's (1981: 163) idea of viewing existence as a *functional domain* within the context of a cross-language typology of existential constructions. Givón (2001a: 25) argues that "languages can code the same functional domain by more than one structural means". The grammatical typology is the one that "enumerates the main structural means by which different languages code the same functional domain" (Givón 2001a: 23). As the analysis proceeds from function to form, the data are functionally approached in order to find out how existence is expressed in Flemish Sign Language.

This thesis starts with a chapter on the background of Flemish Sign Language and short presentations of some of the most important studies on the grammar of Flemish Sign Language. The third chapter explains the relation between existential, possessive and locative constructions in spoken languages and includes typological surveys conducted by Clark (1978) and Freeze (1992). Chapter four focuses on existential constructions in signed languages.

In chapter five I focus on my data collection and methodology. Chapter six analyzes the various ways in which Flemish signers express existence. Chapter seven discusses the results of my research and is followed by a conclusion in chapter eight.

## 2. FLEMISH SIGN LANGUAGE

Flemish Sign Language (Vlaamse Gebarentaal or VGT) is the language used in Flanders, the northern part of Belgium, by approximately 6.000 signers (Loots et al. 2003). It consists of five regional varieties. These varieties arose around the various Flemish deaf schools and are used in regions that more or less correlate with the five Flemish provinces; West-Flanders (West-Vlaanderen), East-Flanders (Oost-Vlaanderen), Antwerp (Antwerpen), Limburg (Limburg) and Flemish Brabant (Vlaams Brabant) (Vanhecke & De Weerdt 2004: 27). Figure 1 below shows the geographical location of Flanders and its five provinces.



**Figure 1: Flemish provinces**

The increasing contact between the signing people in Flanders nowadays contributes to a spontaneous standardization process (Van Herreweghe & Vermeerbergen 2006: 225). Vanhecke and De Weerdt (2004: 36) believe that their findings on lexical similarities between the regional varieties caused by continuous overlapping, borrowing and adopting of signs throughout Flanders are a sign of this process.

Next to the socio-linguistic angle, research on VGT has been focused on lexicon, phonology, morphology and syntax. In the following, I will give a brief overview of each linguistic domain.

In November 1999, three Flemish universities set up the project “The Deaf community in Flanders: evaluation, sensitisation and standardisation of Flemish Sign Language”. This project consisted of three parts. The first part was a demographic study of the Flemish deaf and partially deaf. The second part was a “sign-database-project”. The third and final part provided an overview of the attitudes in Flanders regarding “signs in education” of deaf and partially deaf children. The linguistic part of the project continued in the form of a two-year study, “Sociolinguistic Research of Flemish Sign Language”, at Ghent University. During this research, the online Flemish Sign Language dictionary (<http://gebaren.ugent.be>) was composed. This important application currently contains around 7500 signs from Flemish Sign Language (De Meulder & Van Mulders 2007). Also in 1999, the Flemish Sign Language Centre, CORA<sup>1</sup> and Fevlado<sup>2</sup> decided to set up a project in order to trace and fill in hiatuses for technical terms in the VGT lexicon within certain educational fields. From around 1980 onwards VGT was being granted a growing societal and educational role, confronting teachers, educationalists and VGT interpreters with various “hiatuses” in the VGT lexicon. First, existing signs for mathematical, geographical and historical terms used in (deaf) education were collected. Then, the hiatuses for the technical terms were filled by consulting Deaf experts (cf. De Weerd & Rogiest 2003, Van Herreweghe & Vermeerbergen 2003).

Demey (2005) conducted research concerning the phonology of Flemish Sign Language. She explored the iconic and distinctive features of VGT signs based on the manual part of the signs, i.e. the four parameters handshape, hand orientation, articulation place and movement. The aim of her dissertation was to describe the phonological elements and structures of the standard lexicon of VGT from data consisting of about 2400 isolated citation form signs (ibid.).

Within a large-scale doctoral research project, Vermeerbergen (1996) conducted the first exploration on the morpho-syntax of VGT mainly focusing on the expression of the relationship between the verb and its argument(s). She made a distinction between verb signs (e.g. ANSWER) and verb constructions (e.g. ‘a-man-walking-to-a-parked-car’), further dividing the verb signs into variable verbs (e.g. ANSWER) and invariable verbs (e.g. DEAF).

---

<sup>1</sup> Commissie Ontwikkeling en Research ten aanzien van personen met een Auditieve Handicap (Commission Development and Research concerning people with an Auditory Impairment).

<sup>2</sup> Federatie van Vlaamse DovenOrganisaties (Federation of Flemish Deaf Organisations)

As the distinction between verb signs and verb constructions is not always clear, these signs can be seen within a continuum (Vermeerbergen 1996: 54-57).

An important finding from Vermeerbergen's (1996) study – especially when considering the object of my own research - was that verb constructions can be used to connect a referent to a locus, i.e. localisation, in order to use the locus later on to (grammatically) refer to the referents. Other ways of establishing a locus are: 1) pointing, preceding or following a lexical sign, 2) a lexical sign produced on a locus, 3) a verb sign modified in articulation space, 4) a directional verb, or 5) a simultaneous production of pointing and the spoken component denoting the referent. In addition, Vermeerbergen (1999: 21-25) noted that pointing can refer to a present person, object, animal or place but also to non-present referents. Vermeerbergen and De Vriendt (1994) and Vermeerbergen (1996) found that repetitions of signs, constituents or clauses occur frequently in VGT and repetition of one type of constituent (e.g. subject, verb sign or verb construction) might occur more than repeating another type of constituent (e.g. other arguments or negation). Vermeerbergen's (1996: 90, 114) study also showed that existential HAVE is one example of another type of constituent that can be repeated and that this repetition only occurs in monologues.

Regarding syntax, Vermeerbergen (1996) has shown that different sentence types such as yes/no-question, wh-question, negation, affirmation and topicalization are non-manually marked by the use of eyebrows and/or head movement (for a full overview of non-manuals, see Vermeerbergen 1996: 23, 1999: 17). In their descriptive work on negation and interrogatives in VGT, Van Herreweghe and Vermeerbergen (2006: 256) noted that the use of non-manuals in these sentence types seems to behave similarly as in other sign languages.

Vermeerbergen (1996) also investigated the word order of reversible, non-reversible and locative sentences from both elicited data, inspired by Volterra et al. (1984) research, and spontaneous language data. Later on, small studies on word order in VGT were cross-linguistically compared with South African Sign Language (Vermeerbergen et al. 2007), Irish Sign Language and Australian Sign Language (Johnston et al. 2007).

Vermeerbergen (1996, 1999) noted that combining one verb with more than one explicitly mentioned argument, especially with reversible arguments, is rare in spontaneous

language data and this made describing the basic word order in terms of Subject (S), Verb (V) and Object (O) difficult. She proposed to look at the “basic word order” in VGT as a combination of two clauses. Each clause consists of a verb (or predicate) combined with one or two arguments with the first clause functioning as topic and the second one as comment. Following Chafe, Vermeerbergen (1996: 29) describes the topic as “a unit that sets a spatial, temporal, or individual framework within which the main predication holds”. Topics that consist of one sign are non-manually marked by means of raised eyebrows (Vermeerbergen 1999: 63) or a squint (Vermeerbergen 2001-2002).

In her pre-study, using elicited data, on word order in declarative sentences in terms of Subject, Verb and Object, Vermeerbergen (1996) found that non-reversible sentences show two main patterns: SVO and SOV. A third pattern, SVOV, i.e. ‘verb sandwiches’, occurs less frequent. These results contrast slightly with cross-linguistic study (Vermeerbergen et al. 2007), which states that SVO is the most frequent word order pattern whereas SOV is used less frequent.

In reversible sentences, Vermeerbergen (1996) found two main word order patterns, SOV and SVO. A later study (Vermeerbergen et al. 2007) found that SVOV is also possible. Younger signers also use O,SV with O as the topic (Vermeerbergen 1999: 63). The verb choice has a certain impact on the word order; the use of a lexical verb results in SVO-order whereas the use of verb constructions results in SOV (Vermeerbergen 1996, 2008).

Both Vermeerbergen (1996) and Vermeerbergen et al. (2007) - using elicited data - showed interesting findings on the word order of locative sentences in VGT. These sentences basically have two main patterns. The first pattern shows the order Location – Located Element – Locative Relation as exemplified in (1) and (2) (Vermeerbergen et al. 2007).

(1) HOUSE TREE vc-(tree-behind-house)

(2) HAVE HOUSE TREE BEHIND  
HOUSE -----

In both examples the Locative Relation appears at the final position of the utterance by means of a verb construction (vc) (1) or a preposition sign (2). Vermeerbergen (1996: 76) notes that there is a tendency to place the verb construction at the final position of the sentence.

The second pattern shows the order of Located Element – Locative Relation – Location as illustrated in example (3). In this case the Locative Relation appearing between the Located Element and Location is always expressed by means of a preposition sign (Vermeerbergen 1996, 1999, Vermeerbergen et al. 2007).

- (3) \_\_\_t  
CAT ON CHAIR

In the spontaneous language data from Vermeerbergen's (1996: 135) study, a pattern identical to the pattern from elicited data shown in example (1) was found, with a verb construction at the final position of the utterance that marks the Locative Relation. When expressing the Locative Relation by means of a preposition sign, the order Location – Locative Relation – Located Element occurred as shown in example (4). This construction was translated in Dutch as existential sentence.

- (4) MOUNTAIN ON HOTEL  
'There is a hotel on the mountain.'

### 3. EXISTENTIAL CONSTRUCTIONS IN SPOKEN LANGUAGES

Chung and McCloskey (2002) note that spoken language linguists approach existential constructions differently depending on the framework they use. Within the generative framework, for example, Milsark (1975) strongly focused on the form of existential sentences in English. His research resulted in an *impersonal approach* towards existential constructions.

In the introduction (see chapter 1), I have explained that this thesis focuses on how Flemish signers express existence and that the study proceeds from function to form. Therefore, I do not follow Milsark's (1975) impersonal approach, but the more functional one from Givón (2001) (see chapter 1). In general, I call this approach the *locative approach* (following Lyons 1967a, 1967b, 1968). This approach is explained in this chapter. Its presentation is followed by the presentation of two typological surveys on the relation between existential, possessive and locative sentences.

#### 3.1. The locative approach

In general, linguists have been occupied with two questions regarding the analysis of existential construction and its relationship to semantics and pragmatics. The first question is what the internal structure of an existential construction looks like. The second question has to do with the relationship between the existential construction and other syntactic constructions within one language. In other words, they wonder whether other constructions or sentence types show a similar structure to the existential construction (Chung & McCloskey 2002.)

Lyons (1967a, 1967b, 1968) made a distinction between the existential construction (5), the locative construction (6) and the possessive construction (7). He also showed that

these constructions are semantically related as they all express a certain *location* (on the table / Tom) of a certain object (book).

- (5) There is a book on the table.
- (6) The book is on the table.
- (7) Tom has a book. / The book is Tom's.

