

The quest for syntactic dependency

**Sentential complementation
in Sign Language of the Netherlands**

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The quest for syntactic dependency

Sentential complementation in Sign Language of the Netherlands

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aan de Universiteit van Amsterdam
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“Chomsky [ch = ch], Chomsky, Chomsky. Chomsky heeft jou verpest en Hans Bennis ook!”

(De Taaltovenaar)

Did I ever tell you that this sheer jacket represents the symbol of my individuality and my believe in personal freedom?

(*Wild at heart*, David Lynch, 1990)

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List of abbreviations

1, 2, 3	first, second, third person
ADV	adverbialiser
AUX	auxiliary
DECL	declarative
DEM	demonstrative
DU	dual
FUT	future
LOC	locative
NEG	negation
NMLSTN	nominalisation
NS or NEU.SP	neutral space
OBJ	object
PAST	past tense
PF	perfective
PL	pluralis
PRES	present
REM.PAST	remote past
SG	singularis
SIM	simultaneous action
SP	same pivot (=same subject here)
SUBJ	subject

Gloss conventions

a. Graphic representation

Signed language data is represented, where possible, by pictures of the signs.¹ If no pictures of signs are given in the text then these were not available from the sources (this holds mainly for examples from the literature). The following symbols were used:



An arrow indicates the direction in which the hand(s) move(s).



An arrow with stripes indicates that the movement is repeated. Note that the number of horizontal stripes does not refer to the number of repetitions.



A sinus indicates that the hands move in an alternating fashion.



A cross indicates that the hand(s) is(are) touching the body, approximately on the location marked by the cross.



These arrows indicate that the thumb and the finger(s) touch each other.



The hand in bold indicates the final hand configuration of the sign, if this differs from the hand configuration of the beginning (here, the sign starts with a fist and ends with an open hand).



This arrow besides the head indicates that the head is nodding. This is often used to mark an affirmative sentence.



This arrow above the head indicates that the head is shaking. This headshake is used in many signed languages to mark negation non-manually. The face often shows a negative expression.

¹ I thank Handicom Harderwijk (the Netherlands) for their kind permission to use their drawing program Sign PS to represent pictures of the signs.

b. Glosses

Under the drawings glosses are given. In the gloss conventions used, I mainly relied on the conventions common in the literature on signed languages.

GLOSS	Glosses are given in small capitals in English irrespective of the signed language.
GLOSS. GLOSS	If more than one gloss is necessary to reflect the signs meaning in English, a period '.' is used between the glosses.
GLOSS _{left}	The subscripts indicate the locations in space where a sign is made.
POINT	This gloss is given to a point sign (a sign usually made by the index finger); it is often glossed as INDEX in the literature.
//	A double slash indicates a sentence boundary.
,	A comma indicates a major constituent boundary, e.g. to distinguish a topic from the matrix clause.
PU	Palm(s) up is the gloss that refers to a sign in which the palm(s) of the hand(s) are turned upwards. This is not a lexical sign. It is often used at sentence boundaries.
+	The plus indicates that the preceding sign is repeated once.
[]	Sometimes, parts of the glosses are put between square brackets to clarify that these signs are part of one clause.

Subscripts used in this study:

Signer	This location indicates that a sign is made at or towards the location of the signer.
opposite.of. the.signer	This location indicates that a sign is made at or towards the location that is opposite of the signer.
Right Left	These directions indicate that a sign is made at or towards the right or the left of the signer.

Back	These directions can modify the locations to the right and to the left of the signer. Back means closer to the signer, whereas front means further away from the signer.
Front	
neutral.space	This direction indicates that a sign is made in or towards neutral space, i.e. the space in front of the signer.

c. Non-manual markers

A line above the glosses indicates one of the following non-manual markers. The length of the line indicates the duration of the marker. Note that not all components of these non-manual markers could be reflected in the drawings.² The given components hold for NGT only.

_____ neg	Negation marker; characteristics: headshake, often accompanied by a negative facial expression.
_____ aff	Affirmative marker; characteristics: repeated head nods.
_____ t	Topic, focus, or left-dislocation marker; characteristics: raised eyebrows, lowered and/or stretched chin, wide open eyes (manual characteristic: hold or extension, or a slow retraction of the last sign of the topic/focus/left-dislocation constituent).
_____ y/n	Polar question marker that accompanies questions on which a short answer is expected, characteristics: raised eyebrows, lowered chin. ³
_____ wh	Content question marker that accompanies questions on which a long answer or discussion is expected; characteristics: wrinkled nose, lowered eyebrows, raised under and upper lip. ⁴

² It should be kept in mind that, except for the components of the negation marker, not all non-manual and manual components of the non-manual markers are present, or expressed with the same duration in every case. Irit Meir and Wendy Sandler (p.c.) made the same observation in Israeli Sign Language. Therefore, I would rather speak of prosody or intonational markers than of grammatical markers (cf. among others, Coerts 1992 for the opposite opinion). Cf. footnote 8 in chapter 1.

³ This prosody was thought to mark yes/no-questions only, which explains the *y/n* on top of the line (cf. the following footnote).

⁴ This prosody was thought to mark *wh*-questions only, which explains the *wh* on top of the line (see also Vermeerbergen 2002). However, many *wh*-questions can be found that occur with raised eyebrows and yes/no-questions that occur with furrowed brows. My informants often told me that raised eyebrows are used if the signer expects a short answer from the addressee, and furrowed eyebrows if the signer expects a longer answer like a discussion or an explanation. It is often the case that answers on yes/no-questions are

role shift Role shift can be compared to direct speech in spoken languages. In signed languages it can be marked by shifting the head and shoulders toward that location in space that is associated with the referent whose role is taken by the signer. In the graphics this is expressed by slightly shifted shoulders and facial expressions.

d. Translations

All translations are in English.

‘translation’ A translation between single quotation marks is a free translation.

“translation” A translation between double quotation marks is a literal translation and has the purpose of illustrating the sentence structure.

(word) A word between brackets indicates that this word has no overt realisation in the signed language.

short (*yes* or *no*) and on *wh*-questions somewhat longer. This might be the reason for finding a large amount of raised eyebrows in the context of *yes/no*-questions and furrowed eyebrows in the context of *wh*-questions. Nonetheless, there are many *wh*-questions, in certain discourses of course, to which a short answer is expected and possible. For example, in a context where a rock band is going to play that night, one might come across the following *wh*-question/short answer pairs: *What band is going to play tonight?* – *Kane*. *Where?* – *The pub*. *What time?* – *Ten thirty*. The reverse is true for *yes/no*-questions. In a context where the asker is not sure if the addressee is going to the cinema that night, he might ask: *Are you still going to see that film tonight?* – *Well, I think I rather go the pub, because Kane is playing. And I really like this band.*

Goals of the quest

Before a quest can be undertaken it is necessary to be well prepared. We have to answer several questions in advance. What equipment might come in handy, and what will be redundant? What direction should be taken, and what pitfalls might await us? Even in a linguistic quest, like this one, these matters are relevant. However, first of all, an explanation will be given as to why this quest is attempted, and what the goals of this linguistic quest are.

1.1 Linguistics and signed languages

Linguistics is the study of natural human language. As such, the main task of a linguist is to determine the principles that underly the form of natural human languages, i.e. their syntax, morphology, and phonology. Characteristic for most linguistic approaches is that they do not want to describe the form, i.e. the grammar of one specific language. Rather their goal is to uncover the principles that determine the grammar of human languages in general. In generative linguistics this is seen as the innate knowledge that speakers have of language. The goal of the generative framework is to describe and formalise this knowledge, also called Universal Grammar or UG, and how this knowledge is acquired and used (Chomsky 1965, 1986a, 2001; Katz 1964).¹

UG is not a fully-fledged innate grammar, otherwise every human being would speak the same language. UG is a grammar that contains parameters that are set at a certain value on the basis of the environmental language the child in the acquisition process is confronted with. Furthermore, UG consists of principles that hold in all natural languages. It is these universal principles that generative linguists are particularly interested in. Of course, data drawn from

¹ Although generative grammar is the background of this descriptive study, I will use certain semantic parameters from functional grammar (Dik 1997a,b) that will be explained in chapter 2, section 2.1.1.

individual languages are taken into account in generative linguistics, too. In current approaches these data are always compared with data from other languages to detect which grammatical rules are language specific and which hold universally for human language.²

Since signed languages are natural human languages, we expect that speakers of these languages utilise the same innate universal knowledge that speakers of spoken languages use, although the modalities of articulation and perception differ considerably. Indeed, neurolinguistic research has shown that when speakers of signed languages use these languages, that part of the left hemisphere where (spoken) language is located is active (Bellugi & Klima 1990, MacSweeney et al. 2002). Linguistic research in signed languages is therefore very interesting and highly relevant, because it can reveal whether the use of a different articulatory-perceptual modality to convey natural language, i.e. the gestural-visual modality in signed languages as opposed to the oral-auditory modality in spoken languages, has an effect on the form of language universals. In addition to the study of language universals and language specific principles, it is also interesting to see whether signed languages have underlying rules that are modality specific.

Linguistic research in signed languages is very recent. One of the first who looked at signed languages from a linguistic point of view is Tervoort (1953) who is often neglected in the literature. In his dissertation, Tervoort gives an accurate description and a phonological, morphological, and syntactic analysis of the signed language used by a small group of deaf children at the school for the Deaf in St. Michielsgestel (the Netherlands). Although Tervoort calls the signed language an *esoteric* and *primitive language* (Tervoort 1953:289), not more than a *visual auxiliary system* (ibid.:291) that uses many *non-linguistic elements* (ibid.:289), he considers it a (natural human) language. Moreover, he observes that this language was developing into a more fully-fledged linguistic system:

Further, we can speak of a language because - although not in general but merely in some cases - it is a matter of a morphological and syntactic

² Cf. Newmeyer 1998 for the view that the study of one language is enough to uncover the system of Universal Grammar.

categorisation. ... The assumption that we here have a language that is in development and in which the morphology which is under construction has not yet led to a complete syntactic categorisation ... becomes increasingly more likely, the more one gets to know the people in the circles from which our informants have been taken : we see that the older people are the more they are in possession of a language system. (Tervoort 1953:288; my translation³)

More influential, however, was Stokoe (1960). He proposed that signs in American Sign Language (henceforth, ASL), just like words in spoken languages, are built up of smaller components. With his research Stokoe stimulated many linguistic investigations into the structure of ASL (see Klima & Bellugi 1979 for an overview of the first studies). Systematic linguistic research on Sign Language of the Netherlands only started in the 1980s. Since the research tradition in general is so young, we often lack descriptions of the structure of signed languages that are necessary in order to determine how signed languages, or one signed language in particular, relates to spoken languages and UG.

An example of this gap in our knowledge is the syntactic relation between clauses in a sentence. Since the occurrence of the three main types of syntactic subordination (relative, complement, and adverbial constructions; see the next section) is no universal property of languages, a fundamental aspect of the syntax of any language is whether and where syntactic dependency between clauses and syntactic subordination is present. For Sign Language of the Netherlands, syntactic dependency between clauses and complex sentences in general, i.e. sentences that contain more than one predicate, have not been described to date. The present study attempts to give a descriptive and linguistic analysis of one type of syntactically dependent construction in Sign Language of the Netherlands, namely sentential complementation.

³ Vervolgens kunnen wij van een taal spreken omdat er – hoewel niet algemeen maar slechts in sommige gevallen – sprake is van een morfologische en syntactische categorisering. ... Het vermoeden dat wij hier te doen hebben met een taal die zich aan het ontwikkelen is en waarin de zich opbouwende morfologie nog niet geleid heeft tot een volledige syntactische categorisering ... dringt zich evenwel des te sterker op, naarmate men meer en meer met de kringen bekend raakt waaruit ook onze proefpersonen genomen zijn : men ziet daar met de leeftijd ook de taal als systematisch bezit groeien. (Tervoort 1953:288)

Sentential complementation has been thoroughly investigated in numerous spoken languages, but I know of only one signed language in which this topic has been tackled, though not very thoroughly, and that is ASL, by far the best investigated signed language until now. Throughout this study I will consider the results of former investigations into sentential complementation in ASL and compare these with the data from Sign Language of the Netherlands.

In this chapter the subject of this investigation will be described in more detail in section 1.2. I will briefly argue that a structural analysis of signed languages is possible and therefore desirable in section 1.3. In section 1.4 I will give a brief description of what we know till now about the grammar of Sign Language of the Netherlands and signed languages in general. In the last part, section 1.5, a brief overview of the contents of this dissertation will be given. In the further text, I will abbreviate the name Sign Language of the Netherlands as NGT that is derived from the official name of this language *Nederlandse Gebarentaal*.

1.2 Subject of this study

The goal of this study is to look for syntactic sentential complementation in NGT. In this language, constructions can be found that at first sight look like sentential complementation constructions but have no overt specialised marking for syntactic subordination, let alone for syntactic sentential complementation. For example, these constructions have no complementizer or special word order in the potential subordinated clause. Therefore, I will first try to find out if the syntactic relation between the clauses in potential NGT sentential complementation constructions is one of subordination. If this is indeed the case, then I will try to determine whether the subordinated clause is occupying an argument position of the main predicate, thus being a complement clause. Before defining syntactic sentential complementation I will first say a few words on syntactic subordination.

The traditional interpretation of subordination is that it represents dependency (the Latin *subordinare* from which the word is derived and the Greek term *hypotaxis* that is also used in linguistics, both meaning ‘ordering under’). Commonly, subordination is defined as embedding of one clause into

another one, with possible reduction of the structure of the subordinated clause. A subordinate (or ‘lower’) clause is thus a clause within a superordinate (or ‘higher’) clause, the first being morphosyntactically dependent upon the latter. As such, subordination is opposed to *coordination* of clauses or *parataxis* (‘ordering beside’) in which the clauses are equivalent.

I deliberately use the term syntactic subordination and its (morpho)syntactic definition, to distinguish it from semantic subordination. Semantic subordination represents a *functional* asymmetry between two linked states of affairs in that one of them has pivotal status and the other an ancillary function (Cristofaro 1997:40). Semantic subordination thus includes syntactic subordination but it also includes structures that express a subordinate-like meaning but which show no morphosyntactic or *formal* dependency between the different clauses. This is shown in (1) from Gumbaynggir, an Australian language.

- (1) Ni:gar yaraŋ duluŋmiŋ ŋayiŋgiŋ wa:gaya
 men-SUBJ DEM laugh-PAST sit-PAST fire-LOC

‘The men were laughing and sitting around the fire.’

‘The men who were laughing were sitting around the fire.’

(Eades 1979:320, in Cristofaro 1997:29)

The common way for English to convey the restrictive meaning of the proposition in (1) is to use a relative clause, whereas Gumbaynggir uses a parataxis construction, as can be seen from the literal translation. Gumbaynggir thus uses no specific sentence construction to convey the restrictive relation between the predicates in (1). The restrictive meaning has to be inferred from the context (Cristofaro 1997:28).

Syntactic subordination can be found in three different kinds of constructions, traditionally distinguished depending on the function the embedded construction has in the sentence. If the embedded construction functions as the argument of a matrix predicate, it is a *complement clause*, as in (2a). If it functions as an adverbial or non-argument, it is an *adverbial clause* (2b). If it modifies a nominal head, the embedded construction is a *relative clause* (2c).

- (2) a. Daniëla said *that she killed ten cockroaches today*.
 b. *Whenever it is summer*, I long for winter.
 c. My best friend's microwave, *which I set on fire last weekend*, smells a bit odd.

As stated above, I will restrict this investigation to syntactic sentential complementation as in (2a), thus, to syntactically embedded clauses that function as the arguments of matrix predicates (they *complete* the event specified by the verb). However, just as subordination, sentential complementation can be defined in semantic terms as well. Since we do not know yet what sentential complementation looks like in NGT, we have to bear in mind that there is a chance that no *syntactic* sentential complementation can be found at all in this language. Therefore, I think it is necessary to briefly discuss what is meant by *semantic* sentential complementation.

Cristofaro (1997) describes semantic sentential complementation in the following way:

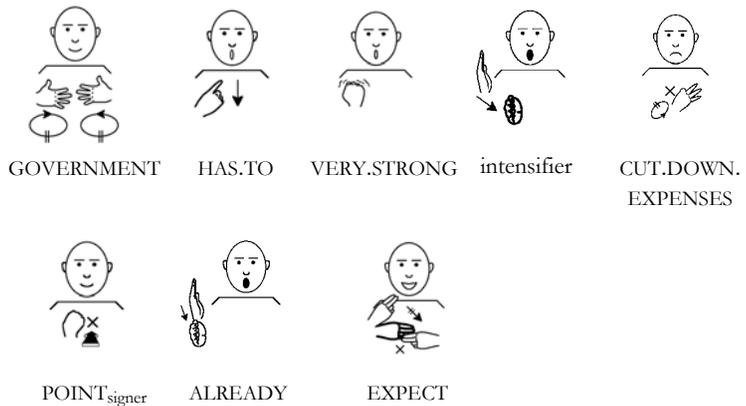
Complement relations link two states of affairs one of which, namely the main, or pivotal one, entails that another one, namely the dependent one, is referred to. (Cristofaro 1997:83)

Just as semantic subordination, semantic sentential complementation can exist without syntactic sentential complementation. In (3) are two examples in which semantic sentential complementation is structurally reflected by paratactic constructions. Example (3a) is from Diegueño, a Yuman language spoken in San Diego County (California) and the northern part of Baja California (Mexico); example (3b) is from Lango, a Nilo-Saharan language of East Africa.

- (4) a. *That Gisela won a trip to the Bahamas* made her very happy.
 b. The fact *that I set my best friend's microwave on fire* emphasises my extreme clumsiness.

Both types of complement clauses were originally included in a pilot study on NGT. The results of the test items that tried to elicit subject complement clauses showed that it was often the case that the test item was paraphrased as two independent clauses. For example, the Dutch version of the subject complement clause of (5a) was translated into NGT as in (5b). In (5a) the italicised clause functions as the subject of the predicate *to be expected*, whereas the two predicates in (5b), *to cut down expenses* and *to expect*, have their own subjects, *government* and *I*, respectively. Therefore, the NGT example in (5b) does not contain a subject complement clause. Rather, it consists of two independent sentences, or two clauses in a parataxis relation.

- (5) a. *That the government has to cut down expenses considerably* was to be expected.
 b.



‘The government has to cut down expenses enormously; I already expected something like that.’

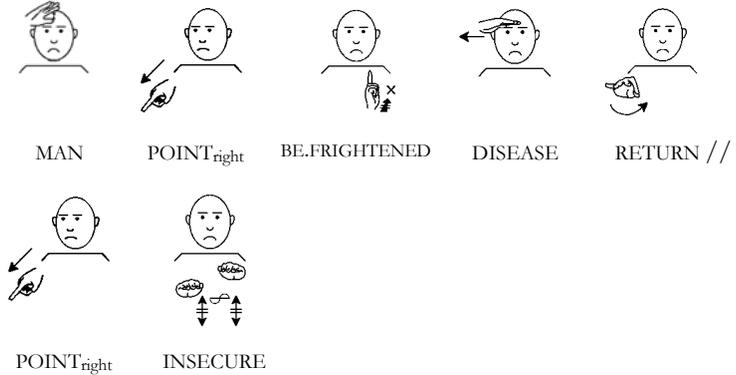
(NGT)

With respect to noun complementation, it was often the case that the complement-taking noun was not expressed resulting in a paraphrase of the

whole utterance. Sometimes, the complement-taking noun was expressed as a verb, as in example (6b). The English equivalent of the Dutch test item is given in (6a), with the complement sentence being italicised.

(6) a. The fear *that the disease might return* made the man very insecure.

b.



'The man is frightened that the disease returns. He is insecure.'

(NGT)

In (6b) instead of a complement-taking noun *fear* the verb *to be frightened* is used, and the first clause of (6a) is turned into a separate sentence.⁴

The results of the pilot test on subject complement clauses and noun complementation thus turned out to be unclear. I decided therefore to concentrate on object complement clauses only, and to leave the topics of subject complement clauses and noun complementation for future research. It should be noted, however, that the results in (5b) and (6b) do not exclude the possibility that subject complement clauses and noun complement clauses exist in NGT.

1.3 Structural analysis of signed languages

Although a large number of the studies into the grammar of signed languages is descriptive in nature, they all assume explicitly or implicitly a hierarchical linear

⁴ The point signs (also called index signs in the literature) are signs that consist of a pointing movement to a certain location in space. These signs can be found in every signed language. These signs determine that a person or object is at a certain location in signing space. The location pointed at by the point sign can subsequently be used in the verbal agreement and pronominal system (see section 1.4 in this chapter).

phrase structure. Among the few researchers that adopt a non-structural analysis of signed languages (among others, see Liddell's later works, especially Liddell 2002, Liddell & Metzger 1998, as well as Taub 1997) is Denis Bouchard. In this section I will briefly discuss one of the articles in which Bouchard explicitly states his view on the analysis of signed languages. I will refute his arguments for a non-structural analysis and thereby defend the point of view that signed languages, just like spoken languages can (and should) be analysed structurally. This standpoint will be assumed throughout this study.

In his article *Sign languages & language universals: the status of order and position in grammar* (1996), Bouchard argues that signed languages should *not* be analysed structurally (cf. also Bouchard & Dubuisson 1995). His reasoning is as follows: ASL can be analysed in a non-structural way, therefore it is not necessary to analyse this language structurally. In Bouchard's own words:

... the descriptions of data from ASL given in several publications are at least as compatible with non structural analyses; hence, ... it is incorrect to conclude that, because of the data as described *may* receive a structural account, then ASL *must* be so described. (Bouchard 1996:101)

However, following this line of reasoning English and French (and every other natural language) should be analysed non-structurally as well for they can be analysed in a non-structural way, cf. among others, cognitive linguistic approaches to natural language (Lakoff 1987, Langacker 1987), or anthropological linguistics (Hymes 1964). However, Bouchard does not draw this conclusion and does not analyse English and French in a non-structural way (cf. Bouchard 1984).⁵

Bouchard wrote his 1996 article as a reaction to Kegl et al. (1996) which was, in turn, a reaction to Bouchard & Dubuisson (1995). Bouchard criticises Kegl et al. (1996) for "recod[ing] the visual-gestural coding of ASL" (Bouchard 1996:130) into a structural coding because they assume that the temporal (read: sequential) dimension is the prominent dimension in ASL. According to

⁵ Bouchard even considers *all* signed languages to be non-structural languages, as opposed to English and French which he calls structural languages (cf. Bouchard 1996:136).

Bouchard “the visual-gestural modality [i.e. signed languages] has means other than order to code information” (ibid.:132). With this Bouchard means that in signed languages the simultaneous dimension is prominent, i.e. the simultaneous expression of two signs, “because there are more articulators” (ibid.:111). Although signed languages may very well have the potential of expressing two signs at the same time, more research needs to be done to see whether they really make use of this potential and under what conditions. From my own experience, I know that complete simultaneous expressions of signs do not occur that often. Most of the time they show some overlap only, i.e. the signs are made more or less linearly, one hand starting to make a sign β when the other hand is still busy with a sign α . Furthermore, these (partly) simultaneous signs, if they occur, always seem to be part of the same constituent, e.g. a verb and its object, or a noun and its index.⁶ Hence, although signed languages have the potential of expressing two signs simultaneously, the distribution of these simultaneous expressions is limited.⁷

If we look at sign language syntax it turns out that the temporal/sequential dimension *is* prominent. This can be best illustrated with the order of constituents in a simple one-predicate sentence. In (7) are examples from NGT, ASL, German Sign Language (DGS, Deutsche Gebärdensprache) and Greek Sign Language (GSS, Ελληνική Νοηματική Γλώσσα - Elleniki Noematiki Glossa).⁸ The signs are expressed linearly without any extra grammatical simultaneous coding superimposed on the linear string. As becomes clear from these examples, the meaning of the proposition can be expressed using one word order only, except for NGT where two word orders are possible. These word orders can be seen as the basic word orders of these signed languages. In ASL and GSS the basic word order is SVO, in DGS SOV, and in NGT SVO/SOV. Other word orders are judged as ungrammatical (indicated by the

⁶ There are constructions where both hands represent objects which perform an action in relation to one another, e.g. the hands represent cars that bump into one another, or two persons that meet each other or kiss each other, or two animals one of which catching the other one. It is not clear at the moment how these constructions should be analysed, e.g. as one clause or sentence, or two (the hands expressing two predicates simultaneously).

⁷ There is another instance in signed languages where simultaneity can be found and that is where certain non-manual expressions are used to utter illocutionary force, such as affirmation, interrogation, etc. These non-manual expressions have been analysed as intonation (Sandler 1999, Wilbur 2000). This same simultaneity can be found in spoken languages as well.

⁸ I thank Roland Pfau and Klimis Antzakas for their help with the DGS and GSS data.

asterisk before the sentences) by native speakers of these signed languages. Thus, the temporal/sequential dimension *does* play a role in signed languages.

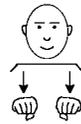
(7) a.



MARIJKE



BUY



CHAIR

‘Marijke buys a chair.’

MARIJKE	CHAIR	BUY
*CHAIR	MARIJKE	BUY
*CHAIR	BUY	MARIJKE
*BUY	MARIJKE	CHAIR
*BUY	CHAIR	MARIJKE

(NGT)

b. MARY LOVE JOHN

‘Mary loves John.’

When CP-internal constituents alone are considered, it is readily apparent that the underlying “unmarked” word order is SVO.

...no other word order yields the interpretation indicated.

(ASL; Neidle et al. 2000:59, ex.24)

C.



WOMAN

MAN

TRUST

‘The woman trusts the man.’

*WOMAN

TRUST

MAN

*MAN

WOMAN

TRUST

*MAN

TRUST

WOMAN

*TRUST

WOMAN

MAN

*TRUST

MAN

WOMAN

(DGS)

d. JANNIS LOVE MARIA

‘Jannis loves Maria.’

?JANNIS MARIA LOVE⁹

*MARIA JANNIS LOVE

*MARIA LOVE JANNIS

*LOVE JANNIS MARIA

*LOVE MARIA JANNIS

(GSS)

According to Bouchard there is no empirical evidence in signed languages which would favour a structural account, because signed languages have a relatively free word order. Unfortunately, Bouchard does not mention on what data he bases this statement. In addition to the examples in (7) there exists extensive literature in which it has been demonstrated that other signed languages have basic word orders as well (among others, Bergman & Wallin 1985 for Swedish Sign Language, de Quadros 1999 for Brazilian Sign Language, Smith 1990 for Taiwan Sign Language, Vermeerbergen 1997 for Flemish-Belgian Sign Language; see for NGT also Coerts 1994, for ASL also Neidle et

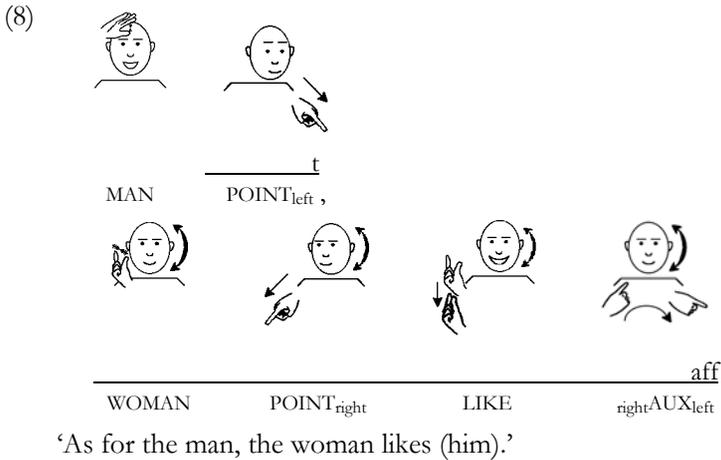
⁹ The native speaker of Greek Sign Language who gave the judgements was not sure about the grammaticality of this order; he thought that extra non-manual markers might be used in order to improve the sentence in which case this order *without* non-manuals is at least marked.

al. 2000, for DGS also Pfau 2001). Actually, Bouchard & Dubuisson (1995) are the only ones to claim that there is a free word order but this claim was based on research on and data from Quebec Sign Language (LSQ, Langue des Signes Québécoise) only. First of all, it is strange to extend this claim to every signed language. Furthermore, as Neidle et al. (2000) point out, the methodology by which Bouchard & Dubuisson collected their data can be called into question:

As is evident from the excerpts from Lelièvre 1996 and Dubuisson 1996...the informants' actual judgements of the acceptability of differing word orders was, in essence, disregarded. (Neidle et al. 2000:60)

If another surface order occurs in signed languages, this order appears in certain contexts only and is accompanied by special prosodic markers to highlight the fact that this is not the basic order. For example, in NGT the object that normally follows the subject can occur in a position before the subject, though only if it is marked with a special topic prosody (represented by \underline{t} in the glosses). This prosody is expressed non-manually and manually. The non-manual part of this prosody consists of raised eyebrows, a lowered and/or stretched chin, and wide open eyes. The comment part of this construction can be marked by an affirmative prosody (represented by aff in the glosses) that consists of repeated head nods over the rest of the sentence. In addition, the manual part of the topic prosody can consist of a hold of the last sign of the topic constituent and a slow retraction of this last sign.¹⁰ A non-basic word order also evokes another interpretation. An example is given in (8).

¹⁰ It should be noted that not in every case all non-manual and manual components are present, or expressed with the same duration. For example, it is possible that the topic constituent is marked by a lowered and/or stretched chin and a slow retraction of the last sign only, or that the raised eyebrows start a few hundredths of a second before the lowered and/or stretched chin and ends later. This observation occurred in my data with other non-manual markers as well, e.g. with what has been called the *yes/no*-question and *wh*-question grammatical markers. Cf. footnote 3 in the gloss conventions.



(NGT)

Non-basic word orders occur in spoken languages as well. In Dutch, the object can also be fronted, as in *DE MAN bijt de hond* ‘the dog bites THE MAN’. Here the object in the order OVS is marked with focus prosody to evoke a contrastive meaning ‘it is the man, not the child that the dog bites’. Also in Dutch, the order VSO *Leest Ellie Nabokov?* ‘does Ellie read Nabokov?’ with a special yes/no-question intonation evokes an interrogative meaning. Thus, although signed languages, and languages in general, use among other things different surface orders to express different meanings, this points by no means to a free or relatively free word order, but rather to a relatively strict order, in which certain grammatical information can be coded in linear structure. I therefore conclude that signed languages, like spoken languages can (and should) be analysed structurally.

1.4 What we know about signed language grammar and NGT

In the following I will explain some of the things that we already know about signed language grammar, with particular reference to NGT.¹¹ The aspects explained here are necessary for later discussion.¹²

¹¹ Certain grammatical aspects that were discovered to be part of a specific signed language grammar, turned out to hold for signed languages in general (or, at least for the signed languages that are investigated until now). Apparently, particular grammatical aspects are modality-dependent. As will become clear from the main text, these aspects of the grammar are presented in this section as holding for signed languages in

1.4.1 Basic components of signs

As could already be seen in the signed language examples in (5b), (6b), (7), and (8), sentences in signed languages are built up from (smaller) phrases, just like sentences in spoken languages. These smaller phrases are composed of single signs that can be compared to words. And just like words, a sign can be decomposed into even smaller parts. Roughly, five parts are discriminated of which a sign is build up. A sign is made at a certain *location* in signing space or on the body of the signer. Signing space, also called neutral space is a three dimensional space approximately a quarter of a sphere in front of the signer at about waist height, a quarter of a sphere above the signer, and the space in between, see the picture in (9).



SIGNING SPACE

Furthermore, a sign is made with a certain *hand configuration* determined by the number of fingers and the position of these fingers, the *orientation* of the hand and the fingers is also important, the hand can move through the signing space or make a hand internal *movement* during a sign, and the sign can be accompanied by a *non-manual* component that can vary from a certain facial behaviour to making a sound with the mouth. In (10) the components of a sign are demonstrated with my name sign.

general. Grammatical aspects for which I am not sure whether they hold for all signed languages, are presented explicitly as part of NGT grammar.

¹² See Neidle et al. (2000) for a more extensive discussion of morphosyntactic aspects of signed languages, and in particular ASL.

(10)



INGEBORG

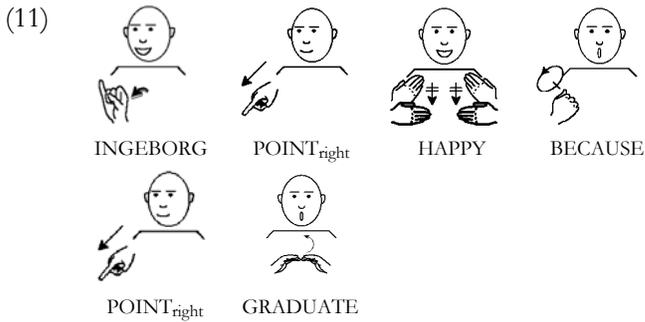
My name sign is signed in neutral space. The hand configuration is the so-called I-hand in NGT because it represents the letter I in the NGT hand alphabet. The orientation of the hand palm is away from the signer while the fingers (or actually the knuckles) are pointing upwards. The hand makes a small upwards and forwards arc movement and the sign is not accompanied by a special non-manual marking.

The components just described are often compared to phonemes in spoken languages but in many cases they can probably better be compared to morphemes (Zwitserslood 2003, Zwitserslood et al. 2003). I will come back to this issue with respect to locations and hand configurations in a moment. For more information on the phonetics and phonology of NGT and signed languages in general, I refer to Brentari (1998), Crasborn (2001), van der Hulst (1996), van der Kooij (2002), and Uyechi (1994).

1.4.2 Localisation

Referents of signs can be localised in signing space by point signs (often glossed as INDEX in the literature, but glossed as POINT in this study, see fn. 3 in this chapter). This is done by pointing to a certain location in signing space before or after a sign that for example refers to a person.¹³ From now on, this person is connected to that particular point in signing space that can be used in the pronominal and verbal agreement system. Let's illustrate this with the following examples.

¹³ In this way, inanimate entities, whole situations, and even thoughts and ideas can be localised at points in signing space as well.



'Ingeborg_i is happy because she_i will graduate.'

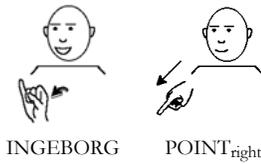
(NGT)

In (11) *Ingeborg* is localised at a location to the right of the signer. If the signer points to this location again in (11), the point sign should be considered as a pronoun referring to Ingeborg. Note that pronouns in English (and many other spoken languages) are ambiguous. Thus, in the English translation of (11) the pronoun *she* can refer to Ingeborg or any other female person. In signed languages point signs used as pronouns are not ambiguous because the location to the right of the signer in the discourse of (11) uniquely refers to Ingeborg, and not to someone else. Every other person that will play a role in the discourse of (11) will be localised at another unique location in signing space.

MacLaughlin (1997) and Neidle et al. (2000:88) analyse the point sign that localises another sign in signing space as a determiner, but for NGT the exact status of point signs is still unclear. In her dissertation, Zwitterlood suggests that the point sign is actually an intransitive predicate that expresses the localisation of a referent (Zwitterlood 2003:145, fn.2) with one slot for location agreement. Her main motivation for this analysis is that this sign behaves in most respects similar to verbs of motion and existence, although Zwitterlood does not discuss this further. Zwitterlood's analysis predicts that the sign phrase in (12) is a grammatical independent sentence in NGT, which can be questioned and negated, among other things. This analysis predicts also that the string of signs in (13) is grammatical, for a point sign can function as a pronoun

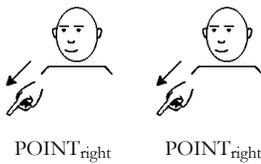
as well. Whether the strings of signs in (12) and (13) are grammatical NGT sentences or not, is not yet obvious.¹⁴

(12)



(NGT)

(13)



(NGT)

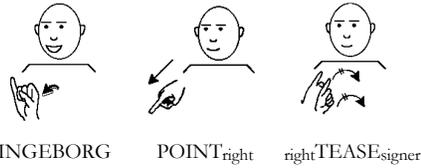
It would be very interesting to investigate the consequences of this proposal more deeply. For the time being, I have glossed point signs in this study as POINT and considered point signs that localise other signs in signing space as part of the determiner phrase (DP).

1.4.3 Verb agreement

Example (14) shows how locations in signing space work in the verbal agreement system. The NGT verbs *to tease* in (14a) and *to visit* in (14b) have no fixed locations. In the phonological specification of the roots of these verbs, however, the information is stored that they move from one location in signing space to another (Zwitserslood 2003, Zwitserslood et al. 2003), and that the beginning location refers to the subject of the teasing or visiting event and the end location to the object. Again, *Ingeborg* is localised at a location to the right of the signer. Since, the verb *to tease* moves from this location to the location of the signer it means that Ingeborg is teasing the signer. The verb *to visit* in (14b) is moving from the signer to the location where Ingeborg is localised and therefore means that the signer is visiting Ingeborg.

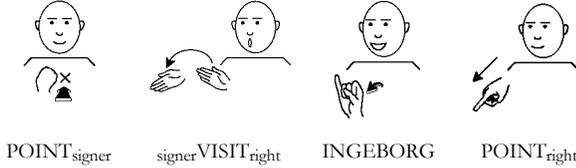
¹⁴ As Josep Quer rightly remarks, it should be carefully checked whether non-manual markings make the sentences in (12) and (13) grammatical.

(14) a.



'Ingeborg is teasing me.'

b.

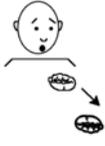
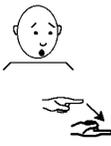
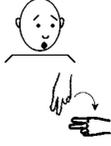


'I visit Ingeborg.'

(NGT)

Besides predicates that use two locations that express verbal agreement there are also predicates that have only one location that expresses agreement. Whether this one location denotes subject or object agreement depends on the phonological specification of the verb root (Zwitserslood 2003, Zwitserslood et al. 2003).

Location as it plays its role in the pronominal and verbal agreement system thus constitutes a morpheme rather than a phoneme. The same holds for hand configuration. In predicates that express the motion, location, and existence of a referent the hand configuration is not established in the phonological specification of the verb's root (Zwitserslood 2003, Zwitserslood et al. 2003) but determined by the shape characteristics of the argument. The hand configuration in these predicates indicates the referent involved in the event expressed by the predicate. For this reason, in these cases hand configuration should be considered as an agreement morpheme as well (van Gijn & Zwitserslood 2003). This is illustrated in (15) for the NGT verb *to fall* (from van Gijn & Zwitserslood 2003:8, ex.4).

- (15) a.  FALL.BROAD.
FLAT.ENTITY
'A book falls.'
- b.  FALL.LONG.
NARROW.ENTITY
'A pen falls.'
- c.  FALL.TWO.LEGGED.
ENTITY
'A boy falls.'
- (NGT)

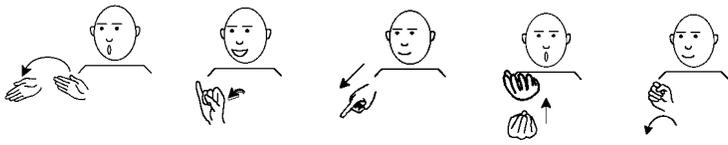
If the signer wants to express that a book falls, he will use a hand configuration that resembles the shape of a book, as in (15a). If the falling referent is a pen, the signer will choose a hand configuration that matches the long and narrow shape of a pen (15b), and if the entity is a human being or an animal, usually a hand configuration with two extended fingers that represent the legs is chosen (15c). The set of hand configurations that are used as agreement morphemes form a small, closed class. Van Gijn & Zwitserlood (2003) call this type of agreement *gender agreement*, because it is reminiscent of the gender agreement system found in Bantu languages.

The hand configurations used in the agreement system are usually described as *classifiers*. For spoken language classifiers, Corbett (1991) and Croft (1994), among others, claim that these are not agreement markers. The main reasons for their claim are that the set of classifiers in a language is often very large, and that classifiers are not obligatory. However, in signed languages, the set of 'classifiers' is limited, at least in NGT. Moreover, these hand configurations appear obligatorily on verbs of motion, location and existence. Therefore, with van Gijn & Zwitserlood (2003) I still support the view that in signed languages, hand configurations in predicates of motion, location, and existence are agreement morphemes (see also Glück & Pfau 1999).

In addition to predicates that show location and gender agreement, the so-called *agreement verbs*, signed languages also have a set of verbs that do not show overt agreement. These *non-agreement verbs* have been a mystery in signed linguistics for many years, because just like agreement verbs, non-agreement verbs are able to occur in the absence of overt arguments. Let me explain this first.

1.4.4 Null arguments

All signed languages investigated till now seem to have the possibility not to express the arguments of a predicate overtly, if these arguments can be recovered from the context. Both subject and object arguments can be left unexpressed. If a verb shows agreement, this agreement allows for recovering the null arguments. Thus, in the second sentence of (16) the agreement clarifies that the person who gives the flowers is the signer, and the person who receives the flowers is Ingeborg. Note that the subject of the first clause is also left unexpressed overtly.

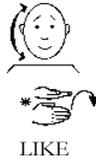
- (16)
- 
- signer VISIT_{right} INGEBOG POINT_{right} // FLOWER signer GIVE_{right}
- ‘I visit Ingeborg. I give her_i flowers.’

(NGT)

However, null arguments are possible in the absence of agreement as well in NGT. This can be seen in sentence (17).

- (17) Question: Does Alinda like that shirt?

Answer:



‘Yes, (she) likes (it)’

(NGT)

In (17) the arguments cannot be recovered from agreement, because the NGT verb *to like* does not show any agreement marking. For the same phenomenon in ASL, Lillo-Martin (1986, 1991) gave the following analysis. She considers null arguments in the presence of agreement as *pro-s*, that is, as null pronouns that are licensed and identified by the subject or object agreement of

the predicate. Null arguments in the absence of agreement are compared by Lillo-Martin to null arguments in Chinese, a language without verbal agreement. These null arguments are regarded as *null variables* that are licensed and identified by (null) topics (see the works by Lillo-Martin and van Gijn & Zwitserlood 2003 for more detailed explanations). This analysis was also adopted by van Gijn & Zwitserlood for NGT. Neidle et al. (2000) reject Lillo-Martin's analysis. They claim that null arguments in ASL are always *pro* and thus always licensed and identified by agreement. If manual agreement, i.e. location agreement in their view, is absent, then the null arguments are licensed and identified by non-manual agreement which is established by head tilt to a particular location in signing space for subject agreement and eye gaze to a certain location for object agreement.

Van Gijn & Zwitserlood could not find any evidence for the presence of non-manual agreement in NGT. Together with Pfau they present yet another analysis (Zwitserlood et al. 2003) which I take over and support in this study. In Zwitserlood (2003) and Zwitserlood et al. (2003), the agreement system of signed languages is formalised in a Distributed Morphology (henceforth, DM) framework. In DM linguistic elements like words and phrases are built up from abstract roots and morphosyntactic features that are inserted into terminal nodes and which are subject to derivational operations such as movement, merger, and fusion. Only after these syntactic operations have taken place are roots and features connected with phonological features, or vocabulary items (see Halle & Marantz 1993, Harley & Noyer 2001 for more details on derivations in DM). With regard to predicates in signed languages this means that every predicate has a root that is combined with morphosyntactic features, among which agreement features. It depends, however, on the phonological specification of the verb's root whether vocabulary items can be inserted for the various agreement features. Thus, if the verb root is already phonologically specified for hand configuration and location, the agreement morphemes cannot be connected with vocabulary items, whereas if the verb root is not yet phonologically specified for hand configuration and/or location, a certain hand configuration and/or location can be inserted (see Zwitserlood et al. 2003 for detailed derivations of all types of predicates).

Thus, in the approach of Zwitserlood (2003) and Zwitserlood et al. (2003) null arguments in the presence *and* in the absence of agreement are considered to be *pro-s* that are licensed and identified by abstract agreement features.