Syntactically, Lyons (1968: 390) argued, existential constructions as the one in (5) and possessive constructions such as in (7) are both derived from locative constructions. To support this view, Lyons (1968: 389-390) showed that the use of the existential verb 'to be' seldom occurs without a locative or temporal complement in English language. This is illustrated in examples (8) and (9):

- (8) There are lions in Africa.
- (9) The accident was yesterday.

From the point of view of semantic analysis, Lyons (1968: 390) further suggested that an existential construction like "There is a book on the table" can perhaps be described as implicitly locative. If an object does exist, then the object must be located in a certain time and space. Lyons (1968: 390) claimed that "the assertion that something exists, or existed, requires 'complementation' with a locative (or temporal) expression before it can be interpreted".

In addition to the semantic relation between existential and locative constructions, a prototypical possessive construction suggests the possessed object is physically located somewhere and it is at the same place as the possessor (Taylor 1995: 201). This confirms Lyon's (1968) suggestion that possessive and existential constructions are semantically related as examples (5) and (7) both express the location (on the table / Tom) of an object (book).

As mentioned before, I adopt the locative approach towards existential constructions. This means that I consider existential, locative and possessive constructions to be semantically related to each other, i.e. they all express the location of an object.

## 3.2. Typological surveys

In typological works, two contrastive methodological approaches towards linguistic universals have arisen with pioneered work from Greenberg (1966) on the one hand and Chomsky (1982) on the other. Comrie (1989: 1) explains that these approaches differ on three different levels: data, abstractness and explanation. The functional-typological approach taken by Greenberg uses data from a wide variety of languages around the world, analyses the concrete syntactic language structure and openly explains linguistic universals. The formal approach from Chomsky opts for a thorough research of a few language samples, goes for a more abstract analysis of syntax and favours the innateness as an explanation for language universals (Comrie 1989: 1-14.)

### 3.2.1. Clark's typological survey

Within the locative approach of Lyons (1967a, 1967b, 1968), Clark (1978) made a distinction between four types of sentences that she called *locational constructions*: existential construction, locative construction, 'have'-possessive construction and 'be'-possessive construction. Clark (1978) illustrates these constructions with examples from English ((10a) – (10d)) and French ((11a) – (11d)).

- (10) a. There is a book on the table.  
 b. The book is on the table.  
 c. Tom has a book.  
 d. The book is Tom's.
- (11) a. Il y a un livre sur la table.  
 b. Le livre est sur la table.  
 c. Jean a un livre.  
 d. Le livre est à Jean.

Clark (1978: 87) views existential and locative sentences such as in (10a) / (11a) and (10b) / (11b), respectively, as constructions that contain a nominal (a book, the book / un livre, le livre) and a locative phrase (on the table / sur le table). The ‘have’-possessive in (10c) and (11c) and the ‘be’-possessives in (10d) and (11d) both comprise a possessed item (a book, the book / un livre, le livre) and a possessor (*Tom / Jean*). Clark (1978: 87) notes that the possessed item and the possessor in possessive constructions take the form of a nominal and a locative phrase, respectively.

From a syntactic point of view, Clark (1978: 87-88) notes that the word order in existential and locative constructions is different. In existential construction, the locative *there* (as a copy of the locative phrase at the end of the construction) precedes the nominal and the nominal is followed by the locative phrase. In contrast, the locative construction has the nominal preceding the locative phrase. The word order in these constructions respectively parallels with the ‘have’- and ‘be’-constructions, the former having the word order of Possessor (or locative phrase) preceding the possessed item (or nominal) and the latter showing the reverse. The word pattern of these constructions in English ((10a) – (10d)) is also found in French ((11a) – (11d)).

Furthermore, Clark (1978: 88) states that word order in existential and locative constructions is not arbitrary. The word order in both constructions depends on the definiteness of the nominal. Clark (1978: 88) claims that if the nominal is definite, it will appear at the initial position of the sentence. However, when the nominal is indefinite, another constituent should precede the nominal as can be seen in examples (10a) – (11a), (10b) – (11b) and also for the ‘have’- and ‘be’-possessives in (10c) – (11d) and (10d) – (11d). The nominal (a book) in existential constructions is indefinite whereas it is definite in locative constructions (the book). This parallels with the possessive constructions with ‘have’-possessives containing an indefinite nominal (a book) and ‘be’-possessives a definite nominal (the book).

Clark (1978) conducted a typological survey, following Greenberg’s (1966) approach, with data from approximately 40 languages around the world. She compared existential, locative and possessive constructions between these languages with a main focus on word order, definiteness of the nominal and verb agreement and she suggests two discourse rules.

## Word order

Clark (1978) found that existential constructions in 27 out of 35 languages show the word order of locative phrase (Loc) preceding the nominal (Nom). Table 1 below presents the amount of languages related to different patterns of word order in existential constructions found by Clark (1978; for a full overview see Clark 1978: 93). Some languages (e.g. Japanese) have the pattern where the existential verb appears after the nominal whereas other languages (e.g. Finnish) have the verb preceding the nominal. Clark (1978) notes that only a few languages prefer the word order of Nom Loc where the placement of the verb is relatively unimportant. Out of 35 languages, 30 languages prefer not to place the indefinite nominal at the initial position of the existential construction (Clark 1978).

<b>Location preceding Nominal:</b>	<b>Number of languages:</b>
Loc Nom V	13 languages (e.g. Japanese, Swahili, Turkish)
Loc V Nom	10 languages (e.g. Finnish, German, Panjabi)
Loc Nom	1 language (Tagalog)
Pro-Loc V Nom Loc	3 languages (English, French, Spanish)
<b>Nominal preceding Location:</b>	
V Nom Loc	4 languages (e.g. Hebrew, Hungarian)
Nom V Loc	6 languages (e.g. Yoruba, Twi)
Nom Loc V	3 languages (e.g. Nasque, Mundari)

**Table 1: Word pattern in existential constructions found by Clark (1978: 92).**

Clark (1978) found two main word order patterns in locative constructions: Nom V Loc in 18 languages (e.g. English, Finnish, Hebrew) and Nom Loc V in 14 languages (e.g. Basque, Hungarian, Japanese). In both patterns, the nominal precedes the locative phrase. 3 languages (Mandarin, Chinese, Swahili) show the pattern Nom Loc and another 3 (e.g. Tunic, Taos) the pattern Loc Nom V. Only a few languages have patterns with the locative phrase following the nominal.

Clark (1978) shows that in most languages the word order in locative constructions indeed differs from the word order in existential constructions. Table 2 presents a summary of the word order alternation between existential and locative constructions in several languages (Clark 1978, for a full overview see Clark 1978: 96).

<b>Existential construction:</b>	<b>Locative construction:</b>	<b>Examples of languages:</b>
Loc Nom V	Nom Loc V	Turkish, Eskimo, Swahili
Loc V Nom	Nom V Loc	Finnish, Mandarin Chinese
Pro-Loc V Nom Loc	Nom V Loc	English, French, Spanish
V Nom Loc	Nom V Loc	Hebrew, Hungarian

**Table 2: Word order alternations in existential and locative constructions found by Clark (1978).**

## **Definiteness**

Clark (1978: 91) states that both English and French are languages that have various articles to mark definiteness of the nominal. Many other languages only have one article to mark a definite nominal and most languages do not have any definite or indefinite article. In these languages, the word order marks the definiteness.

As mentioned earlier, Clark (1978) argues that word order in existential and locative constructions is not arbitrary because the definiteness of the nominal determines the word order. Existential constructions that contain an indefinite nominal are used pragmatically to introduce new information in a discourse.

## **The verb used in existential and locative constructions**

Clark (1978: 101) claims that because of the relationship between existential, locative and possessive constructions the verbs used in these constructions should also correlate. In her survey, she notes that most languages use the same verb in all three constructions. Finnish, for example, uses the verb '*olla*' in all four sentence types while French uses '*avoir*' in the existential and 'have'-possessive construction and '*être*' in the locative and 'be'-possessives (Clark 1978).

Considering existential and locative constructions, Clark (1978) found that 26 out of 40 languages (e.g. Basque, Turkish, Burmese) use the same verb for existential and locative constructions. In some languages, existential and 'have'-possessive constructions are related both by the definiteness of the nominal and the verb used within the constructions (e.g. French as exemplified above). Normally, the subject of the verb in existential and locative constructions is the nominal. However, the indefinite nominal in existential

constructions occurs in a third person form because a first or second person form requires a definite nominal (Clark 1978: 109).

### **Discourse rules**

Clark (1978: 119-120) suggests two discourse rules that explain the difference of word order in the four locational constructions. The first rule states that a definite argument precedes an indefinite argument. If both arguments are definite, a second rule applies, stating that animate arguments precede inanimate arguments. Since the locative phrase is nearly always definite, the first rule applies to existential constructions resulting in the following order: Loc (definite) Nom (indefinite).

Again, the contrast in word order in existential and locative constructions can also be explained through their respective functions as the former construction is used to introduce a new referent in a discourse. This results in the appearance of an indefinite nominal. The definite nominal used in the locative construction implies that the referred object was already mentioned earlier in the discourse (Clark 1978: 91).

### **3.2.2. Freeze's typological survey**

I am aware of the fact that Freeze's (1992) typological survey on existential, locative and possessive constructions, as described later on in this chapter, has quite a strong generativist view as he believes that these constructions are derived from a single underlying structure. I do, however, not consider his research in depth. I only refer to his discussion of the relation between the basic word order of a language and the word order of locative and existential constructions.

Freeze (1992) conducted a typological survey to show that existential and possessive constructions are syntactically derived from the locative construction. His analysis was based on the locative paradigm from Russian language where the similarities between the three constructions are easily recognized (see (12)).

- (12) a. *kniga*            *byla*    *na*    *stole*  
 book-NOM    was    on    table-LOC  
 ‘The book was on the table.’
- b.    *na*    *stole*            *byla*    *kniga*  
 on    table-LOC    was    book-NOM  
 ‘There was a book on the table.’
- c.    *u*    *menja*            *byla*    *sestra*  
 at    1-sg-GEN    was    sister-NOM  
 ‘I had a sister.’

The locative construction in (12a) and the existential construction in (12b) both consist of a locative argument and a theme argument (Clark (1978) called the latter term *nominal*). The theme argument (*kniga*) takes the subject position in the locative construction. In the existential construction the locative argument (*na stole*) takes this position. It is assumed that in languages that do not have a proform (e.g. *there* in English) the locative argument is the subject which is the case in Russian (Freeze 1992.)

Freeze (1992) based his study on a sample of 5 languages that differ in the basic word order of subject (S), object (O) and verb (V). He compared the word order in existential and locative constructions. His analysis has shown that the order locative (L) preceding the theme (T) in existential constructions, as in the Russian example (12c), is the most common form. Freeze (1992: 556) considers the use of a proform as exceptional.