Although the approach of Zwitserlood and Zwitserlood et al. is promising, its consequences need to be investigated more thoroughly, just as the occurrence of certain phenomena that do not seem to fit with what their analysis predicts. For example, in NGT it is not possible to utter the second sentence in the context of (18), because it is not clear who loves who.

- (18)
-
- (NGT)

The ungrammaticality of the second sentence in (18) is probably due to pragmatic reasons. If a context is created in which one of the two arguments is a non-animate entity, the second sentence in (18) might be fully grammatical, because pragmatics determines that the meaning of the sentence agrees with the default interpretation in which a non-animate entity is loved and not the thing that loves. However, more research is necessary on this subject.

In the case of (18) in NGT, and in certain other signed languages like DGS (Rathmann 2000) and Taiwan Sign Language (Smith 1990), an auxiliary verb is used that shows subject and object agreement and thereby clarifies the relationship between the null arguments. In NGT this auxiliary verb is the sign OP (Bos 1994), as in (19).

- (19)
-
- (NGT)

1.4.5 Non-manual marking

A last aspect of signed language grammar that I want to discuss here is non-manual marking at the sentence level. This marking occurs over phrases and is realised by facial behaviour and movements of the upper body. An example of two such markers could already be seen in sentence (8) in this chapter. In this sentence a topic and an affirmative marker occur. In early research, these markers were assumed to be syntactic markers. Most non-manual markers, however, consist of several components, e.g. the topic marker contains in addition to a manual component, the non-manual components raised eyebrows, lowered and/or stretched chin, and wide open eyes. Since not every component of a marker is always present, and since the duration of these markers does not always have the same length, I consider these non-manual markers on the sentence level as prosodic markers (cf. fn. 3 in the gloss conventions). In part c of the gloss conventions is a list of the non-manual markers and their components as appear in this study. Other aspects of NGT and signed language grammar will come up for discussion in the following chapters.

1.5 Overview

In chapter 2, I will give a brief overview of the literature on complementation. In particular, I will describe the semantic and syntactic characteristics that have been proposed for complementation. The semantic characteristics form the input of the classes of complement-taking predicates that I will investigate in NGT. The syntactic characteristics form the starting-points for the tests to elicit complement constructions in NGT. Chapter 2 also describes the methodology used and gives more information about the informants.

In chapters 3 to 6 the various tests that were carried out are described in detail and their results are presented and discussed. The goals of these tests is to find out if syntactic complementation can be found at all in NGT, and if so, to reveal the syntactic characteristics of sentential complementation in NGT. Chapter 3 deals with a test on argument structure. In chapter 4 a test on right dislocation is presented. In chapter 5 a test that involves the non-manual

negation marker is discussed and chapter 6 tests *wh*-extraction in *wh*-questions and topicalisation structures.

Chapter 7, finally, gives a summary and a conclusion.

Preparing the quest: tests and methodology

A though it has now been settled what the goals of this linguistic quest are, we can still not simply pack our bags and start this quest right away. Before our departure we have to determine the strategy. Foremost, we have to figure out what can be learned from former quests that had the same or a similar goal, for these will determine what equipment is needed for this current quest.

2.1 Characteristics of sentential complementation

In chapter 1 it was shown that complementation has both aspects related to syntax and aspects related to semantics. In syntax complementation involves a subordinated clause functioning as the argument of a matrix predicate, in semantics it means that one state of affairs induces the reference to another state of affairs, which is not necessarily reflected in syntactic structure. The topic of this research is to look for constructions that represent *syntactic* complementation and if these can be found at all in NGT. I am not going to look for the semantic relation of complementation. The literature has shown, however, that syntactic complementation not only has syntactic features but also semantic characteristics.

In the following subsections various characteristics of sentential complementation that have been described in the literature will be discussed. In section 2.1.1 I will start with semantic features on the basis of which the complement-taking predicates used in this investigation have been chosen. Various syntactic features follow in 2.1.2. It should be kept in mind that the literature on sentential complementation is quite extensive. Therefore, I cannot

give an exhaustive overview of the semantic and syntactic features. In section 2.2 I will explain what tests I have used to collect the necessary data for this investigation. These tests are based on various syntactic features discussed earlier. How the tests were carried out is described in 2.3. Section 2.4, finally, gives some background information about the informants.

2.1.1 Semantic features

It is commonly held that many characteristics of complement clauses are determined by the matrix predicate, also called the complement-taking predicate.¹ Since not much is known about the morphosyntactic behaviour of complement clauses and complement-taking predicates in signed languages, I used semantic criteria to select the matrix predicates that I have used in the tests.²

Various semantic classifications of complement-taking predicates have been proposed in the literature. The semantic features that are used for the classifications vary. I made a selection of three features mentioned in various studies and that play a role in the classifications in Cristofaro (1997), Dik (1997a, 1997b), Hengeveld (1989, 1998), and Noonan (1985). These features are *entity types*, *time dependency*, and *presupposedness* (factivity and implication). These features are not isolated independent features. They are embedded in each other in a way that I will explain below. Note that these semantic features are not specific for complementation. They apply to adverbial subordination too (Hengeveld 1998).

a. *Entity types*

Extending ideas by Lyons (1977:442-447), it is assumed in functional grammar (Dik 1997a, 1997b) that all linguistic units refer to entities of four different types based on their semantics (Dik 1997a:49ff.; Hengeveld 1989, 1998, and

¹ See however, Barbiers (to appear) who argues that it is the structural position of the complement clause that determines this. More specifically, Barbiers argues that the structural position of the complement clause in the sentence determines its semantic status.

² Actually, ASL is the only signed language for which it has been shown that syntactic complementation exists (Liddell 1978, 1980; Padden 1988).

subsequent work).³ The entity types are characterised by the following layers: *predicates, predications, propositions, and clauses*.

Predicates designate properties or relations. Predications designate states of affairs and result from combining a predicate with proper arguments (so-called terms). Propositions pertain to what is said or thought about a state of affairs, they designate something that can be evaluated in terms of its truth. Clauses, finally, involve the speech situation as a whole, specifically referring to the speech act (see table 1). Note that the terms proposition and clause in functional grammar are used in a more narrow sense than in this study and linguistics in general. The term proposition usually refers to what in functional grammar is called predication, and the term clause is used in this study for units that maximally contain a predicate and the arguments and adjuncts that accompany this predicate. In functional grammar, the various layers or levels are ascribed different formal structures with their own grammatical functions (so-called operators).

layer	entity type
1a predicate	property/relation
b term	entity
2 predication	state of affairs
3 proposition	possible fact
4 clause	speech act

Table 1: *layers and entity types in functional grammar*

In this model, a sentence is described as a structure that contains the four hierarchically ordered layers, such that a higher layer encloses the lower layers. Thus, in an independent or main clause all layers are simultaneously present; they cannot be isolated.⁴ Simple arguments can designate entities of each layer as in the following examples in (1), slightly adapted from Dik (1997b:94, ex.1).

³ In more recent versions of Functional Grammar more than four entity types are distinguished. Since this distinction turned out to be too detailed for the present purposes, I decided to restrict myself to the four original types described in the main text.

⁴ These semantic structures can be compared with the functional projections that are distinguished in (modern versions of) generative grammar (p.c. Aafke Hulk).

- (1) a. Ellie is *ill*.
(Ellie is ascribed a property, an entity of type 1a)
- b. Gisela is *a teacher*.
(Gisela is ascribed a term, an entity of type 1b)
- c. Mar watched *the cycle race*.
(Mar watched an event, an entity of type 2)
- d. Daniëla knew *the facts*.
(Daniëla knew propositional contents, an entity of type 3)
- e. Henny answered *my question*.
(Henny responded to a speech act, an entity of type 4)

In Hengeveld (1989) it is hypothesised that if simple arguments may refer to different kinds of entities, sentences that function as arguments may do so as well.^{5,6} Thus, each layer can be turned into a complement clause and complement clauses can be classified according to the highest layer that they contain, as can be seen in (2), slightly adapted from Dik (1997b:94, ex.2).⁷ I will restrict myself to complementation on the last three levels.

- (2) a. Mar saw *that Gisela's Chinese lantern was on fire*.
(reference is made to an event, an entity of type 2)
- b. Daniëla knows *that the life of a bug is not an easy one*.
(reference is made to a propositional content, an entity of type 3)
- c. Henny asked *why no one ate the French cheese*.
(reference is made to a question, an entity of type 4)

It is commonly understood that the semantics of the matrix predicate determines the semantics of the embedded clause (cf. however, fn.1 in this

⁵ This does not hold for terms, entities of type 1. It does hold for properties, however, as in *I am able to swim* (p.c. Kees Hengeveld) which are also entities of type 1. Since the latter case involves modals mainly that are excluded from this study (see the end of this subsection), both terms and properties are not involved in the selection of complement-taking predicates.

⁶ In fact, Hengeveld (1989) hypothesises that all subordinate constructions can be classified according to the highest layer that they contain. Although this holds for adverbial relations, it is of limited usefulness in relative relations (Cristofaro 1997:179).

⁷ Barbiers (to appear), working in a generative framework, also ascribes various formal structures to different types of complement clauses.

chapter). Therefore, it is assumed in functional grammar that the matrix predicate selects an embedded clause of an entity type that this predicate belongs to. The differences between complement types are accounted for in terms of the differences between the layers underlying them. This, then, forms the validity of these layers. For example, in Nama, a Hottentot language spoken in south-west Africa, the use of a particular morphosyntactic feature for sentential complements is dependent on the layer the main predicate belongs to. This means that in this language there is overt evidence for the different layers. The following examples are from Dik & Hengeveld (1991:235, exx.5-7). Here I use boldface to mark the morphosyntactic features that are determined by the layer.⁸

- (3) a. 'Oo-s ke //’úisà //xaápá kè múí
 then-3SG DECL she again REM.PAST say
 /’úú-ta a **tí**
 not.know-1SG pres quote
 ‘She said again: “I don’t know.”’
- b. //’íp ke ’am’a-se kèrè =/om
 he DECL true-ADV REM.PAST believe
 /’aé//amsà xuú-kxm /xíí hàà **!xáísà**
 Windhoek from-1DU come PF that
 ‘He really believed that we had come from Windhoek.’
- c. !gû-s ke káíse a !gomba te
 go-NMLSTN DECL very PRES difficult to.me
 ‘It’s very difficult for me to go.’

In Nama, utterance predicates that are used for direct speech reports, fourth order predicates, take a fourth order complement that is marked by a quote particle *tí* (3a). The predicate *=/om* ‘believe’ in (3b), a third order predicate, takes a third order complement. These may be marked in this language by the complementizer *!xáísà*. The commentative predicate in (3c) is a second order predicate and takes a second order complement, that is

⁸ Note that the slashes and double slashes in the sentences in example (3) do not indicate pauses or sentence boundaries.

nominalised in Nama by the suffix *-s*. This shows that entity types are relevant in the determination of complement taking predicates.

b. Time dependency

In certain complement clauses the time reference of the dependent state of affairs is determined by the time reference of the matrix predicate. This is called dependent, or determined time reference (DTR). If the time reference of the complement state of affairs is not logically bound by the time reference of the matrix predicate, the complement clause has independent time reference (ITR). Time dependency plays a role in the class of second order entity types only, since third and fourth order entity types necessarily have independent time reference (Hengeveld 1998). Two distinctions can be made in predicates with dependent time reference: the complement state of affairs necessarily has to occur simultaneously with the matrix predicate, as in (4a), or after the matrix predicate (4b).

- (4) a. I see Ellie cooking a vegetarian dish.
 (the event of Ellie cooking a vegetarian dish necessarily takes place at the same time of the event of seeing)
- b. I want Ellie to cook a vegetarian dish.
 (the event of Ellie cooking a vegetarian dish is something that might take place in the future)

c. Presupposedness (factivity and implication)

With respect to entity types of the third order, presupposedness says something about the speaker's attitude towards the truth of the dependent state of affairs. In the literature this is also called *factivity* (Karttunen 1971, Kiparsky & Kiparsky 1970). I use presupposedness rather than factivity, because within the class of second order entity types no reference can be made to truth value. Nevertheless, presupposedness does play a role at this level too. Here it says something about the logical entailment of the dependent state of affairs by the matrix predicate. This is called *implication* by Dik (1997b:114).

Three distinctions can be made. Firstly, if the speaker commits himself to the truth of the complement proposition, the complement clause is (*semi-factive*).⁹ With regard to the second layer, we can talk about *implication* if the matrix predicate implies that the complement state of affairs is actually realised. Secondly, if the speaker is not committed to either the truth or the falsity of the complement proposition, or if the matrix predicate carries no implication as to the realisation or non-realisation of the complement state of affairs, we talk about *non-factivity* and *non-implication*, respectively. Lastly, a complement clause is *contra-factive* if the speaker signals that he himself believes that the complement proposition is false. Its second layer counterpart is *contra-implication*: the matrix predicate implies that the complement state of affairs was in fact not realised. Examples of the three distinctions for the third layer are in (5) and for the second layer in (6).

- (5) a. Wil knows that pigs don't fly. (semi-factive)
 b. Wil believes that pigs can fly. (non-factive)
 c. Wil pretended on the phone that pigs can fly.¹⁰ (contra-factive)
- (6) a. I regret that I am not an astronaut. (implication)
 b. I want to be an astronaut. (non-implication)
 c. I pretend to be an astronaut. (contra-implication)

Combining the three entity types with the three differentiations of presupposedness (that play a role at level 2 and 3 only) and two different time dependencies (only relevant at level 2), ten distinctions can be made. In table 2 these are set out with some examples of complement-taking predicates (ctp-s). Note that the classification presented here sometimes fits more than one class of complement-taking predicates as distinguished in the literature (cf. Noonan 1985).

⁹ On the term semi-factive see Hooper & Thompson 1973:480 and Karttunen 1971.

¹⁰ Of course, photographic phones should be excluded here. Otherwise, *pretend on the phone* no longer refers to a speech act solely and the predicate belongs to entities of a type 2.

layer	time dependency	presupposedness	ctp-s
2	DTR	implication contra-implication non-implication	<i>Phasal</i> : begin, stop, be busy <i>Direct perception</i> : see, hear <i>Impediment</i> : hinder, prevent <i>Desiderative</i> : want <i>Deontic modal</i> : should, be able
	ITR	implication contra-implication non-implication	<i>Commentative</i> : regret, like <i>Pretence</i> : pretend be certain, be possible
3	ITR	(semi-)factive contra-factive non-factive	<i>Knowledge</i> : know, realise <i>Unreal wish</i> : unreal wish, imagine <i>Positive propositional attitude</i> : think, believe, wish <i>Negative propositional attitude / Doubt</i> : doubt
4	ITR		<i>Utterance</i> : tell, ask, assert, claim

Table 2: *classes of complement-taking predicates*

Several classes of complement-taking predicates are excluded from this study for the following reasons. First, I do not use any modal predicates because these do not form a homogeneous group (see also fn. 5 in this chapter). Moreover, modality is such a broad topic in itself that I would have no time to investigate all the various differentiations properly. Second, I consider the impediment predicates and predicates that express an unreal wish too difficult to take into account. Especially the latter ones suppose mood distinctions about which we do not know anything in signed languages in general, let alone for NGT. And like modality, mood is a very large topic in itself. Finally, the predicates *be certain* and *be possible* are excluded as well, because in English and Dutch these take a subject complement clause. The arguments for excluding these from this study were presented in chapter 1, section 1.2. Of course, the classes excluded here form a good subject for future exploration.

There are nine different classes of complement-taking predicates remaining to use in the tests that will be discussed below. These predicates are listed in (7).^{11,12}

- (7) a. Phasal: *beginnen, bezig-zijn* ('to begin', 'to be busy')
 b. Direct perception: *zien* ('to see')
 c. Desiderative/volitional: *willen* ('to want')
 d. Commentative: *leuk vinden* ('to like')
 e. Pretence: *doen alsof* ('to pretend')
 f. (Acquisition of) knowledge: *weten* ('to know (something)')
 g. Propositional attitude: *geloven* ('to believe')
 h. Doubt: *twijfelen* ('to doubt')
 i. Utterance: *vragen* ('to ask'), *vertellen* ('to tell')

2.1.2 Syntactic features

Besides semantic features, sentential complementation also has syntactic features. Since the latter features might be of help in finding out if we are dealing with syntactic complementation in certain NGT constructions, most of the tests to collect the necessary data are based on some of these syntactic features.

The syntactic features of sentential complementation that I will discuss below come from various ranges that are mentioned in the literature (Andersson 1975, Haiman & Thompson 1984, and Haspelmath 1995). In the literature on signed languages (Liddell 1980, Padden 1988) some additional syntactic features emerged. Although these features are not specific for signed languages, they have not been discussed in the literature on spoken languages. The literature in which these additional features are described considers only ASL, until now the only signed language for which sentential complementation, and subordination in general, have been investigated.¹³

¹¹ I give the Dutch names of the predicates first, because the English counterparts sometimes slightly differ in meaning.

¹² In all future I will first present *to want* and then *to see*.

¹³ The investigation of subordination in signed languages started with Henry Thompson's article *The lack of subordination in American Sign Language* (1977) in which, as the title already says, it is claimed that ASL has no syntactic subordination. Not long after the publication of Thompson's article Liddell (1978, 1980) and

The syntactic features that emerge from the literature are the presence of a *complementizer*, a different *word order* within the complement clause, *wh-extraction* from the complement clause (*topicalisation* and *wh-questions*), the impossibility of using *coordinate conjunctions*, the possibility of *pronominal right dislocation* of a matrix clause argument at the end of the complement clause, the duration of the non-manual *negation marker*, and the *form of the embedded verb (infiniteness)*. Again it should be kept in mind that none of these features is related exclusively to sentential complementation, but applies to subordination in general.

a. *Complementizer*

Complement clauses can be marked by a subordinating conjunction, a complementizer. The problem with this criterion is that not all languages have (overt) complementizers to mark syntactic complementation. This also holds for NGT. An NGT equivalent of the respective English and Dutch complementizers *that* and *dat* has not emerged to date. This can be seen in the NGT-sentence in (8) that contains at least a *semantic* subordinated complement clause (the semantic complement clause is in boldface).

(8)

POINT_{signer}

KNOW

POINT_{addressee}addressee**COME**_{signer}

'I know that you are coming to (see) me.'

(NGT)

Bos (1996:4) states for NGT that there are indications that the serial verb ROEPEN 'to attract attention' is developing into a complementizer. The grammaticalisation of an utterance predicate that functions as a serial verb into a complementizer is not an unknown process in languages. Bos mentions that Fischer has noticed a similar process in ASL, and Lord (1993) in different spoken languages with serial verbs. Unfortunately, Bos does not give any

Padden (1988) convincingly falsified Thompson's claim. The reader is referred to the latter two authors for a devastating breakdown of Thompson's arguments.

- _____ t
- b. *FLOWER, ₂GIVE₁ MONEY, ;GIVE₁
 ‘Flowers, he gave me money but she gave me.’
 (ASL; Padden 1988:93, ex.38)

In (12a) topicalisation from an element of the embedded clause is possible in ASL, whereas this is not possible from a coordinate clause, as in (12b). Coordinate clauses thus form islands for *wh*-extraction, whereas subordinate clauses do not.¹⁴ Hence, if *wh*-extraction of an element from the potential complement clause is possible, this clause is syntactically dependent on, and not coordinated to the matrix clause.

d. Coordinate conjunctions

Coordinate conjunctions can intervene between two coordinate clauses but not between a main and a syntactically embedded clause. For NGT we know very little about coordinate conjunctions. I have never seen equivalents of the Dutch conjunctions *dus* (‘so’, ‘consequently’), *en* (‘and’), *noch* (‘neither’, ‘nor’), *of* (‘either’, ‘or’) and *want* (‘for’, ‘because’), but there is a sign for *maar* (‘but’). This sign is demonstrated in (13).

(13)



BUT

(NGT)

The problem with the conjunction in (13) is that it cannot be used in every context, because a certain contrast in the meaning of the coordinated sentences is presumed. For this reason and since not much is known about the distribution of coordinate conjunctions in NGT, these will not be considered.

¹⁴ For the moment, I leave out of consideration subordinate clauses that start with a *wh*-constituent and, in some languages, factive subordinate clauses that form islands for extraction. These will be discussed in chapter 6.

e. Pronominal right dislocation

Right dislocation refers to the phenomenon that an element that is related to an element in its normal position, is ‘dislocated’ to the end of the sentence. In (14a) from Norwegian a proper name that is related to a pronoun in the sentence is right dislocated. In (14b) there is a Norwegian example of pronominal right dislocation, where the pronoun is in a right-dislocated position related to the proper name in the sentence.

- (14) a. Han_i var gift med søskenbarnet mitt en gang i tida, Axel Aarvoll_i.
 ‘He_i was once married to my cousin, Axel Aarvoll_i.’
 b. Axel_i var gift med søskenbarnet mitt en gang i tida, han_i.
 ‘Axel_i was once married to my first cousin, he_i.’

(Fretheim 1995:34, ex.4)

In NGT (Bos 1995) and ASL (Neidle et al. 2000, Padden 1988) a similar phenomenon can be found, although it differs from plain right dislocation in that only pronouns that refer to an element in the sentence can be right dislocated. At first, it was thought that only a pronoun copy of the subject could appear at the end of a sentence. However, from my own observations I know that pronoun copies of other arguments than the subject at the end of simple sentences are possible as well. This is also reported for ASL by Neidle et al. (2000:55) (but cf. Aronoff et al. 2000 for a different view).¹⁵

For ASL, it was clear from the beginning that pronoun copies could also appear in complex sentences in which one clause is dependent on the other. In these sentences the pronoun copy of the subject of the main clause may occur at the end of the dependent clause. This can be seen in the following example.

- (15) ₁FORCE_i MAN _iGIVE_j BOY _jPOSS BOOK ₁INDEX

‘I forced the man to give the boy his book, I did.’

(ASL; Padden 1988:88, ex.18; boldface is mine)

¹⁵ It must be remarked that, at least in NGT, pronominal right-dislocation of subjects seems to occur far more often than pronominal right-dislocation of other arguments. However, precise figures are not available at the moment.

In (15) the subject of the matrix clause is not lexically present. However, it is present in the subject agreement on the verb FORCE, (the first subscript of this sign, '1', makes clear that the signer is the subject of the main clause).

Pronoun copy in NGT has been investigated only for simple sentences and not in much depth, although Bos (1995) mentions one example of pronoun copy in a complex sentence. On the basis of this one example, she concludes that subject pronoun copies are allowed between the clauses in a complex sentence. Her example is in (16).

- _____ **neg**
- (16) SEE **INDEX**₁ PU₂ NOT-YET₂ REMEMBER[+] **INDEX**₂ PU
 'I see that you still don't remember (how the computer works).'
 (NGT; Bos 1995:132, ex.16; boldface is mine)

In (16) the pronoun copy of the main clause subject is in boldface. According to Bos's analysis the subject of the main clause SEE INDEX₁ has been dropped after it was copied to a post-verbal position, therefore the pre-verbal subject is not lexically present in (16). We do not know at this moment what the exact syntactic relation between the predicates in (16) is. In ASL the distribution of pronoun copies was used to indicate a syntactic dependency relation between the clauses in a complex sentence. That is, if a pronoun copy of a first clause argument follows the second clause of a complex sentence, this second clause is syntactically subordinated to the first clause. However, for NGT we cannot conclude in advance that the occurrence of a pronoun copy *between* the clauses is a clue for the clauses *not* being in a syntactic subordination relation. The distribution of pronoun copies in NGT might be completely different from that in ASL. Nevertheless, the occurrence of pronoun copies of matrix clause arguments at the end of a potential complement clause is something to bear in mind.

f. Non-manual negation marker

The absolute duration of the non-manual negation marker in ASL can be used to show that a clause is syntactically subordinated. If a clause is dependent on another clause, negating the matrix clause by use of the non-manual marker will

result in a stretch of this marker over the dependent clause, too, if no lexical negation is present (Neidle et al. 2000, Padden 1988). This is shown in example (17). The non-manual negation marker is expressed by a repeated headshake in ASL (which is also the case for the non-manual negation marker in NGT).

_____ neg

(17) ɿINDEX WANT ɿINDEX GO-AWAY

‘I didn’t want him to leave.’

(ASL; Padden 1988:89, ex.23)

For NGT Coerts (1992) has shown that the non-manual negation marker covers all manual signs that fall within its scope in simple sentences. It is not clear whether this is also the case for complex sentences in NGT. In ASL the dependency relation of the clauses seems to determine the distribution of the negation marker in complex sentences rather than the other way round. In other signed languages, it could be the case that clauses are syntactically dependent without negation being possible across both clauses. Still, the duration of the non-manual negation marker is something to take into account when looking at potential complement clauses.

g. Form of the embedded verb

Non-finite verb forms can only occur in dependent clauses¹⁶. This can be seen in example (18).

- (18) a. *Simon to win the tennis league.
 b. Wil wants Simon to win the tennis league.

Where non-finite verb forms occur, there is therefore evidence that the clause is dependent. To use this as a diagnostic requires considerable knowledge of the forms of the verb. It must be possible to unambiguously identify the non-finite form. In NGT a rough division can be made between two types of verbs: *agreement* verbs, that may show agreement but do not always

¹⁶ There are languages in which this only holds in the interrogative and declarative moods, not in the imperative mood.

do so, and so-called *plain* verbs that never show overt agreement (Bos 1993, van Gijn & Zwitserlood 2003; cf. the discussion on agreement in chapter 1, section 1.4). For plain verbs in potential complement clauses it is hard if not impossible to decide whether these are finite or non-finite, because the form of the verb will always be the same. For agreement verbs it is not yet entirely clear what the non-finite form looks like. For this reason, the form of the embedded agreement verb will not be taken into consideration when looking at complement clauses in NGT.

2.2 Tests

Of the syntactic characteristics that we have discussed here, most can only be identified when considerable knowledge of other morphosyntactic structures is available. If there is any knowledge about these aspects in NGT, then it is very limited.

Complementizers and a special word order for subordinate clauses do not occur in every language. With respect to coordinate conjunctions, we know too little about their appearance and distribution in NGT to use them as a diagnostic for syntactic coordination. This holds for pronominal right dislocation and the duration of the non-manual negation marker as well. It might turn out that these two phenomena behave completely different from the same phenomena in ASL. The lack of knowledge that we have at the moment concerning verb forms in NGT, turn out to be a problem if we want to use non-finiteness of verb forms as evidence for syntactic dependency. *Wh*-extraction data give one type of evidence only: if *wh*-movement of a topic or *wh*-constituent from the potential complement clause is *not* possible, it can still be the case that this clause is syntactically dependent on the matrix verb. Therefore, what is needed for establishing such a fundamental question as syntactic subordination is a test that is universally applicable without being dependent on other structures.

Such a test is implicitly offered by van Valin & LaPolla (1997:449). In short this test boils down to the distributional dependency of the clauses in a complex sentence, hence the name *distributional dependency test*. If the clauses can stand on their own as independent sentences, they are coordinated in the

complex sentence. If one of the clauses cannot occur as an independent sentence, then there is a relation of subordination between the clauses in the complex sentence. Concerning potential complement constructions, the question will be whether the semantic main predicate can occur on its own without the semantic complement clause. If not, the semantic complement clause apparently fills an argument slot of this predicate and is syntactically subordinated to it.

Although the results of the distributional dependency test might be sufficient proof for substantiating the syntactic relation between the clauses in a complex sentence in most cases, I carried out some additional tests based on the syntactic features dealt with in section 2.1.2. It turned out that the distributional dependency test could not give sufficient proof for all types of complement-taking predicates. Therefore, I used the tests on pronominal right dislocation and the duration of the non-manual negation marker, as briefly described in section 2.1.2, to establish the syntactic relation between the clauses in a complex sentence for every type of complement-taking predicate. It will turn out that one of these additional tests cannot discriminate between subordination and coordination in NGT, whereas the other test can. After it has been established that syntactic subordination does exist in NGT, the question arises whether the subordinated clause is an argument of the complement-taking predicate. To find an answer to this question, two more tests were carried out, one on *wh*-extraction in topicalisation and one on *wh*-extraction in *wh*-questions.

Thus, the tests that will be carried out apart from the distributional dependency test concern the distribution of pronominal right dislocation, the duration of the non-manual negation marker, and *wh*-extraction in topicalisation and *wh*-questions. Each test will be described individually in a chapter that at the same time presents and discusses the results of this test. It should be kept in mind that even if the tests turn out not to be revealing with respect to syntactic complementation in NGT, they will give us more information about certain syntactic aspects of NGT grammar.

2.3 Method of testing

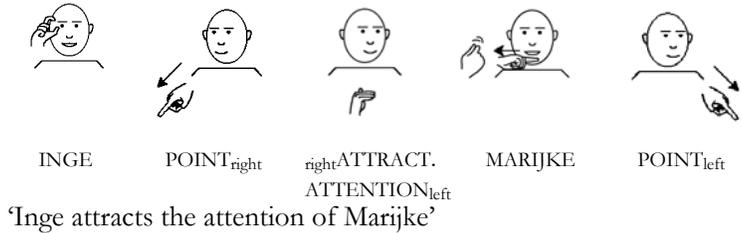
All tests had the form of judgement tasks. I presented NGT sentences with the constructions under investigation to the informant by signing the sentences myself. To date, morphosyntactic research on NGT has used signed language data that were obtained by picture tasks and in spontaneous conversations. Complement clauses and all kinds of syntactic processes, like topicalisation or pronoun copy, are difficult or almost impossible to elicit with picture tasks. Moreover, it is common knowledge that certain language constructions are rare in spontaneous conversation, so the failure to find a construction in spontaneous conversation does not prove that this construction is absent from the language altogether. Therefore, judgement tasks were considered to be the appropriate tasks to collect the necessary data for this investigation.

During the tests, the experimenter signed the sentence under consideration to the informants. The informants were asked to sign this sentence for themselves and then to judge if this sentence was grammatical in NGT. More specifically the informant was asked to judge whether the sentence was good or bad or questionable. If a sentence was judged as being good or grammatical, then the informant was asked to sign the sentence again. He was also asked to formulate the sentence in his own way; this was done in order to see if the informant had the same sentence in mind as the one offered by the experimenter. If a sentence was judged as being bad, i.e. ungrammatical, or questionable, the informant was asked to explain why, so that it could be seen if a sentence was rejected for non-syntactic reasons, such as the wrong use of facial expressions. Sometimes the informants spontaneously gave information about sentence structures that could only occur in *Nederlands met Gebaren* (Sign Supported Dutch, abbreviated as NmG). NmG is a sign system made up by hearing people to communicate with deaf people. It follows the syntax of Dutch supported by signs from NGT and signs made up by hearing people (Schermer et al. 1993:49ff).

As Neidle et al. (2000:16) point out, it is best to use a native speaker for carrying out tests with informants. According to Neidle et al. the informants will feel much more confident with a native speaker than with a non-native speaker. Furthermore, it is known that native speakers in general will adapt

their language to a non-native conversational partner that has problems in using this language in a grammatically correct way. That is, the native speakers will try to make themselves understood by simplifying the language they use to a kind of baby-talk. When the experimenter is a native speaker, it decreases the chance that the informants will adapt their language to the non-native experimenter. Unfortunately, since there was no native speaker available, I had to carry out the tests myself. And, although fluent in NGT, I am not a native speaker. The informants were asked to take this into account. They were asked to be careful not to adapt their language to my sometimes faulty signing. They were also asked to use the signed language that they used among their deaf family and friends, and not to rely on the prescriptive rules of NGT grammar that some of them learn in their higher education. This latter remark turned out not to be superfluous, as can be illustrated by the following comment that one informant gave as a reaction to one of the test items during a judgement task about word order in simple sentences. The offered sentence with SVO word order is in (19a). After signing the sentence in (19a) the informant gave the reaction in (19b), that I freely translated. Note that literal glosses in small capitals are used where significant.

(19) a.



- b. I think I can sign this for sure but according to the books of the Gebarentrum [the ‘Dutch Sign Centre’; ivg] you have to sign

POINT_{right} INGE POINT_{right} POINT_{left} MARIJKE POINT_{left}
 right/ATTRACT.ATTENTION_{left} [SOV order; ivg]...

Former research [Coerts 1994; ivg] has shown that it should be

POINT_{right} INGE POINT_{right} POINT_{left} MARIJKE POINT_{left}
 right/ATTRACT.ATTENTION_{left}.

But I myself and others can put the constituent

POINT_{left} MARIJKE POINT_{left}

after the verb [SVO order; ivg].

(NGT)

The informant’s judgement in (19b) that SVO is a possible sign order corresponds to the positive judgements of this order by the other informants.

The tests were taped on analogue video and coded with a timecode in hours:minutes:seconds:frames, where one frame equals 1/25 of a second. The videotapes were transcribed by myself, sometimes in consultation with the informants who performed the tests. In every test, several sentences per predicate were elicited.¹⁷ The whole database contains minimally 600 sentences per informant. The data was collected in sessions lasting no longer than three hours with several breaks over a period of three years.

2.4 Informants

For this investigation, I worked with three native informants who performed the tests and helped me with the transcription whenever that was necessary. The three informants were all born deaf of deaf parents and deaf grandparents. During the elicitation period of three years, they varied in age from 25 to 35 years. All informants had attended deaf schools from childhood and have a social life primarily in deaf communities. Two informants are from the region of Amsterdam, one from the region of Voorburg (near The Hague).

The Netherlands have traditionally been divided into five regions: Groningen in the north, Amsterdam, Voorburg, and Rotterdam in the west,

¹⁷ The elicitation materials are available on request.

and St.-Michielsgestel in the south-east of the Netherlands. It is now commonly thought that there are hardly any lexical and grammatical differences between the sign language variants used in the west and the north of the Netherlands (Schermer 1990:61). Schermer shows that there is, however, variation between these four regions and St.-Michielsgestel (Schermer 1990:61).

When presenting the results I will always indicate if the informants gave different grammaticality judgements. Where this is not indicated, all three informants were in agreement.

I am thoroughly aware of the fact that results of only three informants are not easily generalised to the language of a whole language community. This is especially true, since NGT has no standardised grammar yet, and here I mean grammar in the sense of a set of norms and rules of the language. Nevertheless, the results presented in this investigation do reflect the (unconscious) knowledge of their language that three native speakers share. Since they conceive this knowledge as NGT, it is so presented. The internal knowledge of language of these three native speakers must be part not only of a modality specific grammar, a sort of 'Universal Signed Grammar' (UnsignedG), but also of UG. Therefore, the study of the knowledge of only three speakers of NGT is very interesting and important, for language-specific, modality-specific, and language-universal reasons.

1st adventure: Distributional dependency

*A*nd so this linguistic quest begins. We are packed with the necessary equipment, cautious to avoid the pitfalls of linguistic description and prepared to fight the dragons of linguistic analyses. We know precisely what to search for and how to tackle this task. Pay attention now, for the first adventure is about to begin.

3.1 Introduction

In the previous chapter it was explained that considerable problems arise when carrying out most of the morphosyntactic tests in NGT to establish the syntactic relation between clauses in potential complement constructions. In many cases there is not enough information available concerning the property relevant for the test. This, of course, makes the test results with respect to syntactic dependency unreliable or hard to interpret. The syntactic status of the clauses in potential complement constructions in NGT will therefore be established by the distributional dependency test, a test that is applicable without being dependent on other properties.¹

3.2 Distributional dependency

As shown in chapter 1, there are different ways of syntactically linking the semantic complement to the semantic main predicate: the clauses can be in a relation of coordination or parataxis, or in a relation of subordination. Van Valin & LaPolla (1997:449) use the distributional dependency of the clauses in complex sentences to distinguish the two types of relationship. If the clauses in

¹ The results of the distributional dependency test and on topicalisation that were presented earlier in van Gijn & Baker (2003) no longer hold. They are now more refined.

a complex sentence are able to occur on their own structurally as independent sentences, the syntactic relation between them is one of coordination. Whereas, if one of the clauses is not able to occur as an independent sentence, the relation between the two clauses is one of syntactic subordination.

Van Valin & LaPolla argue that if one of the clauses cannot occur on its own as an independent clause, there is a relation of syntactic dependency between the clauses. Within syntactically dependent clauses they further distinguish between subordination and *cosubordination*. A cosubordination relation displays characteristics of both coordination and subordination. Like coordination, the clauses in a cosubordination construction are in a sequence, but, unlike coordination, there is a syntactic dependency relationship between the clauses, as is the case in subordination, too. In contrast to subordination cosubordinated clauses are neither modifiers nor arguments of the ‘matrix’ clause. Still, a cosubordinated clause cannot stand as an independent sentence because it lacks the expression of a crucial and obligatory grammatical category, e.g. tense, illocutionary force, negation, etc. In subordination there is a purely structural dependency between the main and the subordinated clause, even though the latter is fully inflected for the obligatory grammatical categories. In the Papuan language Kewa all three constructions (subordination, cosubordination, and coordination) can be found (Franklin 1971 in van Valin & LaPolla 1997:450, ex. (8.16)).

- (1) a. Nipú ípu-la pare ní paalá na-pía
 3SG come-3SG.PRES but 1SG afraid NEG-be.1SG.PRES
 ‘He is coming but I am not afraid.’
- b. (Ní) Épo lá-ri épa-wa
 1SG whistle say-SIM.SP come-1SG.PAST
 ‘I whistled while I came.’ or ‘I came whistling.’
- c. (Ní) Épo lá-lo-pulu irikai épa-lia
 1SG whistle say-1SG.PRES-CAUSAL dog come-3SG.FUT
 ‘Because I am whistling, the dog will come.’

The clauses in sentence (1a) are coordinated since both clauses can occur as independent sentences. The clauses in (1b) are in a cosubordination relation. Though the second clause can stand on its own, the first clause cannot because it lacks agreement, an obligatory grammatical category in Kewa sentences. Therefore, this first clause is syntactically dependent on the second clause for this grammatical marking. The clauses in sentence (1c) both contain all the obligatory grammatical categories for independent sentences, yet the first clause cannot stand on its own because it is a modifier. Hence, the relation between the clauses is one of subordination.

Since the topic of this study is to uncover whether semantic sentential arguments are sentential arguments in a syntactic respect, too, and since cosubordination is always about clauses that are not arguments (or modifiers) of the matrix predicate, either syntactically or semantically, I will not refer to this kind of clausal relationship in the remainder of this study and make a distinction solely between coordination and subordination.

The distributional dependency of the predicates can be used as a diagnostic for establishing the relationship in potential NGT complement sentences. The focus will be on the possibility of the semantic main clause occurring on its own. If the semantic main predicate cannot occur on its own, the semantic dependent clause, which is semantically an argument of the matrix predicate, is syntactically dependent on, or subordinated to the semantic matrix predicate.

In other words, the goal of the distributional dependency test is to uncover the argument structure of the semantic complement-taking predicate. This was done by asking the informants whether this predicate and a subject, or an Agent or Experiencer argument, can stand as an independent sentence in a neutral context (e.g. *Ellie wants*).² If not, a Theme or Patient argument (and in case of the utterance predicates also a Recipient argument) was added to find out if the argument structure was saturated in this way (e.g. *Ellie wants whiskey*, *Ellie wants me to take a goal-kick*). Since for NGT nothing was known about argument structure in general, I used simple Theme and Patient arguments first before adding Theme and Patient clauses in order to detect the base argument structure.

² See chapter 2 section 2.3 for more detailed information on the interview method used in this study.

It should be noted that it is important to use the distributional dependency test in a neutral context where no prior discourse entities have been established. NGT is a language that allows subjects and objects to be null if it is clear from the context what these arguments are (see section 1.4.4 in chapter 1). However, in a neutral context all semantic arguments of the verb need to be lexically present.

3.3 Results

In this section I will describe and discuss the results of the distributional dependency test. Each complement-taking predicate is dealt with in a separate subsection.

3.3.1 Phasal predicates: *to begin* and *to be busy*

The NGT verb for *to begin* is illustrated in (2).

(2)



BEGIN

(NGT)

The verb in (2) can have an agreement marking that corresponds with the subject. In these cases the verb is made at the same location as the subject. This subject agreement marking is, however, not obligatory. In most cases the verb is made in neutral space.³

Without any context, the informants cannot use the NGT verb *to begin* in combination with a subject argument only, as in (3), because it is not clear what activity the subject begins with.

³ The neutral space agreement marking can be considered as the default agreement marking (see Neidle et al. 2000:34 for ASL). Sometimes the location of the signer can be considered as the default agreement marking, too, as is often the case with the subject agreement of the NGT verb *to see* (see section 3.3.3). Unfortunately, not much is known yet about the distribution of default and non-default agreement marking in signed languages (cf. Neidle et al. 2000:34ff. who link a non-definiteness effect to neutral object agreement marking in ASL).

(3)



*INGE



BEGIN

'Inge begins.'

(NGT)

Strangely enough, the sentence in (3) does not become grammatical by simply adding an indefinite pronoun like *something*, as can be seen in (4). Nor is it possible to insert a demonstrative like English *this* or *that*. Although a point sign can be used as a demonstrative, it cannot be used in the NGT equivalent of the English sentence *Inge begins this*.

(4)



*INGE



BEGIN



SOMETHING

'Inge begins (with) something.'

(NGT)

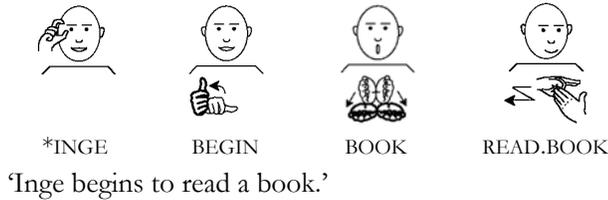
The sentence in (4) seems to remain ungrammatical even in a context in which a person A asks a person B what Inge is doing or going to do. Person B cannot answer then with the sentence in (4) if he does not know what Inge will begin doing exactly. So probably, the reason for the ungrammaticality of (4) is a pragmatic one. Unfortunately, I had no time to go deeper into this matter, but more research is required here.

The sentence in (3) with a subject and a verb only can, however, be grammatical when signed in a particular context. One of the informants gave the example of a classroom situation in which the students have to do exercises. The teacher can then sign the sentence in (3) to express that Inge has

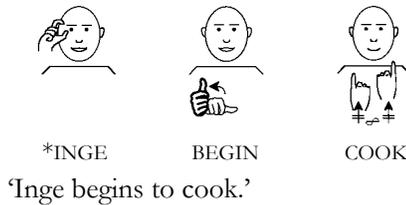
to start. In this case, sentence (3) must contain a null object that refers to the event of doing the exercises.⁴

Complex sentences as in (5) are considered by all informants as being part of the sign system NmG. The sentences in (5) are thus considered ungrammatical in NGT.

(5) a.



b.



(NGT)

There are two ways in which the meanings of the sentences in (5) can be expressed in NGT. First, the signers can use a sign, or a string of signs, that indicates that the act of reading or cooking is commencing. This is shown in sentence (6), which can be literally translated as ‘Inge opens a book’. Note that the sign *to open a book* looks like the sign for *book* but is made with a more prominent movement of the hands and the body (note the lifted shoulders).

⁴ Josep Quer rightly remarks that the case discussed here can be one of Null Complement Anaphora, which is an instance of the general phenomenon of ellipsis.

(6)



INGE

OPEN.BOOK

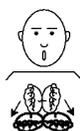
“Inge opens a book.”

‘Inge begins to read.’

(NGT)

Second, the time adverbial *now* can be inserted before or after the subject, as in (7). This time adverbial, however, makes the meaning of the sentence ambiguous as to whether the act of reading is starting or whether it has already been going on for some time.

(7) a.



INGE

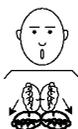
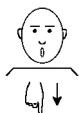
NOW

BOOK

BOOK.READ

‘Inge begins to read a book.’ or ‘Inge is reading a book.’

b.



NOW

INGE

BOOK

BOOK.READ

‘Inge begins to read a book.’ or ‘Inge is reading a book.’