Freeze (1992) compared the word order in existential constructions with the word order in locative constructions on the basis of the language’s basic word order. This is shown in table 3 below. The bold T(heme) and L(ocative) refer to the subject position within both constructions.

Basic order	Language	Existential construction	Predicative locative
SVO	e.g. Russian	L COP T	T COP L
VOS	e.g. Chamorro	COP T L	COP L T
VSO	e.g. Tagalog	COP T L	COP L T
SOV	e.g. Hindi	L T COP	T L COP

**Table 3: word order alternation found by Freeze (1992: 564).**

Existential constructions in SVO-languages like Russian have the locative argument preceding the theme argument. The predicative locative (or locative construction) in Russian shows an alternate order. It has the theme argument in the subject position preceding the locative argument. Languages with basic word orders that differ from VOS, VSO and SOV also show a different word order in the existential and locative predicate (Freeze 1992.)

Like Clark (1978), Freeze (1992: 557) also explains the alternation of word order in existential and locative constructions due to definiteness effect on the theme argument. When the theme argument is indefinite, the locative argument takes the subject position in existential constructions. If the theme is definite, it takes the subject position. In addition, parallel to Clark's first discourse rule (1978), Freeze (1992) notes that there is probably no language that accepts a definite theme (or nominal) within an existential construction. The locative argument, however, can be either definite or indefinite as this is the case in Russian (Freeze 1992).

## 4. EXISTENTIAL CONSTRUCTIONS IN SIGNED LANGUAGES

In sign linguistics, expressing existence is a topic that has not been studied a lot or in depth. This chapter gives an overview of studies on existential constructions in different sign languages. Because I use the ‘locative approach’, which I introduced in chapter 3, the possessive and locative constructions are also discussed.

### 4.1. British Sign Language

Deuchar (1984: 146-147) argues that British Sign Language (BSL) is a creole. Her assumption is based on the language’s structural properties and on the way this language is acquired. She refers to Bickerton (1981) who argued that many creoles use one lexical item to express existence and possession and claims the same holds true for BSL. The language indeed only has one lexical item, the sign HAVE, to express both existence and possession.

Hughes, Colville and Brennan (1984) analyzed a small group of BSL signs whose primary function is to express existence and location. They confirm that the sign HAVE can express existence and possession, but contrary to Deuchar’s (1984) claim, Hughes et al. found that BSL has two other signs with the same function. These signs are illustrated in Figures 2 and 3.



Figure 2: EXIST in BSL



Figure 3: EXIST/LOCATE in BSL (Hughes et al 1984: 7)

Hughes et al. (1984) noted that both signs in Figures 2 and 3 include the notion of an object or a person existing. However, while the sign in Figure 3, which I gloss as EXIST/LOCATE, can also be used to explicitly emphasize the specific location, the sign in Figure 2, which I gloss as EXIST, is used less to emphasize location.

## 4.2. Danish Sign Language

Kristoffersen (2003) investigated the order of the constituents in existential, locative and possessive constructions in Danish Sign Language (DSL). Her research was based on a corpus of videotaped monologues from native Deaf signers. 28 constructions were found that include the verb EXISTENTIAL with a mouth pattern similar to /ar/. The verb EXISTENTIAL is illustrated in Figure 4.



**Figure 4: EXISTENTIAL in DSL (Kristoffersen 2003: 132)**

In her study, Kristoffersen (2003) replaced the terms *locative phrase* and *possessor* from Clark (see section 3.2.1) with the semantic role *Ground* and the terms *nominal phrase* and *possessum* with the semantic role *Figure*. She found that DSL forms existential, locative and possessive constructions by the use of one lexical verb EXISTENTIAL. These constructions are illustrated in (13), (14) and (15), respectively. The notations “+fl”, “+fr”, “+l” in these examples refer to the loci “forward left”, “forward right” and “left” in the signer’s articulation space. PRON means pointing sign and 1.p first person singular. The slash denotes a short pause.



(17) PRON+d/ ABOUT 150 PERSON+multiple/ ABOUT PRON+d

ar

‘There were about 150 people [on the ferry]’

Finally, Kristoffersen (2003) mentions that in case of unexpectedness of the Figure, the order of the constituents in existential constructions can change. This is shown in example (18) where Figure precedes the verb EXISTENTIAL and Ground is retrieved from the context. In this case, the verb is produced in combination with raised eyebrows.

(18) SECOND TOILET/ EXISTENTIAL/

‘[and] secondly there was even a toilet [on the bus]’ (Kristoffersen 2003: 135)

Kristoffersen (2003: 131) also concludes that in DSL, the definiteness in existential and locative constructions is not encoded morphologically but is distinguished by word order.

### **4.3. Finnish Sign Language and Flemish Sign Language**

De Weerdt and Takkinen (2006) conducted a cross-linguistic research on expressing existence in Finnish Sign Language (FinSL) and Flemish Sign Language (VGT). Their research was based on a questionnaire developed by Zeshan (2006) and her team to develop a typological research project on possessive and existential constructions in different sign languages around the world. Different stimulus materials were also provided to elicit data that match the target structures that can be used to fulfil the questionnaire.

Zeshan (2006) states that most sign languages use one verb sign in both existential and possessive constructions. Example (19) shows an existential construction and example (20) a possessive one in Indian Sign Language:

(19) PROBLEM EXIST

‘There is a problem.’

(20) INDEX-1 HOUSE EXIST

‘I have a house.’ (lit.: ‘I, a house exists.’) (Zeshan 2006)

In order to discover whether other sign languages use other ways to form these constructions, Zeshan (2006) suggested the following possibilities:

\_\_\_\_\_nod

- A head nod as in PROBLEM
- A predicative index (pointing sign) as in HOUSE INDEX-left
- Another lexical predicate as in PROBLEM TRUE
- Other

Based on this questionnaire, De Weerdts and Takkinen (2006) proposed that both Finnish Sign Language (FinSL) and Flemish Sign Language (VGT) express existence in five different ways. As the various ways of expressing existence in VGT are dealt with in chapter 6, this part will only focus on existential constructions in FinSL.

De Weerdts and Takkinen (2006) show that FinSL uses the lexical verb OLLA (‘have’), illustrated in Figure 5, to express existence as shown in (21); this verb can also express possession.

(21) EXIST VASE

‘There is a vase.’



**Figure 5: OLLA in FinSL (Suvi 2003 [Finnish Sign Language dictionary]: entry 250)**

Secondly, De Weerdt and Takkinen (2006) suggested that Finnish signers can also express existence by means of a polysynthetic sign that contains a XMH-movement, i.e. a short movement downward with an end, carrying existential meaning. Liddell and Johnson (1989: 210) define H-segment as “periods of time during which all aspects of the articulation bundle are in a steady state” and M-segment as “periods of time during which some aspect of the articulation is in transition”. In contrast, Wallin (1996: 28) described this movement type as ‘a move with a distinct offset’ and applied it in his descriptive work of polysynthetic signs in Swedish Sign Language.

De Weerdt and Takkinen (2006) analyzed the following construction (22) as an existential construction including a polysynthetic sign at the final position of the utterance. The existential verb OLLA does not appear in this construction.

- (22) THREE HANG-a HANG-b HANG-c POT cl-(pot)-a cl-(pot)-b cl-(pot)-c  
 ‘There are three pots hanging [on the wall].’

The polysynthetic sign is produced three times and every sign contains a straight movement forward that shows the existence of ‘pots’. The verb HANG is also produced three times on specific loci referring to the location of the objects. The main location ‘on the wall’ is retrieved from the context (De Weerdt & Takkinen 2006.)

De Weerdt and Takkinen (2006) added that pointing with an index finger as in (23) or producing a lexical sign in a certain articulation place as in (24) also express existence in FinSL.

- (23) \_\_\_\_\_nod  
 SUN INDEX-3(picture)  
 ‘There is a sun [in your picture].’

- (24) STOVE TWO DRAWER-a DRAWER-b  
 ‘There are two drawers on the stove.’

De Weerdt and Takkinen (2006) explained that the construction in (23) consists of a pointing sign, formed with an index finger, combined with a head nod and round lips equivalent to /o/ that emphasizes the meaning 'to exist' in this context. The lexical signs DRAWER-a and DRAWER-b in (24) were produced on certain articulation places and also mark existence.

The fifth and final group consists of existential constructions combining the previous four ways. For example, the construction in (25) below shows a combination of the FinSL existential verb OLLA with a lexical sign produced on a locus and/or a polysynthetic sign. The analysis of this construction is complicated because it is not clear which sign carries the main existential meaning (De Weerdt & Takkinen 2006.)

(25) RIVER -----  
 BOY cl-(stand) HAVE cl-(plant-in-river)

## 5. METHODOLOGY

As this thesis comprises a small basic study, I involved only four informants and an elicitation test. The elicited data consist of video clips with a total length of approximately 40 minutes. Each videotaped section contains a signed interaction between two informants and ends with a signed report by one of the two informants.

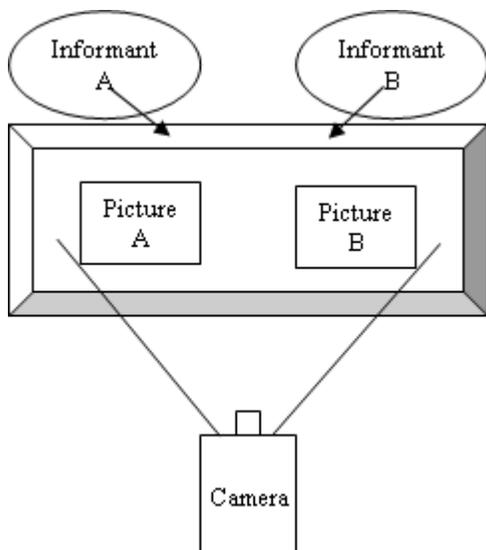
The informants involved in this research are four native signers of Flemish Sign Language. They all acquired Flemish Sign Language from their parents. Three of the informants are Deaf and one is a CODA<sup>3</sup>. Two informants lived in West-Flanders all their lives while the other two have always lived in Antwerp. They all belong to the same generation being between 29 and 33 years old.

The data were elicited using the material and tasks (see Appendices 1 and 2) developed for a cross-linguistic research entitled *Sign Language Typology: Possession and Existentials* directed by Ulrike Zeshan (Zeshan 2006). The choice of the informants was based on the province they live in. The two informants from West-Flanders conversed with one another, as did the two informants from Antwerp. I choose to do this in order to make them feel more comfortable in front of the camera. Also, in this way the chance that they should adapt their own regional variety is reduced.

Each pair of informants was given four pairs of pictures and got to see a total of eight pictures. One informant got a picture that slightly differed from the picture the other informant got (e.g. an object missing, a different object, a different colour). The informants were not able to see their interlocutor's picture. The position of the informants, their pictures on a table and the camera is illustrated in Figure 6. The initial task of the informants consisted of finding the differences between the given pictures through interaction. Their final task was to report about the differences they found at the end of the interaction.

---

<sup>3</sup> Child of Deaf Adults



**Figure 6: position of informants**

Before the informants could start with their task, they were asked never to pick up their picture from the table as it can cause them to sign with one hand while holding the picture in the other. Furthermore, holding a picture in one hand can cause difficulties in distinguishing between pointing at the informant's own picture, pointing at the interlocutor's picture or pointing at the interlocutor him/herself.

The interactions and the reports at the end of each section were transcribed with the ELAN<sup>4</sup> annotation tool. Four tiers were created within the ELAN-transcription and each tier transcribed the signs uttered with the right or left hand. As simultaneity of the signs produced by one signer is not always easy to recognize in an ELAN-transcription, I also transcribed the data in a Word document. The notational conventions of my analysis are shown in Appendix 3. Transcription examples in both ELAN and Word can be found in Appendices 4 and 5.

Because the function of introducing new and important referents within a discourse is important, every utterance of each informant is transcribed and checked in relation to the preceding and following utterances, i.e. the context. Every video clip was observed several times before starting the transcription. I first transcribed the expressions uttered by informant A, followed by the ones of informant B. The transcriptions of existential constructions were checked twice and some examples of simultaneous occurrences of signs

<sup>4</sup> <http://www.lat-mpi.eu/tools/elan/elan-description>

(i.e. with left and right hand) were transcribed in a Word document as well. Finally, examples of existential constructions were analyzed.

## 6. WAYS OF EXPRESSING EXISTENCE IN FLEMISH SIGN LANGUAGE

This chapter presents the classification of different ways of expressing existence in Flemish Sign Language (VGT). Elicited utterances (see chapter 5) are categorized according to the way they express the existence function, and the order of the constituents in these utterances is analyzed.

Overall, the different ways of expressing existence in VGT are divided in five categories. A construction formed around the existential sign HAVE forms the first category. The second category contains those constructions in which the existence is expressed by means of *Verb Construction*. The third category consists of utterances with meaningfully located lexical signs and, in the fourth category, the existence is marked by means of pointing. Finally, a combination of two or more previously mentioned ways forms the fifth category. These five categories, discussed separately in the following sections, are denoted as follows:

1. The sign HAVE
2. Verb Constructions
3. Localized lexical sign
4. Pointing
5. A complex combination of types 1 to 4

Following the terminology from Vermeerbergen (2007) on locative construction in VGT, I will use the terms *Location* (cf. *Ground* in Kristoffersen 2003), *Located Element* (cf. *Figure* in Kristoffersen 2003) and *Locative Relation* (between the Location and the Located Element) when analyzing and discussing the utterances in my data. In the examples, these terms are abbreviated Loc, Loc El and Rel, respectively. For the existential sign marking category 1, I prefer to use the gloss HAVE instead of EXIST. The reason for this preference is that VGT also has a full verb meaning ‘to exist’.

## 6.1. The sign HAVE

Vermeerbergen (1999: 75) notes that the lexical sign HAVE, as shown in Figure 7, has the function of expressing either possession or existence in VGT. De Weerd & Vermeerbergen (in print) confirm these findings. The sign HAVE is produced with a Y-handshape and the thumb pointing to the signer's chest. The sign has a repeated movement towards the chest. The mouth pattern resembles the Dutch word /heef/.



Figure 7: The sign HAVE in VGT

Most declarative existential constructions containing the sign HAVE have a specific constituent order. The Location appears at the initial position of the construction and is followed by HAVE. The Located Element is found at the final position.

- (26) \_\_\_\_\_ t \_\_\_\_\_ ed  
OUTSIDE HAVE GRASS GREEN  
 Loc                  Loc El  
 ‘There is green grass outside.’

The utterance in example (26) appears in the interaction when the signer wants to introduce a new referent (‘green grass’), resulting in a construction with the function of existence. In this construction, the Location (‘outside’) is uttered first, preceding the existential HAVE. HAVE is followed by the new referent that can be found at the final position. The Location





interlocutor the time to identify the referent in the picture. Jantunen (2008) also argues that double pointings function to increase sentence internal, and also textual, cohesion.

In contrast to previous examples, most existential constructions in my data do not explicitly show the Location as it is retrieved from the context. In the following utterance (29), the construction contains a preposition sign that marks the Locative Relation between the contextually retrieved Location and the new referent (Loc EI).

- (29) \_\_\_\_\_t  
UNDER HAVE ONE POT -----  
BROWN  
 Rel            Loc EI  
 ‘There is one brown pot under [the pans].’

The interlocutor retrieves the location in (29) from the previous discussion concerning the number of pans hanging on the wall. In order to introduce a new referent (‘one brown pot’) that is situated right under the pans, the preposition sign (‘under’) occurs at the beginning of the construction. This sign is followed by HAVE, and the Located Element (‘one brown pot’) appears in the final position of the construction. The preposition sign is non-manually marked as a topic that sets the spatial framework for the following comment (cf. Jantunen 2008: 163).

In some cases, when the Location is retrieved from the context, the preposition sign at the initial position of the construction is repeated at the end of the whole construction as can be seen in (30).

- (30) \_\_\_\_eg  
 \_\_\_\_\_t  
NEXT HAVE TABLE NEXT  
 Rel            Loc EI Rel  
 ‘There is a table next [to the stove]’

The first preposition sign NEXT is produced while the signer has eye contact with the interlocutor. The latter preposition sign is produced without eye contact. As the signer watched the picture when uttering NEXT, this probably means that he wanted to make sure that his new referent is in fact located next to the stove. The word order pattern of this construction correlates with the previous example (29) where the Located Element appears right after the existential HAVE. Again, the construction starts with a topic setting the spatial framework (Jantunen 2008: 163).

The two constructions that can be found in (31) and (32) both appeared at the very beginning of the first two tests (from a total of four tests). The first utterance contains a preposition sign (IN) and the second a verb sign (SEE) at the initial position. Both signs are directed towards the signer's picture.

(31) IN-(picture) HAVE TWO PERSONS

Rel/Loc                  Loc El

'There are two persons in the picture.'

(32) INDEX-1 /// SEE-(picture) HAVE FOUR PERSONS

Loc                          Loc El

'There are four persons in the picture.'

In example (31), the preposition sign IN is used to express the relationship between the Location and the Located Element. As the sign is directed towards the picture, it implies that the picture is the Location (Liddell 2003: 189) used to introduce important new referents ('two persons'). In example (32), the verb sign SEE is also directed towards the picture as the signer creates a relationship (Liddell 2003: 103-104) between SEE and his own picture. Both constructions also show the pattern with the Located Element ('two persons', 'four persons') at the final position of the construction after the existential HAVE.

One existential construction is found in which the sign HAVE appears twice, each time carrying a different function. The construction can be found in example (33).

(33) HAVE MAN HAVE POCKET

Loc El

‘There is a man who has a pocket.’

The first HAVE introduces the man as a new referent within the interaction whereas the latter HAVE functions as the man possessing something (‘pocket’). A similar construction was also found in other observations on possessive and existential constructions in VGT (De Weerd & Vermeerbergen in print).

Some utterances do not contain HAVE. Their constituent order invariably remains Location – Located Element as can be seen in examples (34), (35) and (36). The preposition sign either precedes or follows the Location as in (34) and (35), respectively, and marks the Locative Relation. Construction (36) does not contain any marker that shows the Locative Relation of the new referent (i.e. Located Element) and its Location. In this type of construction, it is the order Location – Located Element that marks the existence.

(34) \_\_\_\_\_t

IN RIVER TWO FISH

Rel Loc Loc El

‘There are two fishes in the river.’

(35) \_\_\_t

SUN NEXT THREE BIRD

Loc Rel Loc El

‘There are three birds next to the sun.’

(36) \_\_\_\_\_t

RIGHT-SIDE GRANDFATHER GRANDMOTHER

Loc Loc El

‘There is a grandfather and a grandmother on the right side of the picture.’

Each construction (34-36) marks the Location non-manually with raised eyebrows. This proves that the first constituent is also a topic, setting the spatial scheme for the main predication. If this topic contains a preposition sign, the preposition sign precedes the Location as in (34). The preposition sign in (35) does not belong to the topic and is placed after the Location.

## 6.2. Verb Construction

This section discusses those existential constructions in the data that were created by using a *Verb Construction* (vc). Verb Constructions are complex signs that, according to the current most typical view (e.g. Emmorey 2003, Schembri 2003), contain a classifier handshape and a possibly varying place of articulation, orientation and a movement (Vermeerbergen 1996). Schembri (2003: 3) notes that the handshape in these signs is generally described as a classifier morpheme because the choice of the handshape varies according to the salient characteristics of the referent. In linguistic literature, these signs have been termed in various ways: Slobin et al. (2000, 2003) and Schembri (2003) call them *polycomponential signs*, Wallin (1994) uses the term *polysynthetic signs*, Supalla (1986) names these signs *verbs of motion and location*, Liddell (2003) uses the term *depicting verbs*, and Engberg-Pedersen (1991) terms these signs *polymorphemic verbs of motion and location*.

In my analysis, I will retain the term Verb Construction for the following three reasons. First, the term is frequently used in the literature on the linguistic aspects of VGT (Vermeerbergen 1996, 1999, 2001-2002, Vermeerbergen et al. 2007, Johnston et al. 2007). Secondly, Vermeerbergen's (1996: 47) view of these signs correlates with Brennan's (1990: 163) idea that these "mix 'n' match signs" are productive signs that do not belong to the group of frozen signs; they are structured productively by carefully selecting the parameters (handshape, orientation, movement, articulation place and non-manuals) in order to express a situation, handling or process. Thirdly, Vermeerbergen (1996; also Vermeerbergen et al. 2007, Johnston et al. 2007) uses this term when analyzing locative constructions in VGT, and accordingly, the use of the term verb construction in this thesis

makes future comparison of my findings on existential constructions with Vermeerbergen's findings on locative constructions easier.

Part of the inherent nature of Verb Constructions is to describe an event in a certain spatial location and thus also introduce the locational information of (new) referents into a discourse. Since there is an inherent relationship between location and existence (Lyons 1967a, 1967b, 1968; also see chapter 3), utterances with Verb Constructions are also found quite frequently in my data. In these utterances, the Verb Construction always appears utterance-finally (this agrees with Jantunen's 2008 findings on Finnish Sign Language), as in example (37). Here, the Verb Construction refers to the Located Element but also marks, like the preposition sign in the previous section, the Locative Relation between the Location and the Located Element. The whole construction is structured as topic-comment and, again, the topic is a spatial one.

- (37) \_\_\_\_\_t \_\_\_\_\_wr  
BROWN COUCH / WHITE vc-(spot-on)  
 Loc                    Loc El / Rel  
 'There is a white spot on the brown couch.'

The existence of the brown couch becomes the Location in this construction as it is introduced in earlier interaction and is non-manually marked as a topic. The Located Element ('white spot') is a new referent within the interaction that is expressed by means of a Verb Construction with a claw-hand (claw-like handshape), palm oriented forward and a short movement forward with a hold at the end. In this Verb Construction, the classifier handshape (i.e. claw-hand) refers to the Located Element ('spot'). The mouth pattern does not contain a spoken component. The whole expression of the Located Element is combined with wrinkled eyebrows and nose as the informant doubted a little.