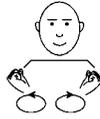
(NGT)

Thus, the NGT verb *to begin* in combination with a subject cannot occur without any formerly established discourse. Surprisingly, the subject-verb combination cannot occur with a simple Patient/Theme or direct object argument or clause either. Unfortunately, I had no time to investigate this matter more thoroughly. To express that an event commences, either a sign that depicts the start of an act can be used, or the time adverbial *now*. This latter

option makes the sentence ambiguous as to whether an event starts or whether it is already being performed.

An almost similar story holds for other phasal verbs such as *to be busy* (8). This sign cannot have any agreement marking.

(8)



BE.BUSY

(NGT)

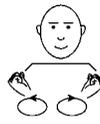
As opposed to the NGT verb *to begin*, the verb *to be busy* can occur in an independent sentence with subject argument only, without any further discourse (9).

(9) a.



WE

'We are busy.'



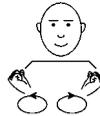
BE.BUSY

b.



INGE

'Inge is busy.'



BE.BUSY

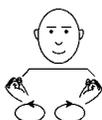
(NGT)

Yet, just as *to begin*, complex sentences with the NGT verb *to be busy*, as in (10), are considered ungrammatical in NGT although they can be part of the sign system NmG. Again, the time adverbial *now* can be used to make the sentence a grammatical NGT sentence (but with an ambiguous meaning), as in (11a-b).

(10)



*INGE



BE.BUSY



COOK

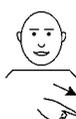
'Inge is busy cooking.'

(NGT)

(11) a.



INGE

POINT_{left}

NOW



COOK

'Inge is busy cooking.' or 'Inge begins to cook.'

b.



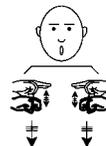
INGE



NOW



THINK.ABOUT



INVESTIGATION

'Inge is busy thinking about the investigation.' or 'Inge begins to think about the investigation.'

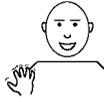
(NGT)

From this it can be concluded that, although NGT has phasal predicates, it does not exploit these predicates in complex sentences, let alone as complement-taking predicates in sentential complementation. This is not at all exceptional. In her typological study on complement constructions, Cristofaro (1997:89) remarks that phasal predicates, among others, are expressed by special particles in certain languages. Unfortunately, she does not give any examples. Nor does Cristofaro make clear whether this necessarily implies the absence of phasal predicates in those languages.

3.3.2 Desiderative or volitional predicates: *to want*

In NGT two forms for the verb *to want* can be found. In (12a) is the neutral verb *to want*. The verb in (12b) expresses ‘strongly want’ or ‘really want’. Until now no differences in the distribution of these two verbs as semantically complement-taking predicates could be found. Both verbs show no agreement.

(12) a.



(NEUTRAL)WANT

b.

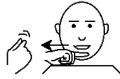


(REALLY)WANT

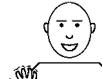
(NGT)

The sentences in (13) are grammatical if they are expressed in a context in which the Patient argument has already been established. For example, if someone asks *Who wants coffee?* it is possible to answer that question in NGT with one of the sentences in (13). It can be assumed that the sentences in (13) have a *pro* in object position in these contexts, because if no such context is established, the sentences in (13) are ungrammatical as independent sentences.

(13) a.

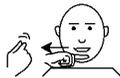


*MARIJKE



WANT

b.



*MARIJKE



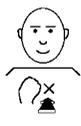
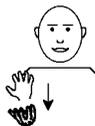
(REALLY)WANT

'Marijke wants.'

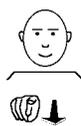
(NGT)

In neutral contexts in which a null object cannot be inferred from the former discourse, subject-verb sentences with *to want* as in (13) become grammatical if an overt Patient or direct object is added. This is shown in (14).

(14) a.

POINT_{signer}

REALLY.WANT

POINT_{addressee}

‘I want you.’

b.



MAN

POINT_{front}

WANT



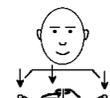
MILK

‘The man wants milk.’

(NGT)

From the examples in (13) and (14) it becomes clear that in a neutral context the direct object of NGT *to want* needs to be overtly present. This indicates that in complex NGT sentences with *to want*, as in (15), where the direct object has the form of a clause, this latter clause is syntactically subordinated to *to want*. The second clauses in (15) can occur on their own as independent sentences. Nonetheless, this fact does not alter the status of these clauses as subordinated clauses.

(15) a.

POINT_{signer}REALLY.
WANTTHEY_{front}

PRESENT

frontGIVE.
PRESENT_{signer}

‘I want them to give me a present.’

b.



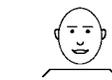
INGE

POINT_{right}

WANT



SOMETHING

rightASK_{left}

‘Inge wants to ask him/her something.’

c.



‘The doctor wants the woman to go home.’

(NGT)

3.3.3 Direct perception predicates: *to see*

The NGT verb *to see* shows agreement for two arguments. The starting location of this verb marks the Agent or subject argument, the end location the Patient argument. The fact that this verb has two agreement slots already indicates that this verb has two arguments. The verb does not have to agree with the actual locations of the arguments. It can have neutral agreement markings that are the location of the signer for subject agreement and neutral space for object agreement (cf. fn.3). The locations of the signer and neutral space are the neutral markings for all agreement verbs with two agreement slots.⁵ In (16a-c) the neutral conjugation and two other possible conjugations are shown, respectively.

(16) a.



signerSEEneutral.space

b.



signerSEEleft

c.



rightSEEleft

(NGT)

The verb *see* cannot form an independent sentence with the subject argument only, unless a direct object is established in the former discourse. In

⁵ Sometimes, the palm in the sign *to see* is not orientated to the location of the subject but to the location of the object. Still, the sign moves from the location of the subject to the location of the object. This movement from the subject to the object location makes this verb a so-called *to*-type verb, as opposed to *from*-type verbs that move from the location of their object to the location of their subject (Padden 1988, Meir 1998).

that case, the object argument slot in the sentence in (17) is filled with a null argument.

(17)



*INGE

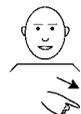
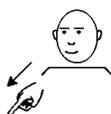
signerSEE_{neutral.space}

'Inge sees.'

(NGT)

However, in a neutral setting the direct object argument needs to be expressed lexically. As well as objects, animate referents (18a-b), and events (18c), the direct object of the NGT verb *to see* can also be an indefinite pronoun (18d), unlike the verb *to begin* in (4).

(18) a.



INGE

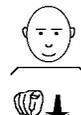
POINT_{right}rightSEE_{left}

MARIJKE

POINT_{left}

'Inge sees Marijke.'

b.



INGE

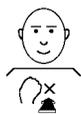
signerSEE_{front}

CAT

POINT_{front}

'Inge sees the cat.'

c.



YESTERDAY

POINT_{signer}

ACCIDENT

signerSEE_{neutral.space}

'Yesterday I saw an accident.'

d.



INGE



signerSEEneutral.space



SOMETHING

'Inge sees something.'

(NGT)

Complex sentences with this verb are considered being part of NGT. Some examples are in (19).

(19) a.



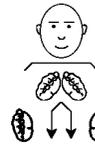
INGE



signerSEEleft



[MARIJKE



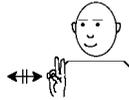
HOUSE



leftGO.TOright]

'Inge sees that Marijke goes home.'

b.



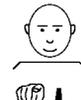
THE.TWO.OF.US



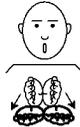
signerSEEfront



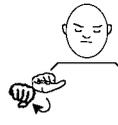
[MAN



POINTfront



BOOK



STEAL]

'The two of us see the man steal a book.'

c.



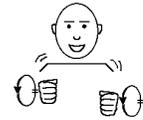
INGE



signerSEEleft



[POINTleft



DANCE]

'Inge sees him/her dancing.'

(NGT)

Since the direct object of the NGT verb *to see* needs to be lexically present in a neutral context, it must be concluded that if this object has the structure of a clause as in (19) this clause is syntactically subordinated to the verb *to see*. As in (15) the potential complement clauses in (19) can occur on their own as independent sentences.

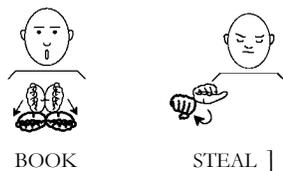
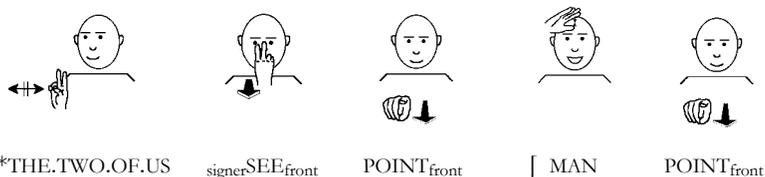
Strikingly, the NGT verb *to see* shows object agreement for the subject of the second clause in many cases. This might indicate that a null object argument is present in the matrix clause that corresponds to the subject of the second clause. If this were the case, the complex sentences in (19) should then be analysed as parataxis or coordination, since the first and second clause are able to stand on their own as independent sentences. This is illustrated for the complex sentence (19b) in (20), for convenience only the glosses are given.

- (20) THE.TWO.OF.US_{signer}SEE_{front} *pro*(=*man*) [MAN POINT_{front} BOOK STEAL]
 ‘The two of us see (him)_i; the man_i steals a book.’

(NGT)

However, if a null object argument were present, the sentence in (21) with two coordinated clauses, and the position of the empty argument filled with a lexical object should be grammatical, too, which is not the case in NGT.

(21)



‘The two of us see him_i; the man_i steals a book.’

(NGT)

Since the structure in (21) is ungrammatical as *one* sentence in NGT, it must be concluded that no empty argument is present in the complex sentences in (19) and that the second clauses in (19) are subordinated clauses.

That *to see* can show object agreement for the subject of the second clause might indicate abstract case that is assigned by the matrix verb to this latter argument, as happens with case in so-called *exceptional case-marking (ECM)* constructions, as in (22).

- (22) a. Ik zie [hem dansen].
 ‘I see him dancing.’
 b. Daniëla believes [him to be a liar].

The Dutch and English clauses between brackets in (22) are infinitival clauses subordinated to *to see* and *to believe*, respectively. According to the Case Filter every overt noun phrase must be assigned abstract case (Rouveret & Vergnaud 1980). Since the infinitival embedded predicates cannot assign case to their subjects, the embedded subjects receive (accusative) case from the matrix verbs, otherwise they would violate the Case Filter.

The object agreement of the NGT verb *to see* that corresponds to the subject of its embedded clause might hint that a similar process of (abstract) exceptional case-marking is working in NGT, too, although case is not visible in NGT.⁶ However, this would imply that the embedded verbs in NGT potential complement clauses of *to see* are infinitival verbs. Yet these verbs can show agreement even for their subjects, as in (19a). Furthermore, the second clauses in (19) can occur on their own as independent single sentences. If the verbs were infinitival this would not be possible. Therefore, what it is exactly that the object agreement of *to see* indicates is not clear at the moment but it cannot point to an (abstract) ECM construction. Nevertheless, the object agreement of *to see* does confirm morphologically that there is a tighter

⁶ It is possible in NGT to use a special handshape in possessive constructions (a closed fist or a flat hand with extended fingers, palm facing towards the location of the possessor) which might be regarded as genitive case. This special handshape or overt expression of genitive case is, however, not obligatory in possessive constructions. See also Neidle et al. (2000:32) who mention the use of a special handshape in possessive construction in ASL as well.

relationship between the two clauses in the complex constructions in (19) than a parataxis relationship.

3.3.4 Commentative predicates: *to like*

The NGT sign for *to like* is depicted in (22). It is similar to the NGT adjective *nice*. This predicate can show agreement for its Theme argument by making the sign at the location of this argument as in (23) but this is not obligatory.

(22)



LIKE

(NGT)

(23)



MARIJKE

POINT_{right}

CHAIR

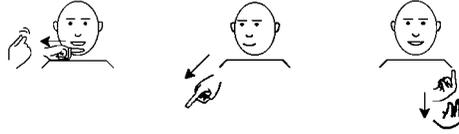
POINT_{left}LIKE_{left}

‘Marijke likes the chair.’

(NGT)

If the Patient argument *the chair* in (23) has already been established in the discourse (e.g., *Look at that chair*), it is possible to express one of the sentences in (24) without mentioning this argument again (sentence (24a) is with overt agreement, sentence (24b) without). In this case a *pro* in object position refers to *the chair*. But without any context, the sentences in (24) are ungrammatical.

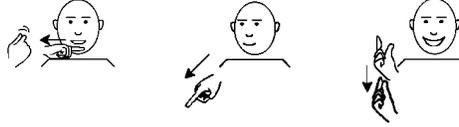
(24) a.



*MARIJKE

POINT_{right}LIKE_{left}

b.



*MARIJKE

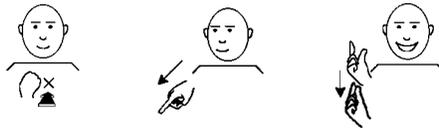
POINT_{right}LIKE_{neutral.space}

'Marijke likes (it).'

(NGT)

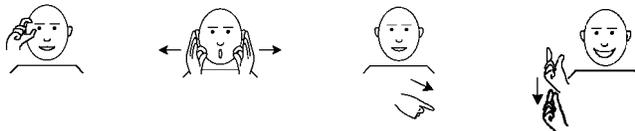
For the sentences in (24) to become grammatical in a neutral context, the Patient argument must be lexically present, as in (23) or the sentences in (25).

(25) a.

INDEX_{signer}POINT_{right}LIKE_{neutral.space}

'I like him/her.'

b.



INGE

CAT

POINT_{left}LIKE_{neutral.space}

'Inge likes the cat.'

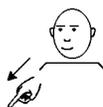
(NGT)

From this it must be concluded that the second clauses in the complex sentences in (26), although they can stand on their own as independent sentences, are syntactically subordinated to the matrix verb *to like*.

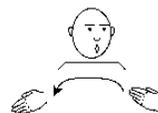
(26) a.



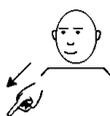
INGE

POINT_{right}LIKE_{neut.space}

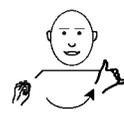
MAN

leftVISIT_{right}'Inge_i likes (the fact) that the man visits her_i.'

b.

POINT_{right}LIKE_{neutral.space}

AMERICA

rightFLY_{left.backwards}

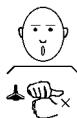
'He/she likes to fly to America.'

(NGT)

3.3.5 Pretence predicates: *to pretend*

There are three different predicates in NGT that mean *to pretend*. The predicate in (27a) is the most commonly used, although the other two can be used in the same contexts. The sign in (27c) is accompanied by an oral component that consists of pursed lips and a constant expiration.

(27) a.



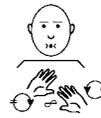
PRETEND

b.



PRETEND

c.



PRETEND

(NGT)

The sentences in (28) with only a subject argument and one of the predicates *to pretend* are ungrammatical as sentences on their own without any context. One informant can make the sentences in (28) grammatical by adding an indefinite pronoun (29), but the other two informants could not.

(28) a.



*INGE



PRETEND

b.



*INGE



PRETEND

c.



*INGE



PRETEND

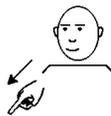
'Inge pretends.'

(NGT)

(29)



?INGE

POINT_{right}

SOMETHING



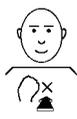
PRETEND

'Inge pretends to do something.'

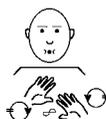
(NGT)

For all informants it holds that the sentences in (28) become grammatical if another clause is added, as in the complex sentences in (30). Irrespective of the fact whether an indefinite pronoun is possible or not, the judgements of the sentences in (28) reveal that the second clauses in (30) are subordinated clauses. Here too, the subordinated clauses are able to stand on their own as independent sentences.

(30) a.



POINT_{signer}



PRETEND



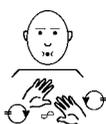
TO.LOOK.AROUND.INNOCENTLY

'I pretend to be as innocent as a babe unborn.'

b.



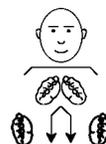
INGE



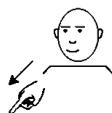
PRETEND



MARIJKE



HOUSE



POINT_{right}



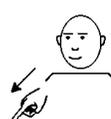
signerGO.TO_{right}

'Inge pretends that Marijke is going home.'

c.



PRETEND



POINT_{right}



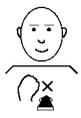
CLOWN



POINT_{right}

'He/she pretends to be a clown.'

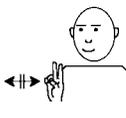
d.



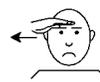
POINT_{signer}



PRETEND



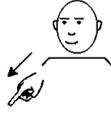
THE.TWO.OF.US



ILL

'I pretend that the two of us are ill.'

e.

POINT_{right}

PRETEND



ILL

'He/she pretends to be ill.'

(NGT)

3.3.6 (Acquisition of) knowledge predicates: *to know (something)*

The NGT verb *to know* is made at the temple and accompanied by the mouthing of the spoken word *weten* that is Dutch for *to know (something)*. This spoken word is necessary to distinguish this sign from the NGT predicate for *to believe* that looks similar, see (35a). The verb cannot show agreement.

(31)



KNOW

(NGT)

The Patient argument of this verb needs to be expressed overtly if it is not established in former discourse. This can be seen by comparing (32) with (33); the sentence without a Patient argument is considered ungrammatical in a neutral context.

(32)



*MARIJKE



KNOW

'Marijke knows.'

(NGT)

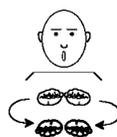
(33)



INGE



KNOW



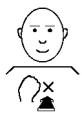
EVERYTHING

‘Inge knows everything.’

(NGT)

This means that the second clauses in the complex sentences in (34) are syntactically subordinated clauses of the NGT complement-taking predicate *to know*, although they can occur as independent sentences.

(34) a.



POINT_{signer}



KNOW



POINT_{addressee}



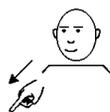
addresseeCOME_{signer}

‘I know that you are coming to (see) me.’

b.



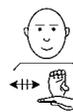
INGE



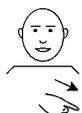
POINT_{right}



KNOW



COMPUTER



POINT_{left}



BROKEN

‘Inge knows that the computer is broken.’

(NGT)

3.3.7 Propositional attitude predicates: *to believe*

NGT has four different verbs that mean *to believe*.⁷ The sign in (35a) is the most common sign for *to believe* in NGT. It looks similar to the NGT verb *to know* in (31) but can be discriminated from this latter verb, because it is accompanied by the mouthing of the spoken word *geloof* which is Dutch for *belief*. The sign in (35b) is less commonly used but means the same as the sign in (35a). The predicate in (35c) is only used when a great deal of emotion from the viewpoint of the signer is involved. If the thing that is believed is not true, the sign in (35d) can be used, although the common sign in (35a) can be used in this context as well. The sign in (35d) is accompanied by an oral component that consists of the tongue sticking out of the mouth slightly and a constant expiration. None of the four signs show agreement.

(35) a.



BELIEVE

b.



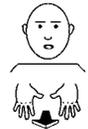
BELIEVE

c.



BELIEVE

d.



BELIEVE

(NGT)

Again, without any context it is not enough to utter a subject argument and one of the verbs in (35), as can be seen in (36). A Patient argument needs to be expressed overtly, as in (37).

⁷ Excluded from this discussion is the verb *to believe* in the sense of 'to have faith' for which NGT uses yet another sign (i).

(i)



(religious) BELIEVE

(36) a.



*INGE

BELIEVE

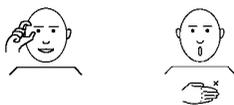
b.



*INGE

BELIEVE

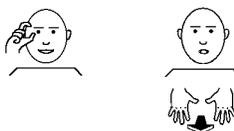
c.



*INGE

BELIEVE

d.



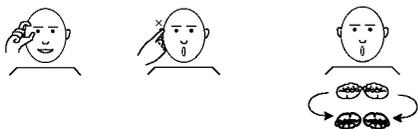
*INGE

BELIEVE

‘Inge believes.’

(NGT)

(37) a.



INGE

BELIEVE

EVERYTHING

‘Inge believes everything.’

b.



INGE

BELIEVE

POINT_{left}

MARIJKE

‘Inge believes Marijke.’

(NGT)

As a result, clauses that function as the direct object of the verbs *to believe* in (35) are syntactically subordinated to these verbs (38). These subordinated clauses can occur as independent sentences.⁸

(38) a.



INGE



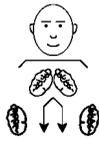
BELIEVE



POINT_{left}



MARIJKE



HOUSE



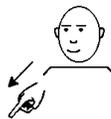
signerGO.TO_{neutral.space}

‘Inge believes that Marijke is going home.’

b.



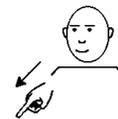
WOMAN



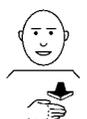
POINT_{right}



BELIEVE



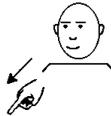
POINT_{right}



PREGNANT

‘The woman_i believes that she_i is pregnant.’

c.



POINT_{right}



BELIEVE



EARTH



FLAT

‘He/she believes that the earth is flat.’

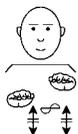
(NGT)

⁸ I take for granted that the Experiencer is realised as a subject and the embedded clause as object complement clause. However, since no case marking is detected, it might well be the case that the grammatical functions are the opposite, which is not unusual with psych predicates. I leave this for future research (thanks to Josep Quer who brought this matter to my attention).

3.3.8 Doubt predicates: *to doubt*

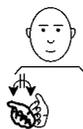
There are two signs in NGT that mean *to doubt* or *to be unsure*. The only difference seems to be that the sign in (39b) is considered as a slightly informal variant of the first. This latter sign can also mean *maybe*.

(39) a.



DOUBT

b.



DOUBT/MAYBE

(NGT)

The sentences in (40) are only grammatical if they are expressed in an appropriate context, e.g. a situation in which Inge has to choose between two chairs or between two solutions to a problem. In these contexts the sentences in (40) contain a null direct object that refers to this context. Without overt or null object, thus in a neutral context, the sentences are ungrammatical as independent sentences.

(40) a.



*INGE



DOUBT

b.