In the following example (38), the Location ('grass') is retrieved from an earlier utterance and is produced with the simultaneous combination of a Verb Construction and a preposition sign ('behind') to mark the Locative Relation with the introduced referent. Invariably, the new referent is placed after the Location and followed by a Verb Construction.

- (38)    \_\_\_nod  
           \_\_\_\_\_t  
           BEHIND   HEDGE vc-(hedge)  
           vc-(grass)  
           Rel           Loc El Rel  
           Loc  
           ‘There is a hedge behind the grass.’

In contrast with the previous example (37), the Verb Construction (‘hedge’) in (38) does not show a specific movement with a hold at the final position as it only shows the extent of the hedge and again, the classifier handshape here refers to the Located Element (‘hedge’). The topic marking ends with a very short head nod in order to get confirmation from the interlocutor.

In utterances that consist of two Verb Constructions, as the one in (38), the Locative Relation between the old and the new referent is frequently marked by simultaneity. Example (39) shows two Verb Constructions with the first one referring to the Location and the latter one to the Located Element.

- (39)           \_\_\_nod  
           vc-(river)       -----  
                           PLANT vc-(plant)  
           Loc            Loc El   Rel / Loc El  
           ‘There is a plant in the river’

The Verb Construction at the initial position of this utterance refers to the known referent (‘river’) from the interaction. In order to show the existence of an object in the river and its relation to the Location, the signer simultaneously produces the sign for the Located Element (‘plant’) as the new referent that is followed by a Verb Construction. The classifier of the final Verb Construction also consists of a handshape referring to the Located Element.

Some constructions, like the one in (40), include the simultaneous production of a Verb Construction referring to the Located Element and another Verb Construction that refers to the Location. Both Verb Constructions mark the Locative Relation of the Located Element and its Location. The simultaneous production of Verb Constructions in (40) is combined with the mouth pattern /op/ which is equivalent to the Dutch preposition *op* meaning ‘on’.

- (40)            \_\_nod
- |              |             |                   |
|--------------|-------------|-------------------|
| <u>TABLE</u> | <u>VASE</u> | <u>vc-(table)</u> |
|              |             | <u>vc-(vase)</u>  |
| Loc          | Loc El      | Rel / Loc         |
|              |             | Rel / Loc El      |
- ‘There is a vase on the table.’

In (40), the Verb Construction referring to the new referent (‘vase’) consists of a short downward movement with a final hold. As in example (40), and other utterances throughout the data, the Verb Constructions do have a short downward movement (forward in (37)) with a final hold. Liddell (2003: 269-275) claims that this movement is a lexically fixed aspect of depicting verbs (i.e. Verb Constructions), which occurs frequently in American Sign Language, whereas the placement of the hand depicts the location. Following Liddell, I analyze these movements in my data as an existential morpheme {EXIST} as they carry the meaning of existence and imply location. In addition to these movements denoting existence and location, the classifier handshapes of such Verb Construction also refer to the Located Elements, such as the C-handshape referring to the Located Element (‘vase’) in (40).

Example (41) shows a construction that consists of two Verb Constructions at the final position in the utterance. Both Verb Constructions refer to new referents (‘cacti’). Before this construction was uttered, the signer fingerspelled C-A-C-T-U-S and produced a description of it to make sure that his interlocutor knew what he was signing about. Once the interlocutor confirmed this, the signer continued with the utterance exemplified in (41).

(41) INDEX-3(picture) TWO vc-(cactus-at-location)  
vc-(cactus-at-location)

Loc Rel / Loc El

‘There are two cacti in my picture.’

As in the previous example (40), Verb Constructions in (41) are produced with a short movement downward that shows the existence of cacti and their specific locations. In these Verb Constructions, the Located Element (‘cacti’) is also marked by means of a classifier handshape.

Introducing more than one new referent in one utterance can also be done by means of Verb Constructions. An example of this is given in (42). The Location precedes the Located Elements. This order always occurs when a signer wants to introduce the new referents and their specific location at once.

(42) \_\_\_\_\_ t  
WOMAN OLD INDEX-3(picture) KNIT vc-(knit)-a WIRE YARN vc-(yarn)-b

Loc Loc El Rel Loc El Rel

‘There is a knit on the old woman’s chest and a yarn on the floor.’

The Location (‘old woman’) is non-manually marked as topic. Right after mentioning this Location, the interlocutor nods. The signer then continues by introducing the new referent (‘knit’) followed by a Verb Construction localized in front of his chest (locus a) to mark the Locative Relation. This Verb Construction (‘knit’) precedes another new referent (‘yarn’) as Located Element with another Verb Construction (‘yarn’) at the final position. The classifier handshapes of both Verb Constructions refer to the Located Elements (i.e. ‘knit’ and ‘yarn’) and the latter Verb Construction includes the morpheme {EXIST}.

In contrast to all of the already mentioned existential constructions in this section, some utterances show a combination of the existential sign HAVE and a Verb Construction. In most cases, these constructions do not show simultaneity as in (43), yet Location invariably precedes the Located Element.

(43) CACTUS NEXT HAVE STONE vc-(stone)

Loc Rel Loc El Rel

‘There is a stone next to the cactus.’

This construction (43) introduces a new referent (‘stone’) in the interaction. The preposition sign (‘next’) comes after the Location (‘cactus’) and shows the Locative Relation with the new referent. The Located Element appears after the existential HAVE and the Verb Construction appears at the end of the utterance. Here, the Verb Construction is not produced with a downward movement but constructed with a claw-hand and air-filled cheeks. The classifier handshape, the claw-hand, itself denotes the Located Element (‘stone’) in this utterance. Compared to previous examples, the Locative Relation between the Located Element and its Location is in this case marked without any simultaneity, but with a preposition sign and HAVE.

The next example (44) shows the same order as the previous example and no preposition sign. The Verb Construction at the final position marks the Locative Relation between the Location (‘hair’) and the Located Element (‘spot’) and does not have a movement with a final hold.

(44) BLACK HAIR HAVE WHITE vc-(spot)-distr

Loc Loc El Rel / Loc El

‘There are white spots on his black hair.’

In only one utterance, with HAVE and a Verb Construction for a new referent, a semi-simultaneous production with the Verb Construction for Location appears, with Location at initial position. This construction is shown in (45).

(45) TWO PERSONS vc-(two-persons-walking-to) -----

HAVE RIVER vc-(river)

Loc Rel Loc El Rel

‘There is a river running in front of the two walking persons.’

The existence of two persons within the picture was discussed earlier and became the Location in this utterance. Their Location is marked by means of a Verb Construction. When the production of this Verb Construction comes to a hold and remains in space, the signer starts to produce the existential HAVE with his other hand, followed by the new referent ('river') and a Verb Construction. The latter Verb Construction describes the existence of the river and locates it in front of the two persons who are walking towards the river. This Verb Construction is produced in order to mark the Locative Relation between the Located Element ('river') and its Location (the place where the two persons are walking).

### 6.3. Localized lexical sign

Vermeerbergen (1999: 18) noted that VGT can connect a referent to its locus through the production of a lexical sign in a non-neutral articulation space in order to use this locus later on to refer to the referent. Liddell (2003: 176 – 198) also claimed that directing lexical signs towards a place has the purpose of associating the meaning of the sign with its location. Regarding verb signs, modifying the place of articulation also connects the referent to a locus (Vermeerbergen 1996: 150).

The Located Element in some existential constructions in my data is produced with a lexical sign in a certain articulation place. In most cases, the Location in these utterances is retrieved from the context and the Located Element signed on a locus implies both existence and location as can be seen in example (46).

(46) TWO BOX-a -----

BOX-b

Loc El / Loc

'There are two boxes [in the stove].'

This construction shows the existence and the location of the new referents ('boxes') and is spatially marked with a lexical sign on a certain place (spot?) in the signer's non-neutral

articulation space (here loci a and b). The Location ('stove') is retrieved from the context that the mother in the picture was cooking in front of the stove. The signer mentions the existence of two boxes on a certain location by first localizing the upper box on locus a. This locus becomes Location too. When holding the dominant hand in space, the signer produces the sign for the other box on locus b that is situated right under locus a. This spatial marking shows the Locative Relation between both Located Elements ('boxes') and their Location ('stove') on the one hand and the relation between the boxes on the other.

The following two constructions (47) and (48) have a preposition sign at the beginning that marks the Locative Relation. Again, the Location is retrieved from the context and the preposition sign precedes the Located Element.

(47) \_\_\_\_\_t \_\_\_\_\_ew

NEXT PAINTING-a

Rel Loc El / Loc

'There is a painting next [to the lamp].'

(48) \_\_\_\_\_t \_\_\_\_\_ew

BEHIND PILLOW-a

Rel Loc El / Loc

'There is a pillow behind [the woman's head].'

The preposition sign NEXT in (47) is produced with a sideways arc-movement. When it comes to a hold, the signer produces the lexical sign PAINTING at the same place (locus a), as a new referent, and the locus is the Location. The same pattern appears in (48) with BEHIND ending behind the signer's head and PILLOW produced at the same place (locus a). Preposition signs in both utterances are uttered with topic marking.

In addition to nominal signs, verb signs can also be put in a certain articulation place in an existential construction. The following utterance (49) includes a Located Element produced by means of a lexical verb sign with a modified articulation place at the end of the utterance.

- (49) THREE PAN HANG-a HANG-b HANG-c  
 Loc El / Loc  
 ‘There are three pans hanging [on the wall].’

The Location of the new referent (‘on the wall’) was retrieved from the earlier context. The new referents (‘three pans’) are introduced by means of a verb sign (‘to hang’) localized on three different loci a, b and c that function as Locations. This way the existence of the pans as well as the location of these pans on the wall is shown.

The combination of the existential sign HAVE and a localized lexical sign in one utterance is very rare. The utterance in (50) shows the only construction found in the data that consists of HAVE followed by localized Located Element.

- (50) \_\_\_\_t  
STOVE HAVE TWO BOX-a BOX-b  
 Loc            Loc El / Loc  
 ‘There are two boxes in the stove.’

The word order is invariably Location HAVE Located Element. In contrast with previous examples in this section, the Location (‘stove’) of the new referent is explicitly mentioned. I assume that existential HAVE is required in constructions with a localized lexical sign if the Location is explicitly mentioned in the utterance. The existence of the referents in utterance (50) (‘boxes’) was uttered differently by the other group of signers, as can be seen in (46). The sign HAVE does not appear there as the Location is not explicitly mentioned.