*INGE



DOUBT

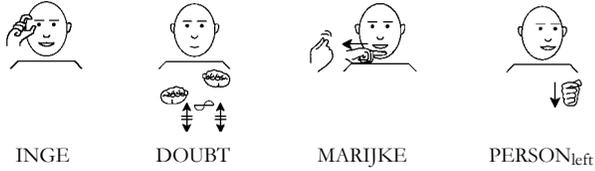
'Inge doubts.'

(NGT)

The sentences in (40) become grammatical in a neutral context if an overt direct object is added. The direct object can be a simple noun, as in (41), but it

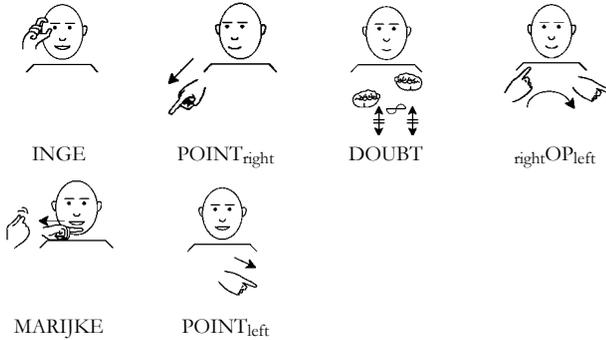
seems that only nouns referring to animate entities or proper names are possible.⁹ For one informant it is necessary to add the auxiliary verb OP to show who has doubts about who (41b). The auxiliary verb OP has no lexical meaning but clarifies only who is the subject of an act (localised at the starting location of the sign) and who is the object (localised at the final location of the sign; see chapter 1 section 1.4).

(41) a.



'Inge has doubts about Marijke.'

b.



'Inge has doubts about Marijke.'

(NGT)

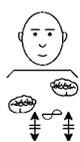
The direct object can be a clause, too, as in (42). Because of the ungrammaticality of the sentences in (40), the second clauses in (42) are syntactically subordinated. They can stand on their own as independent sentences.

⁹ In (41a) the object *Marijke* is localised by the sign *person*, which is not an uncommon way in NGT to localise referents.

(42) a.



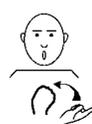
INGE



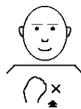
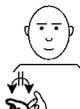
DOUBT



MARIJKE

leftCOME_{signer}'Inge_i is not sure whether Marijke will come to her_i.'

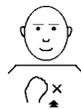
b.

POINT_{signer}

DOUBT



TOMORRO

POINT_{signer}signerGO.
AWAY_{neu.space}

'I am not sure if I will leave tomorrow.'

(NGT)

3.3.9 Utterance predicates: *to ask* and *to tell*

The NGT verb for *to ask* can show agreement for a subject and for a Recipient argument. The start location of the verb reflects the subject agreement and the end location the Recipient agreement (43). The citation form of the verb is in (43a). In (43b-c) are two possible conjugations as an illustration. The NGT predicate *to attract attention* can also be used (44). The context makes clear then that the meaning is 'to ask' and the question itself is expressed as direct speech. This latter predicate shows the same agreement possibilities as *to ask* for the same arguments.

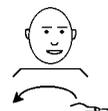
(43) a.

signerASK_{neutral.space}

b.

signerASK_{left}

c.

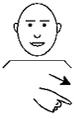
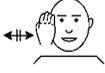
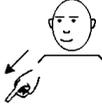
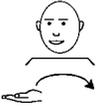
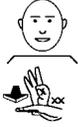
leftASK_{right}

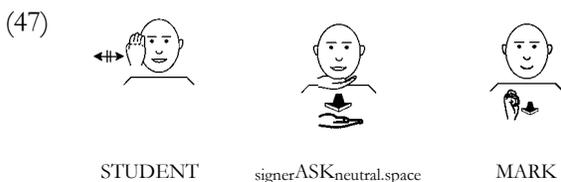
(NGT)

- (44) a.  b.  c. 
- signerATTRACT.
ATTENTION_{neu.sp}
- signerATTRACT.
ATTENTION_{left}
- leftATTRACT.
ATTENTION_{right}
- (NGT)

In a neutral context, it is not possible in NGT to express the subject and the verb *to ask* only, as in (45). However, it is possible to add an object argument for the sentence in (45) to become grammatical. This object argument can have the semantic role of Recipient, as in (46), or it can be the semantic Theme (47).

- (45)  
- *INGE signerASK_{neutral.space}
- ‘Inge asks.’
- (NGT)

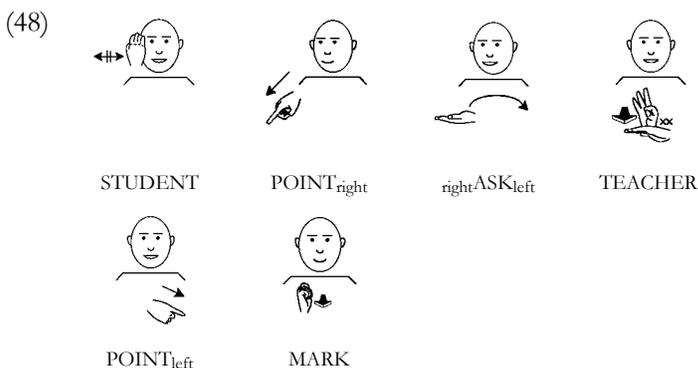
- (46) a.    
- INGE signerASK_{left} MARIJKE POINT_{left}
- ‘Inge asks Marijke.’
- b.     
- STUDENT POINT_{right} rightASK_{left} TEACHER POINT_{left}
- ‘The student asks the teacher.’
- (NGT)



‘The student asks for his mark.’

(NGT)

Note that if only the subject argument and the Theme argument are expressed (47), the Recipient needs to be inferred from the context and from the overt object agreement (thus the object agreement always refers to the Recipient, even if this argument is not overtly expressed). Otherwise, the sentence is ungrammatical. Note also that in certain contexts the neutral object agreement can refer to a Recipient or a group of Recipients localised at that neutral location in former discourse. Moreover, the neutral object agreement can refer to people in general if the question is not directed to a particular person or group of people, but this must be clear from the context. In sentence (48) both the Recipient and the Theme are expressed.



‘The student asks the teacher for his mark.’

(NGT)

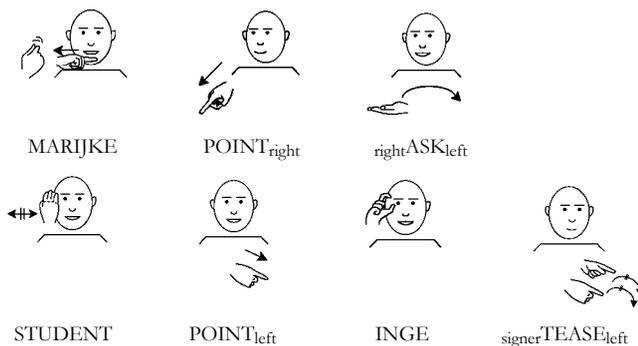
With respect to the optional absence of the Theme argument, the NGT verb *to ask* shows a completely different pattern from what could be seen with the complement-taking predicates previously discussed. With the predicates *to*

want, to see, to like, to pretend, to know, to believe, and to doubt the Theme or Patient argument (which is always the syntactic direct object argument) has to be lexically present in order for simple sentences with these predicates to be grammatical in a neutral context. But with the verb *to ask* the Theme argument does not need to be present, not even in a neutral context.

This outcome has a direct bearing on the status of simple Theme arguments of *to ask*. Is this Theme argument of NGT *to ask* an adjunct, in which case *to ask* is a two-place predicate, or is the Theme an argument and does the NGT lexicon contain two predicates *to ask*, or one predicate with two different argument frames: a transitive verb or frame *to ask* with a subject and Recipient argument only, and a ditransitive verb or frame *to ask* with a Theme as its third argument? The status of the simple Theme as argument or adjunct is important because it will ultimately determine the status of the second clause in complex sentences with *to ask*, as in (49) and (50). If *to ask* is always a two-place predicate, the simple Theme argument is actually an adjunct. On the basis of the distributional dependency test, the second clause in a complex sentence with *to ask* is not subordinated to *to ask* either, because this verb can occur with a subject and Recipient argument only as an independent sentence, and so does the second clause. The two-place predicate is then better glossed as *to inquire*.

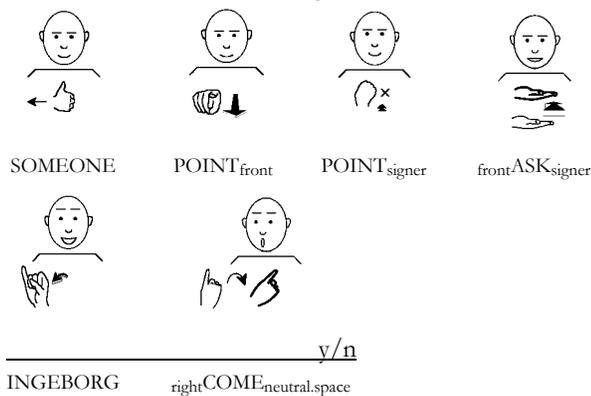
However, if the predicate is ambiguous between a two-place and a three-place predicate, the simple Theme argument is an argument of the three-place predicate and the second clause in complex sentences with *to ask* is subordinated to this verb. Since this is not clear yet, both possibilities are given in the translations, i.e. with and without a referential pronoun that occupies the argument position of *to ask*.

(49) a.



‘Marijke asks the student_i whether Inge teases him_i.’ or ‘Marijke asks the student_i *this*: does Inge tease him_i?’

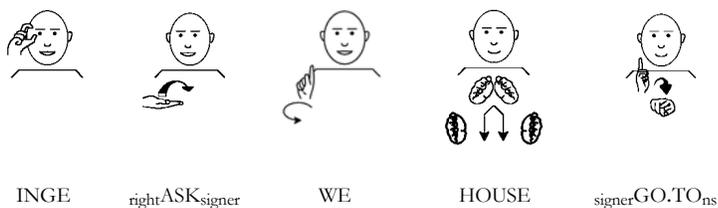
b.



‘Someone asks me: “Is Ingeborg coming?”’ or ‘Someone asks me *this*: “Is Ingeborg coming?”’

(NGT)

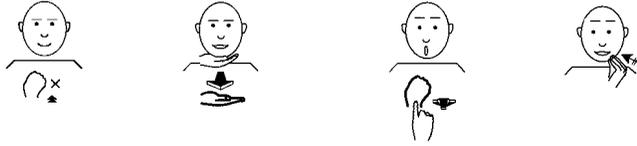
(50) a.¹⁰



‘Inge asks me if we are going home.’ or ‘Inge asks me *this*: whether we are going home?’

¹⁰ Remember that the sentences in (50) without a lexical indirect object are only possible if this argument has been established in former discourse.

b.



y/n

POINT_{signer} signerASK_{neutral.space} addresseeCOME_{signer} EAT

‘I ask you: “Are you coming to my house for dinner?”’ or ‘I ask you *this*: “Are you coming to my house for dinner?”’

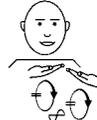
(NGT)

Like the verb for *to ask* the verb for *to tell* in NGT shows agreement for its subject and Recipient argument.¹¹ The citation form of this verb is in (51a), and two possible conjugations are in (51b-c).

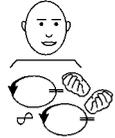
(51) a.

signerTELL_{neutral.space}

b.

signerTELL_{left}

c.

leftTELL_{right}

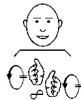
(NGT)

Here, too, the NGT predicate *to attract attention* (44) can be used meaning ‘to tell’, with what is told as a direct speech argument.¹²

¹¹ Two of the three informants can use all locations for the two agreement slots of *to tell*, but for one informant the location of the signer needs to be in the subject or in the Recipient argument slot.

¹² Only recently, the international interest organisation Deaf Power started to stimulate the use of the sign in (i) meaning ‘to sign’ among signers all over the world, instead of the predicates that the different signed languages use for *to tell*. The reason for this is that these latter predicates are considered by Deaf Power to make iconic use of the mouth as a place of articulation. One of my informants can conjugate the *to*-type verb in (i) for all locations, and according to him other signers who do not yet conjugate this sign, will start doing so in the near future.

(i)



SIGN

However, all my informants rather use the ‘old-fashioned’ sign in (51). Therefore, I will not use the verb in (i) in my investigation. In this light it is striking that NGT has a special sign that means ‘to tell of a hearing person’ (ii), which has a negative connotation. This sign makes no use of the mouth as a place of

The NGT verb *to tell* behaves in a similar way as the verb *to ask*. It is grammatical to express the verb and its subject argument only if the Recipient argument can be inferred from the context (52). Otherwise, the Recipient has to be expressed overtly and the sentence is grammatical as an independent sentence (53). The Theme argument can be expressed as well, as in (54).

(52)



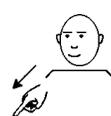
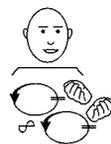
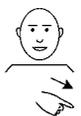
*INGE

signer TELL-neutral.space

'Inge tells.'

(NGT)

(53)



INGE

POINT_{left}left TELL_{right}

MARIJKE

POINT_{right}

'Inge tells Marijke.'

(NGT)

articulation. The sign can show agreement for its subject by making it at the location of the subject. Sequentially with every movement of the sign the signer mouths /fuh/.

(ii)

TELL.OF.A.
HEARING.PERSON

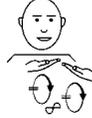
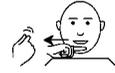
(54)



INGE



SOMETHING

signerTELL_{left}POINT_{left}

MARIJKE

‘Inge tells Marijke something.’

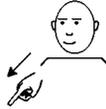
(NGT)

For *to tell* holds too that, if no overt Recipient is expressed, the context can make clear that this argument is implicitly present although this need not be a particular person or group of people. The sentence then is grammatical meaning ‘to tell to someone in general’ as in *Inge told a joke* in English in which it is clear that in a common situation other people are present to whom Inge told a joke (55).

(55)



INGE

POINT_{right}

JOKE

signerTELL_{neutral.space}

‘Inge tells a joke (not to anyone in particular).’

(NGT)

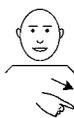
With respect to the status of the second clause in complex sentences with NGT *to tell* (56), nothing can be concluded yet. As with *to ask*, a simple sentence with the predicate *to tell* is a grammatical independent sentence if the subject and the Recipient are expressed only. The Theme does not have to be overtly present or implied from the context. Thus, here too, there are as yet two possibilities: either the simple Theme is an adjunct in which case the Theme clause is, on the basis of the results of the distributional dependency test, not subordinated to the NGT verb *to tell* but coordinated to it, because both clauses can occur as independent sentences. Or NGT *to tell* is ambiguous between a two-place and a three-place predicate in which case the simple

Theme is an argument of the three-place variant of *to tell* and the Theme clause is an argument, too, and hence a syntactically subordinated clause of *to tell*.

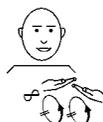
(56) a.



INGE



POINT_{left}



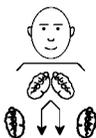
left TELL_{signer}



POINT_{signer}



MARIJKE



HOUSE



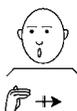
signer GO:TO_{neutral.space}

‘Inge tells me that Marijke is going home.’ or ‘Inge tells me *this*: that Marijke is going home.’

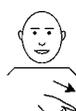
b.



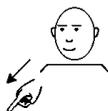
INGE



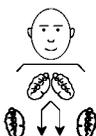
right ATTRACT.
ATTENTION_{left}



POINT_{left}



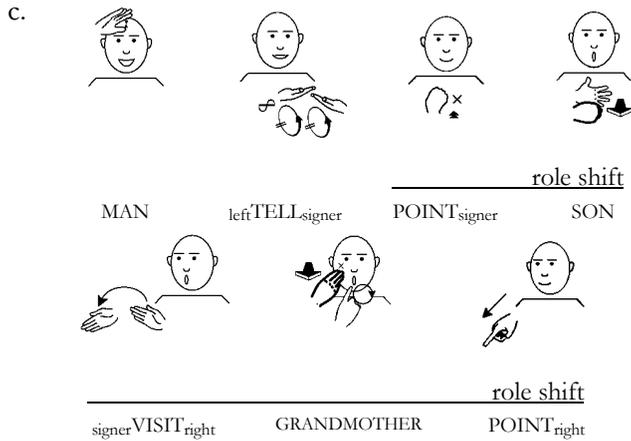
POINT_{right}



HOUSE



‘Inge_i tells him/her that she_i is going home.’ or ‘Inge_i tells him/her *this*: that she_i is going home.’



‘The man told me: “My son visits grandmother.”’ or ‘The man told me *this*: “My son visits grandmother.”’

(NGT)

3.4 Conclusion and discussion

With the aid of the distributional dependency test it could be shown that the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, and *to doubt* in NGT require two arguments, namely a subject and an object, that cannot be left unmentioned in a context in which these arguments have not yet been established. The object argument can have the form of a clause with its own predicate-argument frame. Since the object argument cannot be null in a neutral context, this implies that the object clause is syntactically subordinated to these complement-taking predicates.

For the phasal predicates *to begin* and *to be busy* it turned out that NGT does not use these predicates at all as complement-taking predicates. To express that an activity or event has started or is going on for some time, the time adverbial *now* is used or a sign or a string of signs that describe this matter of fact. Since these latter constructions represent no instance of clause linkage, it is of no use to investigate them further. I therefore decided to not consider these constructions in the remainder of this study.

With respect to the NGT verbs *to ask* and *to tell*, the distributional dependency test could not unambiguously clarify the exact argument structure of these two predicates. It could be the case that NGT *to ask* and *to tell* are two-

place predicates with a subject and Recipient in their argument frames (*to ask* is then better glossed as *to inquire*). If a Theme occurs as well, then the Theme clause has to be analysed as being coordinated to, or in a parataxis relation with the predicates *to ask* and *to tell*, because both the clause with *to ask* or *to tell* and the Theme clause can stand on their own as independent sentences.

However, it could also be the case that the NGT predicates *to ask* and *to tell* are ambiguous between two-place and three-place predicates. If a Theme is present, Then it is an argument of the ditransitive verb *to ask* or *to tell*. And although the Theme clause can occur as an independent sentence, the clause with ditransitive *to ask* or *to tell* cannot, because it is lacking a third argument. The conclusion in this latter case must be that the Theme clause is syntactically subordinated to *to ask* and *to tell*.

Consequently, although the distributional dependency test can give evidence for the subordinated status of clauses, it is not decisive in every case. Furthermore, this test says nothing about the potential complement clauses being argument clauses. This is of special importance in the light of the observation that in some languages the argument structure of (certain) complement-taking predicates can be saturated by a referential pronoun while the potential complement clause is in an adjunct position (Bennis 1986:103ff.). Some examples from Dutch are in (57).

- (57) a. Ellie_i betreurt het, dat zij_i dat liedje voor mij gezongen heeft.
 “Ellie_i regrets it, that she_i sang that song for me.”
- b. ?*Daniëla gelooft het, dat Ellie dat liedje voor mij gezongen heeft.
 “Daniëla believes it, that Ellie sang that song for me.”
- c. *Ellie_i zegt het tegen Daniëla, dat zij_i dat liedje voor mij gezongen heeft.
 “Ellie_i says it to Daniëla, that she_i sang that song for me.”

From (57) it already becomes clear that a referential pronoun cannot saturate the argument structure of every class of complement-taking predicate. Still, since NGT is a pro-drop language, it might be hypothesised that the

Theme clauses with certain classes of complement-taking predicates in NGT are in adjunct position while the object argument position of these complement-taking predicates is filled with a null referential pronoun *pro*. The Theme clauses are not complement clauses then, but adjunct clauses (cf. Barbiers to appear:18 who proposes such a structure for factive complement clauses in Dutch, English, and German). I will come back to this in chapter 6, section 6.4. The Theme clauses cannot be cosubordinated clauses because cosubordinated clauses cannot stand as independent sentences.

In the following three chapters, I hope to find out what the syntactic status of the potential complement clauses is by performing four more tests. Moreover, I hope that the results of the next chapters can confirm the results of this chapter, and clarify the argument structure of the two utterance predicates.

2nd adventure: Pronominal right dislocation

The previous adventure surely was a good start. As expected we have not yet reached the goal of our quest, but the findings hint that we are on the right track. This gives us fresh courage for the next adventure. Will it confirm the evidence that we have already found? And will we find new clues that will bring us closer to our goal?

4.1 Introduction

As discussed in chapter 2, in the literature on complex sentences in ASL, the occurrence of pronominal right dislocation is proposed as a means to distinguish between subordinate and coordinate clausal relationships (Liddell 1980, Padden 1988). This phenomenon is also called (subject) pronoun copy in the literature. In chapter 2 I questioned the diagnostic suitability of pronominal right dislocation with regard to syntactic dependency between clauses. Nevertheless, I investigated this phenomenon in NGT complement constructions to see whether these reservations are justified, and to find out if, and how, NGT might differ in this respect from ASL.

4.2 The distribution of pronominal right dislocation

For ASL, Liddell (1980) and Padden (1988) showed that in complex sentences a pronoun copy of the main clause subject can be right dislocated at the end of the complex sentence. Thus, if the complex sentence consists of a main clause followed by a subordinate clause, the copy appears after the embedded clause (see the pronoun copy in boldface in (1a)), and not at the end of the main clause, that is between the main and embedded clause. If the complex sentence

contains a succession of main clauses, the copy of an argument of the first main clause appears at the end of that clause, thus between the main clauses (see the copy in boldface in (1b); here the original subject $_1$ INDEX normally occurring in preverbal position has been dropped).

- (1) a. $_1$ INDEX DECIDE $_i$ INDEX SHOULD $_i$ DRIVE $_i$ SEE CHILDREN **$_1$ INDEX.**
 'I decided he ought to drive over to see his children, I did.'
 b. $_1$ HIT $_i$ **$_1$ INDEX**, $_i$ INDEX TATTLE MOTHER $_i$ INDEX.
 'I hit him, I did and he told his mother, he did.'
 (ASL; Padden 1988:88, exx.19 and 17; boldface is mine)

Not much is known about pronominal right dislocation in complex sentences in NGT. Bos (1995) only briefly discusses pronominal right dislocation in complex sentences with embedded clauses. She concludes that the copy of the main clause subject appears between the clauses of the complex sentence (see her example (16), repeated here as (2)). However, embroidering on the discussion in chapter 2, it was not at all clear at the time that Bos wrote her article whether the syntactic relation between the clauses in her example is one of subordination.