## 6.4. Pointing

In this section, I will use the term *pointing*, glossed as INDEX and followed by a number or some other specifying element, to refer to those signs that are produced with a 1-hand and a movement or orientation towards a certain place. Vermeerbergen (1999: 23 – 25) notes that pointings in VGT can be directed to a present person, object, animal or a place. She also

notes that when referents that are talked about are not present, the referents will be localized in the articulation space and pointing to their locus will be understood as pointing to the referents (Vermeerbergen 1999: 27). De Weerd & Vermeerbergen (in print) observe that pointing can also function to express possession.

In my data, a lot of pointing signs such as INDEX-1, INDEX-2 or INDEX-3(picture) occurred. As for most pointing, it was not always easy to establish whether the signer was pointing towards his interlocutor, towards the interlocutor's picture or somewhere else. As mentioned earlier, pointings can also have a possessive function, and this makes distinguishing between different types of pointings even harder. However, most pointings that appeared to be existential occurred in affirmative utterances, such as (51), with pointing towards the signer's picture combined with a short head nod and, sometimes, pressed lips.

- (51) \_\_\_\_\_nod  
 INDEX-3(picture)  
 'Yes, there is.'

The head nod and pressed lips when pointing towards a picture appear again in example (52) that consists of a Located Element preceding the pointing.

- (52) \_\_\_\_\_nod  
 SUN INDEX-3(interlocutor-picture)  
 'There is sun in your picture.'

In Jordanian Sign Language, it seems that the verb EXIST is produced with an index finger pointing diagonally downward combined with a mouth pattern equivalent to /fi/ (Arabic 'fi' can mean either 'in' or 'there is/are') and a head nod (Hendriks in print). This is an interesting fact as De Weerd & Takkinen (2006) also found that the simultaneous production of pointing, a head nod and a specific mouth pattern might express existence.



Another example of enumerating new referents is shown in (54). The final referent ('girl') is not preceded by HAVE.

(54) POLE THICK WALL vc-(wall) GIRL SIT-a

'There is a thick pole, and a wall and there is a girl sitting next to it.'

The lexical verb sign SIT is produced on a locus (here called a) right after the Locations (POLE THICK and WALL + vc). I assume that here also every introduced new referent (i.e. Located Element) becomes an old referent (i.e. Location) once the interlocutor nods. The existence of the Located Element ('thick pole'), after confirmation, becomes the Location and this in order to be able to introduce another Located Element by means of a Verb Construction ('wall'). Finally, when the existence of the wall is confirmed, it becomes the Location for the new referent ('girl') which is introduced by means of a localized verb sign. Example (55) illustrates the importance of distinguishing between old and new referents in the interaction, showing a combination of Verb Constructions, a localized verb sign and HAVE.

(55) RIVER vc-(river) ----- HAVE PLANT vc-(plant)-c

BOY STAND-b -----

Loc Rel Loc Loc El Rel

'There is a plant in the river where the boy stands.'

In this utterance (55), 'river' and 'boy' were already introduced earlier in the conversation. Both signs are followed by a Verb Construction and a localized verb sign, respectively. As both referents are old in this construction, the Verb Construction ('river') refers function as Locative Relation and STAND-b to the Location of the boy in relation to the river. Consequently, the signer produces the existential HAVE to introduce the first new important referent (i.e. the Located Element 'plant') followed by a Verb Construction marking the Locative Relation with a classifier referring to the Located Element.

## 7. DISCUSSION

Lyons (1967a, 1967b, 1968) has shown that existential, locative and possessive constructions are semantically related as they all express a certain object on a certain place. Within this locative approach, typological surveys (Clark 1978, Freeze 1992) have shown that these constructions are also syntactically related. The word order of existential constructions parallels with the word order of possessive constructions but alternates with that of locative ones. Clark (1978) also noted that most languages around the world use one verb to express all three semantic domains.

Within sign language linguistics, Deuchar (1984) and Hughes et al. (1984) have shown that British Sign Language uses HAVE to express both existence and possession and two other signs, EXIST and EXIST/LOCATE, to express existence and location. In Danish Sign Language, Kristoffersen (2003) claims, the order of constituents in existential constructions resembles the dominant spoken language word order pattern found by Clark (1978). Danish Sign Language uses the verb EXISTENTIAL to express existential, but also locative and possessive constructions. The most recent studies on signed languages (e.g. Perniss & Zeshan in print) have shown that existence can be expressed by other means as well.

With regard to the overall analysis of expressing existence, my study contrasts, for example, with the generativist typological surveys (e.g. Freeze 1992) as it proceeds from function to form. With this (locative-)functional approach, I have shown that Flemish Sign Language has more than one way, i.e. the use of an existential verb, to express existence. It uses the sign HAVE, a verb construction, localizes a lexical sign, or uses a pointing sign. It can also combine two or more of the previous types.

The word order within the existential constructions in my data resembles the major word order pattern presented in typological surveys on spoken languages (e.g. Clark 1978), and in Danish Sign Language (Kristoffersen 2003). This order is Location first, followed by the utterance final Located Element. In some utterances, the Location can be left out as it is retrieved from the context. This is similar to what Kristoffersen (2003) found on Danish Sign Language. The use of the existential verb HAVE is preferred when new referents are introduced into a discourse. The Located Element (i.e. the new referent) can, however, also

be introduced by means of a verb construction, a localized lexical sign, or a pointing. These alternative ways are produced on a specific location in signing space. This confirms Lyons' (1968: 389) suggestion that existential constructions can be seen as implying location.

Clark (1978) showed that most languages mark definiteness by means of word order which is also the case in Danish Sign Language (Kristoffersen 2003: 131). Although I did not focus on this issue in my analysis, my data still shows that Flemish Sign Language does not mark definiteness morphologically but by means of word order or lexically by pointing. The appearance of the Location at the initial position marks a known definite referent. The Located Element at the end of the utterance, on the other hand, marks a new referent that is indefinite. In addition to word order, I must also acknowledge the importance of non-manual elements. They mark definiteness because they, for instance, mark topics which are definite by definition. However, more investigation on this topic is needed.

In their study on locative constructions in Flemish Sign Language with elicited data, Vermeerbergen et al. (2007) found two major patterns of elements: (1) Located Element – Locative Relation (Prep) – Location, and (2) Location – Located Element – Locative Relation (vc or Prep).

In general, the first pattern differs syntactically from the pattern in existential construction that has the Location at initial position of the utterance and Located Element at the end. My analysis has shown that the Locative Relation expressed by means of a preposition sign, can be placed either before the Location or after the Location depending on whether it is part of the topic or not. The second pattern of locative constructions in Flemish Sign Language resembles the pattern found in existential constructions. My analysis also has shown that Verb Constructions indeed appear at the end of the utterance (cf. Vermeerbergen 1996, Jantunen 2008) to mark the Locative Relation. The classifier handshape refers to the Located Element. The preposition sign occurs only at the final position of the utterance as a form of repetition.

In general, it is difficult to distinguish between existential constructions and locatives. The reasons for this are threefold. Firstly, previous studies have shown that both constructions are expressed by means of one verb (e.g. EXISTENTIAL in Danish Sign Language). This is most probably not the case for Flemish Sign Language as HAVE is used to express existence and possession (De Weerdt & Vermeerbergen in print). It also

confirms Deuchar's (1984) finding that BSL only uses one verb to express existence and possession only. Hughes, Colville and Brennan (1984) also have shown that BSL has other signs to express existence. Secondly, the data in my study are more context-related and differ from the isolated utterances of Vermeerbergen et al's (2007) study that were elicited from pictures. Some researches on word orders in signed languages (e.g. Jantunen 2008) have shown that the word order in isolated utterances can differ from the word order in textual utterances. Thirdly, my research takes into account whether the referents in an utterance are old or new within the discourse and I suggest that the final "reading" (i.e. whether an utterance expresses existence or location) depends on the context.

In her study on locative constructions based on spontaneous language data, on the other hand, Vermeerbergen (1996) found two patterns. The first pattern, Location – Located Element – Locative Relation, resembles the found pattern from elicited data (see pattern 2 above in this chapter). The second pattern shows the order of Location – Locative Relation – Located Element. In my study the order in existential constructions is Location preceding Located Element. Comparing these word orders might, however, not be correct as the data from Vermeerbergen's (1996) study are spontaneous whereas mine are elicited with natural conversations.

In his typological survey, Freeze (1992) has shown there is a relation between the basic word order of one language and the word order in existential and locative constructions (see 3.2.2). When considering the basic word order in reversible and non-reversible sentences in Flemish Sign Language (Vermeerbergen 1996, Vermeerbergen et al. 2007), I do not immediately see a link between these word orders and the word orders found in existential constructions in my study. This is most probably due to the generativist point of view adopted in Freeze's study (1992), which in general assumes that all surface forms are derived from "one" universal deep structure.

This study only comprises data elicited from four signers. Despite the fact that the interactions between the informants were natural, it is clear that they got 'tired' when executing the third, and especially the fourth, task. This resulted mainly in short and quick interactions with a lot of yes/no questions. Due to the position of both informants, their pictures and the camera, it was not always that simple to identify the non-manuals and especially the pointing in the data. I also assume that, after having dealt with two pictures,

both signers came to know the goal of the task, i.e. finding the differences between the two pictures, which made them less active as time went on.

Based on my native intuition, however, I consider the results of my study to give a correct picture on the different ways of expressing existence in Flemish Sign Language and the order of the elements of existential constructions. It is, of course, obvious that more research with larger corpora is needed to fully understand the basic order of elements in existential constructions in Flemish Sign Language.

## 8. CONCLUSION

In this thesis, I have first studied the ways in which existence is expressed in Flemish Sign Language. Second, I examined how the elements within existential constructions are ordered. Concerning the first goal, I have shown in my analysis that Flemish Sign Language can express existence in five different ways; using

- 1) the sign HAVE,
- 2) a Verb Construction,
- 3) a localized lexical sign,
- 4) a pointing, or
- 5) a combination of ways 1 to 4.

The first category of existential constructions is expressed with the existential verb HAVE. The order in these constructions is Location – HAVE – Located Element. The Located Elements are objects that are introduced as new important referents into the discourse and they are indefinite. The referent appearing at the beginning of the construction functions as Location and is always a known and thus definite referent. Preposition signs can appear in existential constructions and they connect the Location to the Located Element. In existential constructions, preposition signs are placed right after the Location. In most cases, the Location is not mentioned explicitly as the signers retrieve it from the context. Consequently, preposition signs can appear at the initial position of the utterance followed by HAVE and the Located Element. Preposition signs may also be repeated at the end of the utterance. The word order in this category is invariably Location preceding the existential HAVE and Located Element, as shown below:

- a) Location – HAVE – Located Element
- b) Location – Locative Relation (Prep) – HAVE – Located Element
- c) Locative Relation (Prep) – HAVE – Located Element – Locative Relation (Prep)
- d) (Prep or verb)-a – HAVE – Located Element

The order in d) consists of a preposition sign or a verb sign that is directed towards a locus (in this case locus a) to mark the Location. In some utterances, the Location is non-manually marked as topic but the preposition sign appearing at the initial position of the utterance is always marked as a topic that sets the spatial location. In addition, some utterances do not contain the existential verb HAVE and there the Location invariably precedes the Located Element.

The second category concerns constructions that express existence by means of a verb construction at the final position that introduces a new referent. The order of elements in these constructions is invariably Location – Located Element – Verb Construction. Next to existence, these utterances also imply location. The Verb Constructions mark the Locative Relation between the Located Element and its Location. Verb Constructions are mostly produced with a movement downward or forward with a final hold that is considered as the morpheme {EXIST}. The classifier handshape refers to the Located Element.

a) Location – Located Element – Locative Relation (vc)

b) Location – Locative Relation (vc) – -----

Located Element – Locative Relation (vc)

The Location can either be produced with a lexical sign or a Verb Construction. If the Location is expressed with a Verb Construction, a simultaneous production with the Located Element will occur. In both cases, the Location can non-manually be marked as a topic by raised eyebrows or a squint. Only a few constructions show a combination of existential HAVE preceding a Verb Construction. In these cases, the Location expressed by a lexical sign at the initial position is followed by a preposition sign. There is no simultaneity.

The third category consists of constructions with localized lexical signs (nominal or verb signs) that express the existence of a Located Element (i.e. new referent). The Location is mostly retrieved from the context. These utterances also imply the location of the Located Element and localizing marks the Locative Relation between the Location and the Located Element. Preposition signs can occur at the initial position of the utterance as a topic followed by a Located Element on a locus that also includes Location.

- a) Located Element-a
- b) Locative Relation (Prep) – Located Element-a
- c) Located Element – verb-a

In this category with localized lexical signs, a combination with existential HAVE is also possible. In these constructions, the Location is always explicitly mentioned and the lexical sign denoting Location can either be produced in a non-neutral articulation place or on a locus.

- d) Location – HAVE – Located Element-a
- e) Location-a – HAVE – Located Element-a

The fourth category consists of constructions that express existence by means of pointing and imply location. Some constructions consist only of pointing towards the physically present location, which is combined with a head nod and pressed lips. Some utterances contain a Located Element, followed by pointing combined with a head nod and pressed lips. The Location in these utterances is never explicitly mentioned as it is retrieved from the context.

The fifth category contains constructions with a complex combination of the previous types 1 – 4, that are, in most cases, the result of enumerating more than one new referent in a long utterance. These constructions most frequently start with Location that precedes two or more Located Elements. Each of these elements is produced by means of either a Verbal Construction or a localized lexical sign. Once the interlocutor confirms the existence of the first Located Element, it becomes the Location of the next Located Element. This latter Located Element is mostly preceded by the existential verb HAVE as the signer's intention is to emphasize that the existence of this Located Element (i.e. new referent) is important.

In sum, there is a continuum in expressing existence in Flemish Sign Language. On the one end of this continuum we find the existential verb HAVE as it most clearly expresses the existence of a new important referent. The categories that express existence by means of a verb construction, a localized lexical sign and a pointing sign also express existence but at the same time imply location.

The scope of my study's title, 'Expressing existence in Flemish Sign Language', is of course larger than what I investigated. More and further research is necessary in order to fully comprehend the basic structure of existential constructions. Moreover, next to existential constructions dealing with present objects, as in this study, constructions occupied with abstract items or non-present objects should be looked at. As Lyons (1967a, 1967b, 1968) argues, existential constructions can have a locative complement (as in this study) but also a temporal complement, and the latter is not investigated yet. It is also important to consider the relationship between existential, possessive and locative constructions. The utterances in this study are textual, but perhaps it is also necessary to study isolated utterances to be able to compare the two and make a better comparison with word order in the locative constructions from Vermeerbergen et al's (2007) study.

## BIBLIOGRAPHY

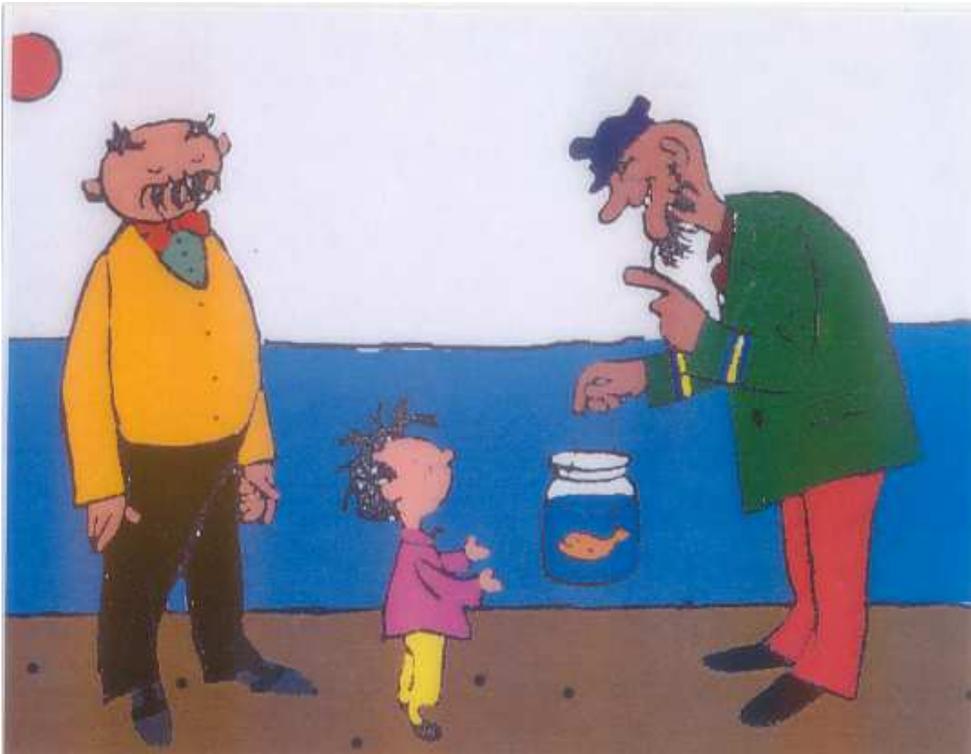
- BICKERTON, DEREK 1981: *Roots of Language*. Ann Arbor: Karoma Publishers Inc.
- CHUNG, SANDRA – MCCLOSKEY, JAMES 2002: *Existentials at the Interface – NSF Project Description*. Santa Cruz: University of California. URL: <http://ohione.ucsc.edu/~jim/PDFFiles/nsf.pdf> [read: 12.03.2008].
- CHOMSKY, NOAM 1982: *Lectures on government and binding*. The Pisa lectures. *Studies in generative grammar* No. 9. Second edition. Dordrecht and Cinnaminson: Foris Publications.
- CLARK, EVE V. 1978: *Locationals: existential, locative, and possessive constructions*. – Joseph. H. Greenberg, Charles A. Ferguson, Edith A. Moravcsik (eds.), *Universals of Human Language*, Vol. 4: *Syntax* p. 85-126. Stanford: Stanford University Press.
- COMRIE, BERNARD 1989: *Language universals and linguistic typology*. Second edition. Chicago: The University of Chicago Press.
- DE MEULDER, MAARTJE – VAN MULDER, KATRIEN 2007: *Deaf Studies in Flanders: to be or not to be*. – *Deaf Worlds* p.50-68.
- DEMEY, ELINE 2005: *Fonologie van de Vlaamse Gebarentaal. Distinctiviteit & Iconiciteit*. Unpublished Doctoral Dissertation. Ghent: Ghent University.
- DEUCHAR, MARGARET 1984: *British Sign Language*. London, Boston, Melbourne and Henly: Routledge & Kegan Paul.
- DE WEERDT, DANNY – TAKKINEN, RITVA 2006: *Different ways of expressing existence in Finnish Sign Language and Flemish Sign Language*. Paper presented at the *Sign Language Typology. Workshop on Cross-Linguistic Research and Internal Cooperation in Sign Language Linguistics*. Nijmegen: Max-Planck Institute for Psycholinguistics.
- DE WEERDT, DANNY – VERMEERBERGEN, MYRIAM: in print. *Observations on possessive and existential constructions in Flemish Sign Language*. – Pamela Perniss – Ulrike Zeshan (eds.), *Possessive and existential constructions in sign languages*. *Sign Language Typology Series* No. 2. Nijmegen: Ishara Press.
- DE WEERDT, KRISTOF – ROGIEST, MARLEEN 2003: *Invulling van Hiaten in het Lexicon van de Vlaamse Gebarentaal: Aardrijkskunde en Geschiedenis*. Gent: Cultuur voor Doven.
- DE WEERDT, KRISTOF – VANHECKE, ELINE – VAN HERREWEGHE, MIEKE – VERMEERBERGEN, MYRIAM 2004: *Lexicografisch onderzoek naar de Vlaamse Gebarentaal*. – Mieke Van Herreweghe – Myriam Vermeerbergen (eds.), *Gent in Oktober* p. 47-58. Gent: Academia Press.
- DRYER, MATTHEW S. 2001: *What is basic linguistic theory?* URL: <http://linguistics.buffalo.edu/people/faculty/dryer/dryer/blt> [read: 28.04.2008]
- 2006: *Descriptive theories, explanatory theories, and Basic Linguistic Theory*. – Felix Ameka, Alan Dench & Nicholas Evans (eds.), *Catching Language: Issues in Grammar Writing* p. 207-234. Berlin: Mouton de Gruyter.
- EMMOREY, KAREN (ed.) 2003: *Perspectives on Classifier Constructions in Sign Languages*. London and New Jersey: Lawrence Erlbaum Associates.