- _____ neg
- (2) SEE **INDEX $_1$** PU $_2$ NOT-YET $_2$ REMEMBER[+] INDEX $_2$ PU
 'I see that you still don't remember (how the computer works).'
- (NGT; Bos 1995:132, ex.16; boldface is mine)

In the previous chapter it has been established that acquisition of knowledge predicates like *to see* in (2) take a syntactic complement clause (the predicate *to see* in example (2) is used in the sense of indirect perception, that is, something is inferred from information that is perceived through the senses, cf. Dik & Hengeveld 1991). Bos's statement that in NGT complex sentences with an embedded clause the pronominal right dislocation occurs at the end of the matrix clause can now be judged at its true value.

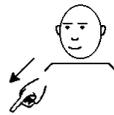
Indeed, my data confirm Bos's statement that pronominal right dislocated elements that are coreferential with an element in the main clause appear

directly after that main clause, as can be seen in (3); the pronoun copies are in boldface. There is an example with a complement-taking predicate from all investigated classes. The examples (3a'-i') show that, if this right dislocated element appears at the end of the embedded, or second clause,¹ the sentence is ungrammatical. For example, in (3a) the subject copy POINT_{right} appears directly after the main clause, here after the verb *to want*. In (3a') the subject copy POINT_{left} occurs after the embedded clause HOUSE_{signer}GO.TO_{neutral.space} and the sentence is considered ungrammatical. The data also corroborate the assumption that pronominal right dislocation is not a useful tool in NGT to discriminate between syntactic subordination and coordination, because it will always occur at the end of the clause in which its coreferential argument is found, irrespective of whether a subordinated or coordinated clause follows.^{2,3}

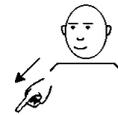
(3) a.



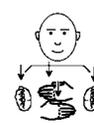
INGE

POINT_{right}

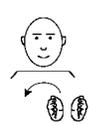
WANT

POINT_{right}

MAN

POINT_{left}

PRESENT

leftGIVE.PRESENT_{right}

'Inge_i wants the man to give her_i a present.'

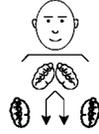
¹ Note that for the complement-taking predicates *to ask* and *to tell* it is not yet clear whether their semantic complement clause is syntactically embedded (see chapter 3, section 3.3.9).

² I came across three sentences in NGT in which the copied pronoun of the main clause subject is positioned after the second clause (see (i)); only the glosses are given and the pronoun copies are in bold). Although these three sentences are not considered fully grammatical by the informants, they are not judged as fully ungrammatical either. I have no explanation for these constructions at the moment.

- (i) a. ?POINT_{right} INGE LIKE POINT_{addressee} PRESENT addresseeGIVE.PRESENT_{left}
POINT_{right}
 'Inge likes you to give her (=Inge) a present.'
 b. ?GIRL POINT_{right} KNOW ORANGES HEALTHY **POINT_{right}**
 'The girl knows that oranges are healthy.'
 c. ?POINT_{right} INGE BELIEVE GOBLINS EXIST **POINT_{right}**
 'Inge believes that goblins exist.'

³ In (3f) and (3g) the signer localises the subject to his right by gazing to that location during the expression of this sign (and the following ones). In (3h) the subject is localised to the signer's left by the subject agreement of the verb *to ask* that is made at this location.

a.ʼ



*POINT_{left}

WANT

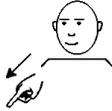
HOUSE

signerGO.TO_{neu.space}

POINT_{left}

‘He wants to go home.’

b.

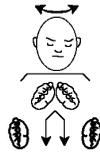


(neg)

POINT_{right}

signerSEE_{neutral.space}

POINT_{right}



neg

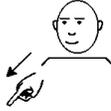
POINT_{left}

HOUSE

signerGO.TO_{neutral.space}

‘She does not see that he is not going home.’

b.ʼ



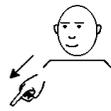
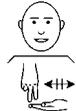
*INGE

POINT_{right}

signerSEE_{left}

BOY

POINT_{left}

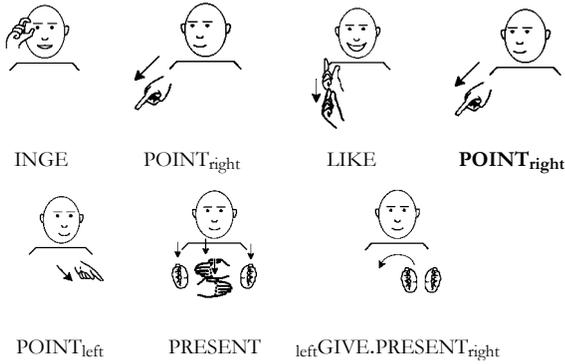


DANCE

POINT_{right}

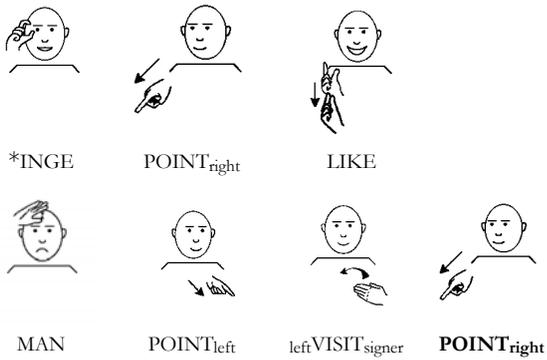
‘Inge sees the boy dancing.’

c.



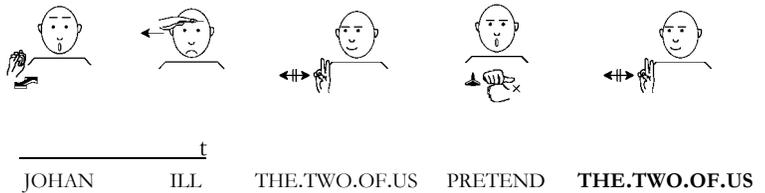
‘Inge_i likes (the fact) that he gives her_i a present.’

c.’



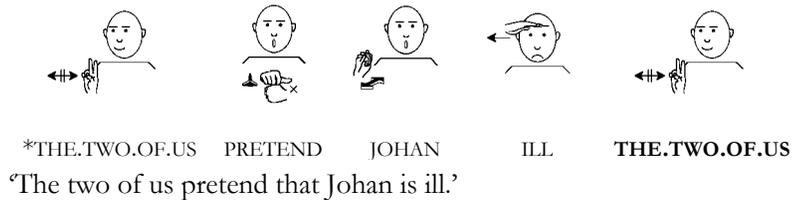
‘Inge likes (the fact) that the man visits me.’

d.⁴



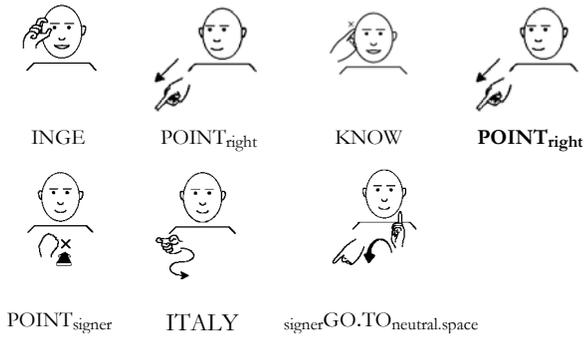
‘As for Johan being ill, the two of us pretend this.’

d.’



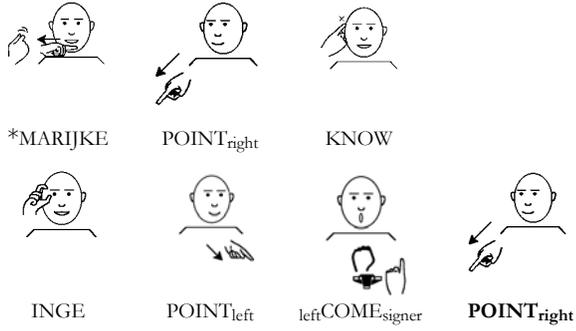
⁴ In this sentence, the potential subordinated clause is topicalised.

e.



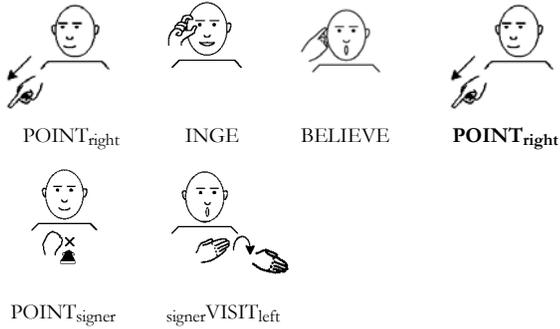
‘Inge knows that I am going to Italy.’

e.’



‘Marijke knows that Inge comes to me.’

f.



‘Inge believes that I visit him.’

f.ʼ



*INGE



BELIEVE



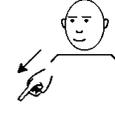
POINT_{left}



GOBLIN



EXIST



POINT_{right}

ʼInge believes that goblins exist.ʼ

g.



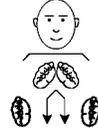
INGE



DOUBT



POINT_{right}^{neg}



HOUSE



ʼInge does not doubt that I am going home.ʼ

g.ʼ



*POINT_{signer}



DOUBT



POINT_{opposite.of.signer}



APPOINTMENT



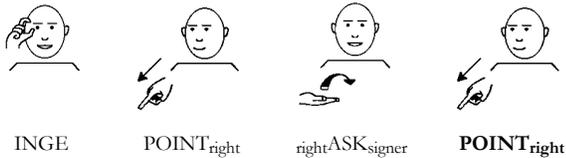
RIGHT



POINT_{signer}

ʼI doubt whether the appointment is right.ʼ

h.



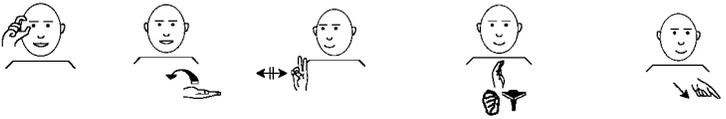
INGE POINT_{right} rightASK_{signer} POINT_{right}



THE.TWO.OF.US signerGO.HOME_{neutral.space}

'Inge asks me if the two of us are going home.'

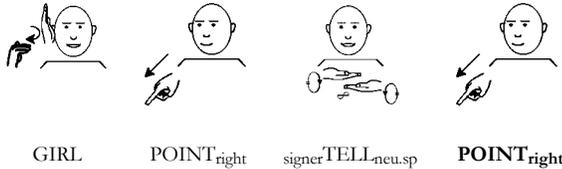
h.{'



*INGE leftASK_{signer} THE.TWO.OF.US signerGO.HOME_{neu.sp} POINT_{left}

'Inge asks me if he two of us are going home.'

i.



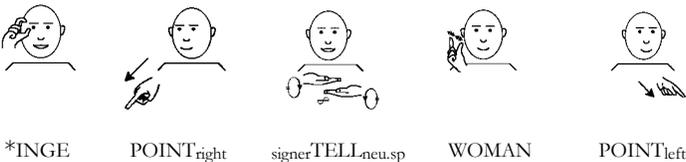
GIRL POINT_{right} signerTELL_{neu.sp} POINT_{right}



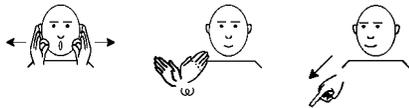
POINT_{right} GRANDMOTHER BIRTHDAY

'The girl_i says that her_i grandmother is having her_i birthday.'

i.{'



*INGE POINT_{right} signerTELL_{neu.sp} WOMAN POINT_{left}



CAT GONE POINT_{right}

'Inge tells the woman that the cat is gone.'

(NGT)

As Bos (1995) already suggested, arguments from the embedded clause can also be right dislocated. Examples of this for all investigated classes of complement-taking predicates are given in (4); again, the pronoun copies are in boldface. For example, in (4a) the pronoun copy **POINT_{right}** of the embedded clause subject **MAN POINT_{right}** is right dislocated at the end of the embedded clause of *to want*.

(4) a.

INGE POINT_{left} WANT MAN **POINT_{right}**

PRESENT rightGIVE.PRESENT_{left} **POINT_{right}**

‘Inge_i wants the man to give her_i a present.’

b.

THE.TWO.OF.US signerSEE_{left} MAN POINT_{left}

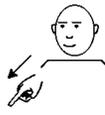
BOOK STEAL **POINT_{left}**

‘The two of us see the man stealing a book.’

c.



INGE



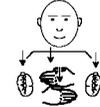
POINT_{right}



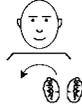
LIKE



POINT_{left}



PRESENT



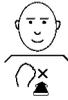
leftGIVE.PRESENT_{right}



POINT_{left}

'Inge likes (the fact) that he gives her a present.'

d.



POINT_{signer}



PRETEND



[POINT_{signer}



MAN



PERSON_{signer}



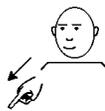
POINT_{signer}]

'I pretend that I am a man.'

e.



GIRL



POINT_{right}



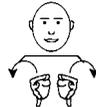
KNOW



ORANGES



POINT_{left}



HEALTHY



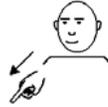
POINT_{left}

'The girl knows that oranges are healthy.'

f.



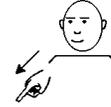
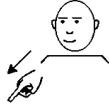
WOMAN



POINT_{right}



BELIEVE



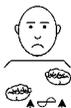
[POINT_{right} PREGNANT POINT_{right}]

‘The woman_i believes that she_i is pregnant.’

g.



POINT_{signer}



DOUBT



POINT_{opposite.of.signer}



APPOINTMENT



RIGHT



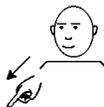
POINT_{opposite.of.signer}

‘I doubt whether the appointment is right.’

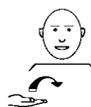
h.



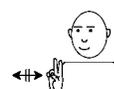
INGE



POINT_{right}



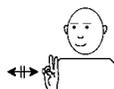
rightASK_{signer}



THE.TWO.OF.US



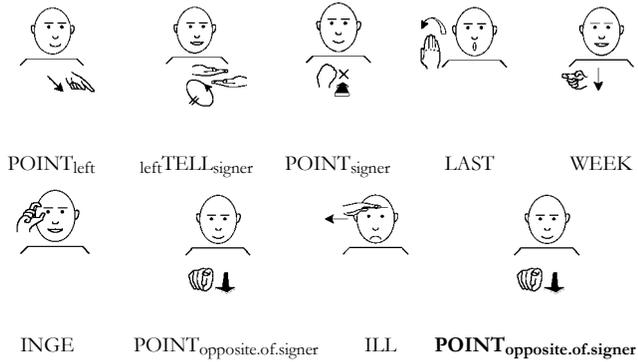
signerGO.HOME_{neutral.space}



THE.TWO.OF.US

‘Inge asks me if the two of us are going home.’

i.



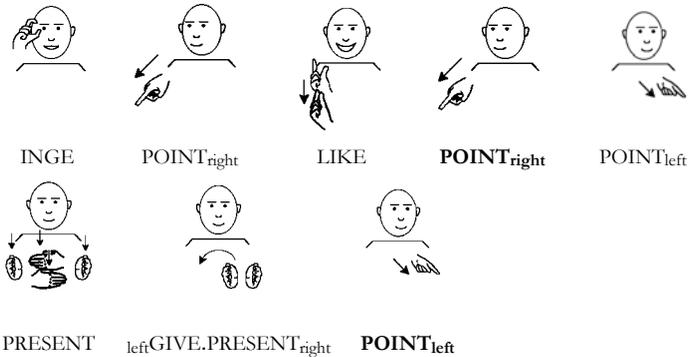
POINT_{left} left TELL_{signer} POINT_{signer} LAST WEEK
 INGE POINT_{opposite.of.signer} ILL POINT_{opposite.of.signer}

'He tells me that Inge was ill last week.'

(NGT)

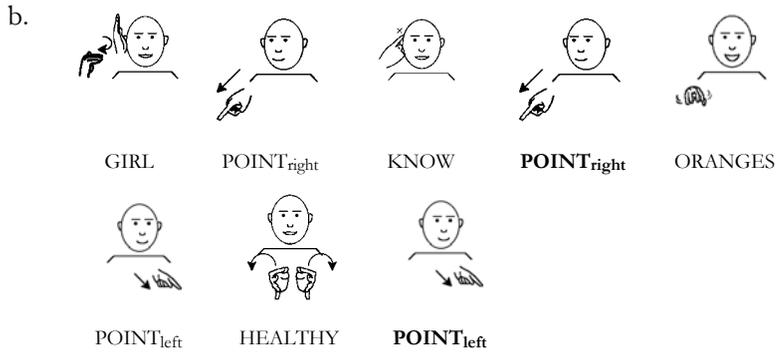
The combination of a right dislocation of a main clause argument at the end of the matrix clause and a right dislocation of an embedded or second clause argument after the embedded or second clause are possible too in one sentence, as shown in (5); the pronoun copies are again in boldface. For example, in sentence (5a), with the complement-taking predicate *to like*, the pronoun POINT_{right} immediately after the matrix clause is a copy of the main clause subject INGE POINT_{right}, and the embedded clause subject POINT_{left} is copied and right dislocated after the embedded clause.

(5) a.

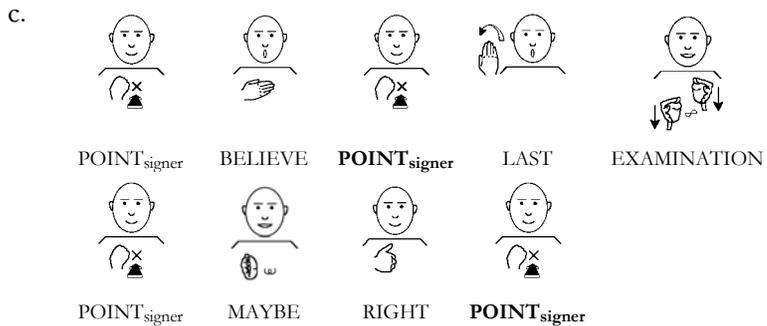


INGE POINT_{right} LIKE **POINT_{right}** POINT_{left}
 PRESENT left GIVE.PRESENT_{right} **POINT_{left}**

'Inge_i likes (the fact) that he gives her_i a present.'



‘The girl knows that oranges are healthy.’



‘I believe that I might have done well in the last examination.’

(NGT)

Right dislocation in spoken languages is considered colloquial speech by most users (Askedal 1987:93, Bos 1995:123). This also seems to be the case for pronominal right dislocation in NGT. A nice illustration that this is probably so is that most of the sentences in (3)-(5) come from tests other than the test in which complex sentences with pronominal right dislocations had to be judged. In this latter test sentences with pronominal right dislocation equivalent to the sentences in (3) were often considered highly informal or even ungrammatical. Nonetheless, comparable complex sentences with pronominal right dislocations were used by the signers quite often in other tests, when they were apparently not aware of this. It is worth noting that there is considerable variation among the signers with respect to the frequency in using this construction. Some signers use pronominal right dislocation quite often, others far less frequently.

In this light it may be interesting to say a few words on the function of pronominal right dislocation. It is not entirely clear at this moment under what (pragmatic) circumstances (pronominal) right dislocation can be used in NGT. This holds too for right dislocation in spoken languages. Most signed language studies state that the function of right dislocation is emphatic (Padden 1988, Wilbur 1994, Bos 1995:fn.11). According to Bos this is not the case for NGT. Her arguments are the following. In the first place, Bos observes that the pronoun copy is produced in such a way that there is no indication of stress, that is there is no intonational break between the sentence and the right dislocated pronoun, and this pronoun is articulated like other pronouns in other positions in the sentence. However, Wilbur (1994) had already argued that it is precisely the doubling that creates the stress, but this argument does not hold in sentences as (1b) and (2) above where the subject itself is non-overt. It is more likely that the non-canonical sentence- or clause-final position itself might induce emphasis (cf. Petronio 1991 and (implicitly) Neidle et al. 2000).

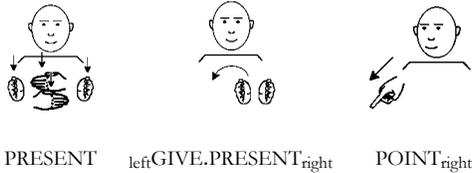
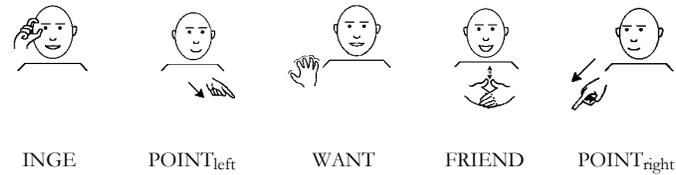
In the second place, Bos states that there is nothing in the pragmatics and semantics of the sentences with pronominal right dislocation that would justify an emphatic function. However, Bos's data come from tests in which the informants participated in pairs (Bos 1995:124) and had (elicited) conversations with each other. It might well be the case that the emphasis is meant to help the addressee characterise the most important argument of the proposition. If this is so, the test situation Bos used forms the right context for pronominal right dislocation. Thus, not the structure of the sentences but the pragmatic situation in which the sentences were expressed might induce the emphatic function. This function could also explain the informal character of right dislocation. However, since in the present study most sentences were offered and judged in isolation, more research needs to be done before anything conclusive can be said about the function of pronominal right dislocation.

In the third place, Bos remarks that pronominal right dislocation occurs too often in her corpus to be explained as emphasis. Given Bos's test situation, the suggestion made above that the emphasis of right dislocation might facilitate the identification of the important argument of a proposition, might

be an answer to Bos's objection here as well. In other words, the appearance of pronominal right dislocation in such conversational contexts is to be expected.