- ENGBERG-PEDERSEN, ELISABETH 1993: *Space in Danish Sign Language*. Hamburg: Signum-Verlag.
- FREEZE, RAY 1992: Existentials and other locatives. – *Language* 68 p. 553-595.
- GIVÓN, TALMY 1981: Typology and functional domains. – *Studies in Language* 52 p. 163-193.
- 2001a: *Syntax*. Volume 1. Amsterdam: John Benjamins.
- 2001b: *Syntax*. Volume 2. Amsterdam: John Benjamins.
- GREENBERG, JOSEPH H. 1966: *Language universals, with special reference to feature hierarchies*. – *Janua Linguarum Series Minor* 59. The Hague: Mouton.
- HUGHES, GERRY – COLVILLE, MARTIN – BRENNAN, MARY 1984: Talking about ‘existence’ in British Sign Language (BSL). – Filip Loncke – Penny Boyes Braem – Yvan Lebrun (eds.), *Recent Research on European Sign Languages* p. 5-18. Lisse: Swets & Zeitlingen.
- JANTUNEN, TOMMI 2008: *Tavu ja Lause. Tutkimuksia kahden sekventiaalisen perusyksikön olemuksesta suomalaisessa viittomakielessä*. Published Doctoral Dissertation. Jyväskylä: University of Jyväskylä.
- JOHNSTON, TREVOR – VERMEERBERGEN, MYRIAM – SCHEMBRI, ADAM – LEESON, LORRAINE 2007: “Real data are messy”: considering cross-linguistic analysis of constituent ordering in Auslan, VGT, and ISL. – Pamela Perniss – Roland Pfau – Markus Steinbach (eds.), *Visible variation: Comparative Studies on Sign Language Structure* p. 163-205. Berlin: Mouton de Gruyter.
- KRISTOFFERSEN, JETTE H. 2003: Existence, Location and Possession and the Order of Constituents in Danish Sign language. – Anne Baker – Beppie van den Bogaerde – Onno Crasborn (eds.), *Cross-linguistic Perspectives in Sign Language Research: Selected Papers from TISLR 2000* p. 131-139. Hamburg: Signum Verlag.
- LIDDELL, SCOTT K. 1989: *American Sign Language. The phonological Base*. – *Sign Language Studies* 64 p. 195-277.
- 2003: *Grammar, Gesture, and Meaning in American Sign Language*. Cambridge: Cambridge University Press.
- LOOTS, GERRIT – DEVISÉ, ISABEL – LICHTERT, GUIDO – HOEBRECHTS, NATHALIE – VAN DE GINSTE, CARINE – DE BRUYNE, INGRID 2003: *De gemeenschap van doven en slechthorenden in Vlaanderen. Communicatie, taal en verwachtingen omtrent maatschappelijke toegankelijkheid*. Gent: Cultuur voor Doven.
- LYONS, JOHN 1967a: A note on possessive, existential and locative sentences. – *Foundations of Language* 3 p. 390-396.
- 1967b: Existence, location, possession and transitivity. – Bob van Rootselaar – Frits Staal (eds.), *Logic, methodology, and philosophy of science* Vol. 3 p. 495-509. Amsterdam: North Holland.
- 1968: *Introduction in Theoretical Linguistics*. Cambridge: Cambridge University Press.
- MILSARK, GARY L. 1975: Existential sentences in English. URL: <<http://dspace.mit.edu/bitstream/1721.1/13021/1/26114819.pdf>> [read: 14.02.2008].
- PERNISS, PAMELA – ULRIKE ZESHAN (eds.) in print: Possessive and existential constructions in sign languages. *Sign Language Typology Series* No. 2. Nijmegen: Ishara Press.

- SCHEMBRI, ADAM 2003: Rethinking ‘Classifiers’ in Signed Languages. – Karen Emmorey (ed.), *Perspectives on Classifier Constructions in Sign Languages* p.3-34. London and New Jersey: Lawrence Erlbaum Associates.
- SLOBIN, DAN I. – HOITING, NINI – KUNTZE, MARLON – LINDERT, REYNA – WEINBERG, AMY – PYERS, JENNI – ANTHONY, MICHELLE – BIEDERMAN, YAEL – THUMANN, HELEN 2000: Sign Language Transcription at a Morphological Level. URL: <[http://www.sign-lang.uni-hamburg.de/Intersign/Workshop4/Slobin\\_Hoiting.html#A3](http://www.sign-lang.uni-hamburg.de/Intersign/Workshop4/Slobin_Hoiting.html#A3)> [read: 12.11.2008]
- SLOBIN, DAN I. – HOITING, NINI – KUNTZE, MARLON – LINDERT, REYNA – WEINBERG, AMY – PYERS, JENNI – ANTHONY, MICHELLE – BIEDERMAN, YAEL – THUMANN, HELEN 2003: A Cognitive/Functional Perspective on the Acquisition of “classifiers”. – Karen Emmorey (ed.), *Perspectives on Classifier Constructions in Sign Languages* p. 271-296. London and New Jersey: Lawrence Erlbaum Associates.
- SUPPALA, TED 1986: The Classifier System in American Sign Language. – Colette Craigh (ed.), *Noun classes and categorization. Typological Studies in Language* 7 p. 181-214. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Suvi = Suvi – Suomalaisen viittomakielen verkkosanakirja [The online dictionary of Finnish Sign Language] 2003. [Helsinki:] Finnish Association of the Deaf, Online publication: <http://suvi.viittomat.net>.
- TAYLOR, JOHN R. 1995: *Linguistic Categorization, Prototypes in Linguistic Theory*. Second edition. Oxford: Clarendon Press.
- VANHECKE, ELINE – DE WEERDT, KRISTOF 2004: Regional variation in Flemish Sign Language. – Mieke Van Herreweghe – Myriam Vermeerbergen (eds.), *To the Lexicon and Beyond. Sociolinguistics in European Deaf Communities* p. 27-38. Washington: Gallaudet University Press.
- VAN HERREWEGHE, MIEKE – VERMEERBERGEN, MYRIAM 2003: Het opsporen en invullen van “gaten” in het lexicon van de Vlaamse Gebarentaal. – Kristof De Weerd – Marleen Rogiest, *Invulling van Hiaten in het Lexicon van de Vlaamse Gebarentaal: Aardrijkskunde en Geschiedenis* p. 2-10. Gent: Cultuur voor Doven.
- VAN HERREWEGHE, MIEKE – VERMEERBERGEN, MYRIAM 2006: Interrogatives and Negatives in Flemish Sign Language. – Ulrike Zeshan (ed.), *Interrogative and Negative in Sign Languages* p. 225-256. Sign Language Typology Series No 1. Nijmegen: Isahara Press.
- VERMEERBERGEN, MYRIAM 1996: ROOD KOOL TIEN PERSOON IN. Morfo-syntactische Aspecten van Gebarentaal. Unpublished Doctoral Dissertation. Brussels: Free University of Brussels.
- 1999: *Grammaticale Aspecten van de Vlaams-Belgische Gebarentaal*. 2nd edition. Gentbrugge: Cultuur voor Doven.
- 2001-2002: *Cursus Grammatica en Lexicon van de Vlaamse Gebarentaal, Deel 2*. Brussels: Free University of Brussels.
- 2008: The quest for basic constituent order in Flemish Sign Language. Presentation at the University of Jyväskylä, 8<sup>th</sup> of April 2008.
- VERMEERBERGEN, MYRIAM – DEVRIENDT, SERA 1994: Repetition of signs (in Flemish Sign Language). – Inger Ahlgren – Brita Bergman – Mary Brennan (eds.), *Perspectives on Sign Language Structure. Papers from the Fifth International Symposium on Sign Language Research* p. 201-214. Durham: Isla.

- VERMEERBERGEN, MYRIAM – VAN HERREWEGHE, MIEKE – AKACH, PHILEMON – MATABANE, EMILY 2007: Constituent order in Flemish Sign Language and South African Sign Language. A cross-linguistic study. – *Sign Language & Linguistics* 10:1 p. 25-54.
- VOLTERRA, VIRGINA – LAUDANNA, ALESSANDRO – CORAZZA, SERENA – RADUTZKY, ELENA – NATALE, FRANCESCO 1984: Italian Sign Language: The Order of Elements in the Declarative Sentence. – Filip Loncke – Penny Boyes Braem – Yvan Lebrun (eds.), *Recent Research on European Sign Languages* p. 19-48. Lisse: Swets and Zeitlinger.
- WALLIN, LARS 1996: *Polysynthetic signs in Swedish Sign Language*. Stockholm: Stockholm University.
- ZESHAN, ULRIKE 2006: *Possession questionnaire*. Sign Language Typology Research Group. Nijmegen: Max-Planck Institute for Psycholinguistics.

APPENDIX 1: example of elicitation material (Zeshan 2006).



APPENDIX 2: example of elicitation material (Zeshan 2006).



### III

#### APPENDIX 3: notational conventions.

HOUSE	English gloss for a Flemish sign
NEXT-a	-a refers to the locus called a
INDEX-3	pointing
INDEX-3(xxx)	pointing towards xxx
vc-(xxx)	verb construction
vc-(cactus)	simultaneity : both signs produced simultaneously
vc-(cactus)	
ONE POT -----	simultaneity: final sign of dominant hand is hold in space
BROWN	
xxx-rep	repetition
___distr	distributed
___eg	eye gaze
___ t	topic marking
___squint	squint marking with short head nod
___nod	head nod
___ed	eyebrows down
___wr	eyebrows and nose wrinkled
/	short pause
///	long pause
Loc	Location
Loc El	Located Element
Rel	Locative Relation
Prep	Preposition sign

IV

APPENDIX 4: part of transcription in ELAN.

IN-(foto) HEEFT TWEE PERSONEN HEEFT TWEE PERSONEN TWEE

INDEX-3(foto) JONGEN KLEIN++

EN MAN GROOT SNORS-(dik)

SAMEN MAN

cl-(dragen) cl-(vangnet) cl-(vangnet-net)

DRIE VOGEL DRIE INDEX-2 DRIE INDEX-1 DRIE

GEEN # (GEEN VOGEL GEEN VOGEL INDEX-3-B-hand(foto))-neg

(GEEN INDEX-2)-neg

INDEX-3(foto) cl-(twee-personen) +++ HEEFT RIVIER  
cl-(rivier-voorbij-2-personen))

cl-(twee-personen-lopen)

TWEE VIS INDEX-1 IN cl-(rivier) INDEX-1 cl-(rivier)

WEL GELIJK cl-(rivier)+++

INDEX-3(in-rivier) GELIJK IN-(rivier) WATER INDEX-3(in-rivier) GELIJK

(uh) PLANT cl-(plant) (of-zoiets)

(INDEX-3 C-A-C-T-U-S cl-(cactus) cl-(stengels-cactus))-topic (head nod) INDEX-  
TWEE INDEX-1 cl-(cactus) cl-(cactus)

cl-(rivier)

INDEX-3(links-van-rivier) DICHTBIJ-(links-van-rivier) cl-(afstand)  
INDEX-3(rechts-van-rivier) VER-(rechts-van-rivier)

AAN-DE-LINKERKANT (nod) CACTUS NAAST-(links-cactus) HEEFT STEEN cl-(steer  
ENORM STEEN cl-(steen)

(ZON INDEX-2)-nod ZON INDEX-2

JONGEN KLEIN HAAR cl-(haar-vooruitstekend) cl-(haar-midden-uitstekend)  
cl-(haar-achteruitstekend) OPSOMMING-1

## APPENDIX 5: part of transcription in Word.

A: IN-(foto) HEEFT TWEE PERSONEN HEEFT TWEE PERSONEN TWEE

A: JONGEN KLEIN ----- DIK-SNOR

EN MAN GROOT

B: (DRIE VOGEL INDEX-2 DRIE)-jn / INDEX-1 DRIE

A: GEEN // (GEEN VOGEL GEEN VOGEL (ges: flat-hand-sweep-along-picture)-neg

A: HEEFT RIVIER cl-(rivier-loopt-langs-twee-personen)

cl-(twee-personen-lopen) -----

B : TWEE VIS INDEX-1(assimilation handshape vis) // IN RIVIER INDEX-1 RIVIER

A: (NIKS NIKS NIKS VIS GEEN VIS)-neg

A: cl-(rivier) ----- (uh) PLANT cl-(plant) ( of-zoiets)

INDEX-3(rivier) GELIJK // (IN(rivier) WATER)-nod INDEX-3(rivier) GELIJK