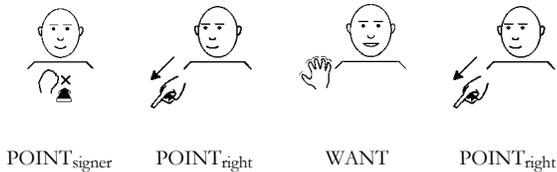
In the fourth place, Bos argues that, if the function of pronominal right dislocation is emphatic, right dislocation of objects would also be expected to occur. This is not possible in NGT, according to her. By making this statement Bos simply ignores the 29 cases presented in her table 2 (Bos 1995:125) in which the object is doubly expressed. That pronominal right dislocation of objects is possible, too, is demonstrated in (6). In (6a) the indirect object POINT_{left} of the embedded clause is copied and right dislocated. In sentences (6b-c), it is the direct object that is copied and right dislocated, POINT_{right} and POINT_{left}, respectively.

(6) a.

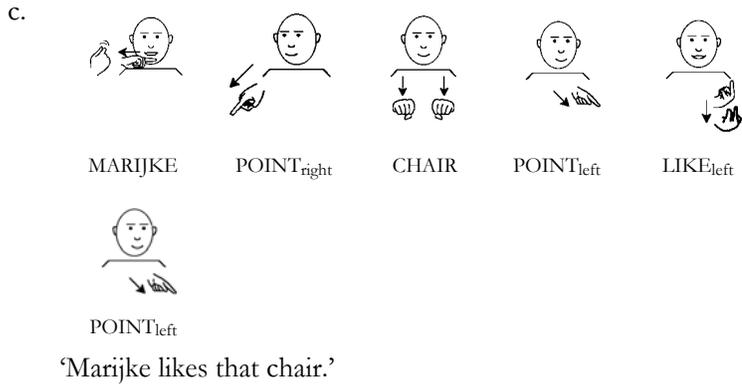


'Inge wants to give the friend a present.'

b.



'I want that.'



(NGT)

However, it is true that pronominal right dislocation of objects does not occur as often as pronominal right dislocation of subjects.^{5,6} Although I have no precise figures, such a tendency can be detected in my corpus as well. If the function of pronominal right dislocation is emphatic, the opposite picture would be expected, that is that objects from which it is generally thought that they provide new information appear in right dislocated position more often than subjects that tend to provide old information. Therefore, Bos has a point here in rejecting the emphatic function of pronominal right dislocation in signed languages. Nonetheless, the function that she proposes (see below) is probably not the right one either.

Bos observes that in her corpus pronominal right dislocation appears more often in the context of non-agreement verbs than in the context of agreement verbs. On this observation Bos bases the conclusion that the function of pronominal right dislocation is to identify the subject of a clause. She supports this conclusion with figures (*ibid.* 137, table 8): pronominal right dislocation of the subject occurs in 25% of the cases in which there is no subject agreement on the verb, whereas subject pronominal right dislocation occurs in only 12% of the cases in which the verb does have subject agreement. Firstly, it is not at all clear from Bos's data whether this difference is statistically significant.

⁵ Askedal (1987:96) observes this for Norwegian too.

⁶ It is very difficult to derive the exact figures on pronominal right dislocation from Bos's tables, since these are quite opaque. But her corpus contains 3041 main clauses (Bos 1995:125) of which 358 clauses contain a double expression of the subject and 29 clauses a double expression of an object (*ibid.* table 2).

Moreover, the fact that in Bos's corpus in 25% of the cases in which there is no subject agreement there is subject pronominal right dislocation, still leaves us with a majority of the cases (75%) in which there is no subject agreement and also no subject pronominal right dislocation.

I think there is reason to question the emphatic function of pronominal right dislocation in signed languages, because of the far higher frequency of subject pronominal right dislocation as opposed to object pronominal right dislocation. But at the same time, Bos did not give conclusive evidence to justify her proposal for the function of pronominal right dislocation. Therefore, more research needs to be done to find out what the function of pronominal right dislocation is, which unfortunately goes beyond the reaches of this study.

To return to the subject of this section, the distribution of pronominal right dislocation in NGT complement constructions, the data showed that it differs considerably from the same phenomenon in ASL in that the right dislocated copy in NGT occurs directly after the clause it belongs to, whether this clause is a main or an embedded clause. For this reason pronominal right dislocation cannot be used as a diagnostic to distinguish subordinate and coordinate clausal relationships in complex sentences in NGT.

4.3 Analyses of right dislocation

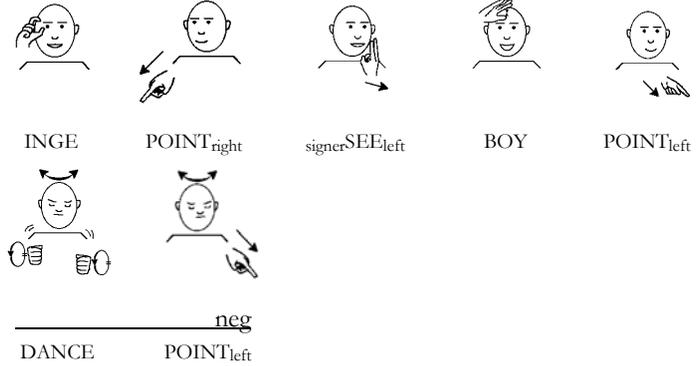
Before moving on to another test in the next chapter, I would like to go briefly into two proposed analyses of right dislocation, since these remain, in my view, problematic for pronominal right dislocation in NGT. Neidle et al. (2000:172, fn.9) state that in pronominal right dislocation in ASL the pronoun copy is right-adjoined to (the highest) CP. In (7) this is depicted for Padden's example from ASL that was already mentioned in (1) above.

- (7) [CP [CP [C_i INDEX DECIDE [CP _i INDEX SHOULD _i DRIVE_i SEE CHILDREN]]]
[_i INDEX]]

'I decided he ought to drive over to see his children, I did.'

(ASL; Padden 1988:88, ex.19; boldface and bracketing is mine)

b.



‘Inge sees that the boy is not dancing.’

(NGT)

Kayne (1994) develops an analysis in which he analyses the “right dislocated” phrase as a complement of the verb in Romance languages, due to his antisymmetry theory in which rightwards movement and rightward adjunction are impossible (see Kayne 1994:78ff. for the details of his analysis). Analysing the “right dislocated” phrase in Romance languages as a complement is possible because the clause contains a coreferential clitic. In NGT, however, the copied element is not a clitic but a referential expression in a canonical argument position. Therefore, it does not seem the right analysis to consider the right dislocated pronoun in NGT as a complement. Unfortunately, it goes beyond the bounds of the present study to explore how pronominal right dislocation in NGT could be analysed. I leave this for future research.

3rd adventure: Non-manual negation

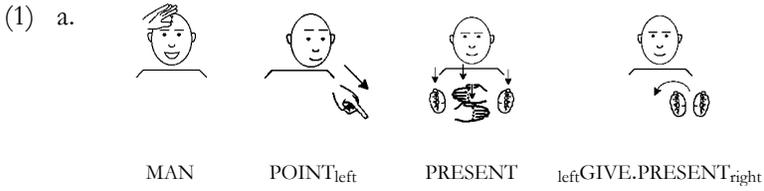
*A*las, we went astray for a moment. The last adventure did not bring us any closer to our goal. Nevertheless, it was interesting and it gave us some new insights. We won't be daunted that easily. So, let's not linger any longer and get back on the right track, for the next adventure already lies ahead.

5.1 Introduction

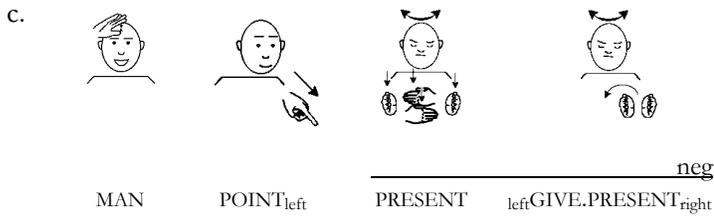
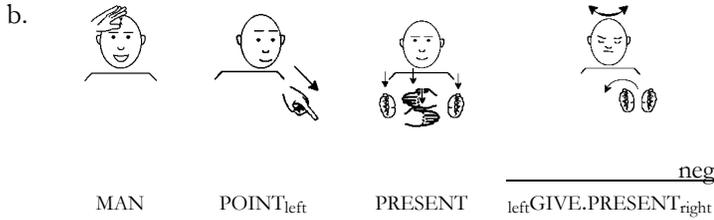
In the ASL literature on complex sentences, the absolute duration, that is, the extension of the non-manual negation marker over the sentence, is also used as a diagnostic to discriminate between subordinate and coordinate clausal relationships (Padden 1988). Just like pronominal right dislocation, the applicability of non-manual negation as a test for syntactic embeddedness in NGT has been questioned in chapter 2, section 2.1.2. In this chapter we will see that this doubt is not justified.

5.2 The distribution of non-manual negation

The non-manual negation marker in NGT consists of one or more headshakes and is often accompanied by a negative facial expression. This non-manual marker alone is enough to express denial of a proposition in NGT and ASL. This is shown in (1) for NGT. In (1a) is a simple affirmative sentence. In (1b-c) this same sentence is accompanied by the non-manual negation marker, which gives the sentence a negative interpretation.



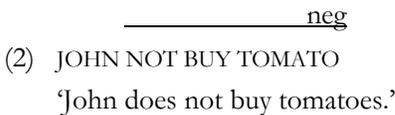
‘The man gives her a present.’



‘The man does not give her a present.’

(NGT)

As can be seen in (1b), in simple NGT sentences the non-manual negation marker can accompany only the verb it negates, or it can spread over the negated verb’s object (1c). Thus, at least the verb should be negated in NGT.¹ In ASL things are a bit different. As can be seen in (2), in ASL an additional manual negation sign is often used which occurs before the predicate.²



(ASL; Aarons 1994:80, ex.10)

¹ Sometimes it seems as if the non-manual negation marker already starts during, or even before the subject of the negated sentence. However, on closer inspection it turns out that this is just a transitional movement of the head to put the head in the right starting position for the actual onset of the negation marker. Thus, the head first makes one short sideways movement which can easily be mistaken for the commencement of the negation marker, whereas the actual start of the marker is right after this transitional sideways movement of the head.

² As was already mentioned in chapter 1, the basic word order in ASL is SVO.

The combination of a non-manual negation marker and a manual negation particle to express sentential negation can be found in other signed languages as well, e.g. in Argentine Sign Language (Veinberg 1993), British Sign Language (Deuchar 1984), Catalan Sign Language (Pfau & Quer 2003), German Sign Language (Pfau 2002, 2003), and Swedish Sign Language (Bergman 1995) (see Coerts 1992 and Pfau 2002 for more examples of signed languages).³ It should be noted, however, that in most signed languages the use of the manual negation particle is optional whereas the presence of the non-manual negation marker is obligatory.⁴ This is in contrast to NGT where the use of manual negation signs is considered to be part of the sign system NmG (Sign Supported Dutch) by the younger generation of native signers.

In ASL the absolute duration of the non-manual negation marker is dependent on the absence or presence of a lexical negation sign. If a lexical negation is present, the marker appears synchronically with this negation sign (3a), or stretches over the c-command domain of the negation, as in (3b) and (2) above. According to Neidle et al. (2000:45), the sentence in (3a) with a short marker over the negation sign only, receives an emphatic interpretation. If no lexical negation is present, the marker in ASL obligatorily stretches over the predicate and its object, as in (3c).

- neg
- (3) a. JOHN NOT BUY HOUSE
 ‘John is *not* buying a house.’
- _____ neg
- b. JOHN NOT BUY HOUSE
 ‘John is not buying a house.’

³ Pfau (2003:8) rightly remarks that culture-specific factors can influence the exact realisation of the non-manual marker. Although the headshake is used in many signed languages (among others ASL, British Sign Language, Catalan Sign Language, German Sign Language, Swedish Sign Language), other signed languages (e.g. Greek Sign Language, Lebanese Sign Language, and Turkish Sign Language) use a negative headnod in addition to the headshake.

⁴ This is not entirely true for Indo-Pakistani Sign Language where the manual particle can be used without the non-manual marker, too (Zeshan 2000:114), something which to the best of my knowledge has not yet been found in any other signed language investigated to date.

- _____ neg
- c. JOHN BUY HOUSE
 ‘John is not buying a house.’
 (ASL; Neidle et al. 2000:44ff., exx.5, 6, 9)

If in a complex ASL-sentence no manual negation sign is present and the non-manual negation marker starts in the first clause, it obligatorily stretches over the second clause, if this second clause is embedded in the first clause. This pattern is expected since the embedded clause lies within the c-command domain of the matrix Neg. An example of this is in (4a). If the second clause is not embedded, the non-manual negation marker does not stretch over this second clause, as in (4b).

- (4) a. _____ neg
 ;INDEX WANT ;INDEX GO-AWAY
 ‘I didn’t want him to leave.’
- b. _____ neg _____ aff
 ;INDEX TELEPHONE, ;INDEX MAIL LETTER
 ‘I didn’t telephone but she sent a letter.’
 (ASL; Padden 1988:89ff., exx.23, 25)

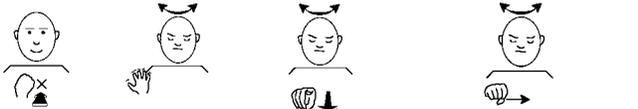
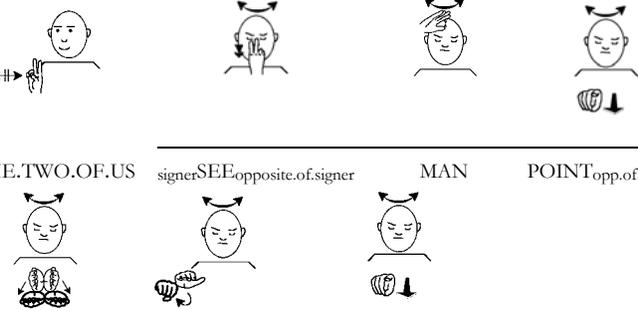
As already mentioned in chapter 2, in ASL it seems to be the dependency relation between the clauses in a complex sentence that determines the absolute duration of the non-manual negation marker, rather than the other way around. That is, in ASL if one clause in a complex sentence is syntactically embedded in another clause and no manual negation particle is present, the non-manual headshake that negates the event of the main clause obligatorily stretches over the embedded clause. In other signed languages, it might be the case that the non-manual negation marker cannot stretch over clause boundaries, whether or not the relationship between the clauses is one of syntactic subordination. However, on the basis of the results from ASL, I assume that, if the non-manual negation marker of the potential main predicate can stretch over a clause boundary, the second clause must be in the c-command domain of the

matrix clause negation. This means that the syntactic relation between the clauses is subordination.

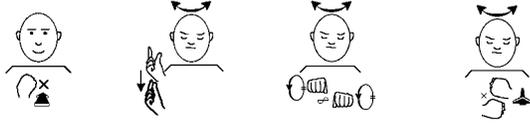
We will now look at the distribution of the non-manual negation marker in complex sentences in NGT. It will be shown that, as in ASL, the absolute duration of the negation marker can be used as a test to uncover syntactic embeddedness but that, in contrast to ASL, it is not the clausal relationship that determines the absolute duration of the marker, in that spreading of the non-manual negation marker is not obligatory.

5.3 The results for complex sentences in NGT

In NGT it is possible to express the non-manual negation marker during the complement-taking predicate and to extend it over the (semantic) complement clause. This is shown in (5) for all classes of complement-taking predicates investigated here. For example, in (5a) the negation marker starts above the complement-taking predicate *to want* and stretches over the entire complement clause.

- (5) a. 
- POINT_{signer} WANT POINT_{addresssee} neu.space COME.ALONG_{signer}
- ‘I do not want you to come along.’
- b. 
- THE.TWO.OF.US signerSEE_{opposite.of.signer} MAN POINT_{opp.of.signer}
- BOOK STEAL POINT_{opposite.of.signer}
- ‘The two of us did not see that the man stole the book.’

c.

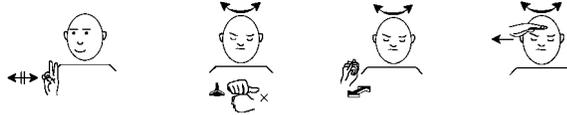


neg

POINT_{signer} LIKE CYCLE CONTINUE

‘I do not like (the fact) that the cycling takes place.’

d.

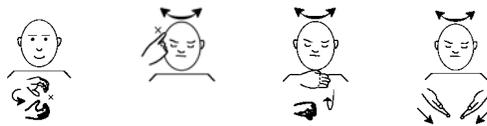


neg

THE.TWO.OF.US PRETEND JOHAN ILL

‘The two of us do not pretend that Johan is ill.’

e.

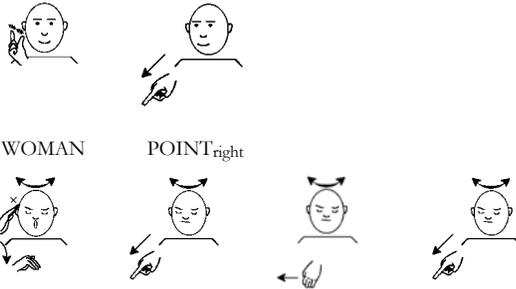


neg

PROFESSOR KNOW GOBLIN EXIST

‘The professor does not know that goblins exist.’

f.



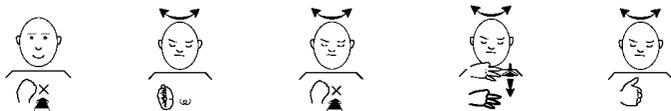
WOMAN POINT_{right}

neg

BELIEVE POINT_{right} PREGNANT POINT_{right}

‘The woman_i does not believe that she_i is pregnant.’

g.

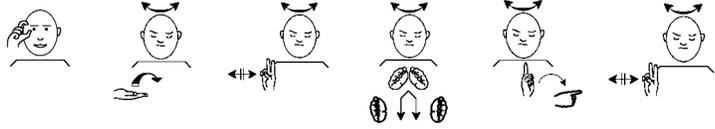


neg

POINT_{signer} DOUBT POINT_{signer} APPOINTMENT RIGHT

‘I do not doubt that the appointment is right.’

h.

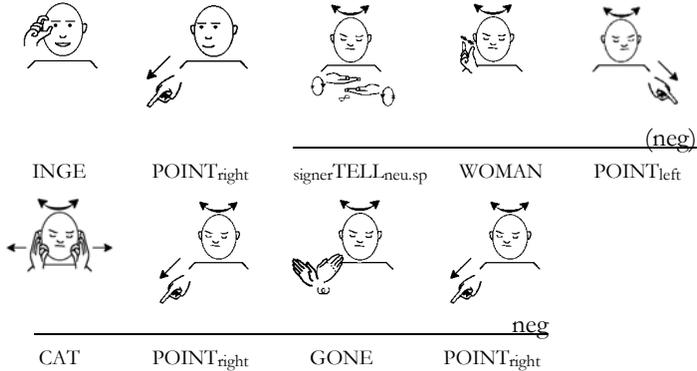


neg

INGE _{right}ASK_{signer} TWO.OF.US HOUSE _{signer}GO.TO_{left} TWO.OF.US

'Inge does not ask me if the two of us are going home.'

i.



(neg)

INGE POINT_{right} _{signer}TELL_{neu.sp} WOMAN POINT_{left}

neg

CAT POINT_{right} GONE POINT_{right}

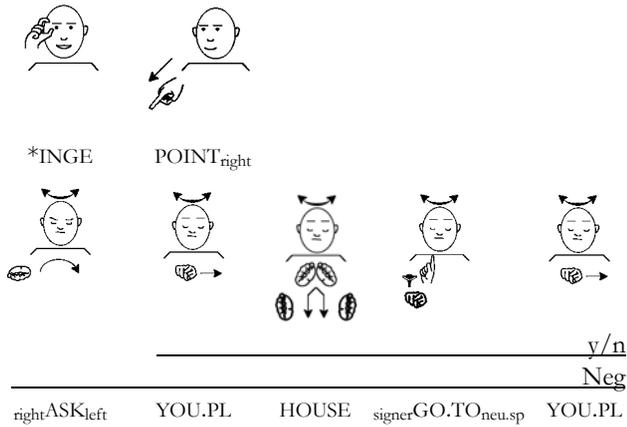
'Inge_i does not tell the woman that her_i cat is gone.'

(NGT)

Although the non-manual negation marker in the sentences in (5) stretches over the whole sentence that contains two predicates, there was no negation involved in the second clause. This was quite clear from the informants' own formulations of these sentences. The (potential) complement clauses in (5) thus fall within the scope of the negation, which implies that these clauses are syntactically subordinated (see my assumption in section 5.2 in this chapter).

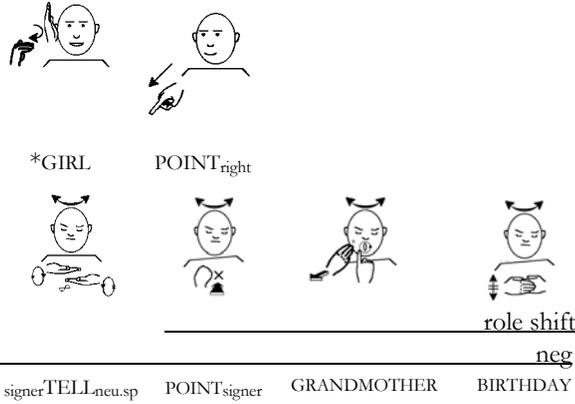
The only exceptions to this observation are utterance predicates with a direct speech complement. As shown in (6) it is not possible to stretch the non-manual negation marker over the clause boundary in these cases.

(6) a.



‘Inge does not ask them: “Are you going home?”’

b.



‘The girl does not say: “It’s my grandmother’s birthday.”’

(NGT)

This restriction seems obvious because direct speech clauses are themselves sentences, or even better, expressions that are independent of the speech act of the matrix clause (Banfield 1982:39, Dik 1997b:102). Direct speech clauses behave just like main clauses with respect to all kinds of constructions and grammatical processes which are known to be impossible in (embedded) indirect speech clauses. For example, direct speech clauses, but not *indirect* speech clauses, can consist of exclamations (7a), or imperatives (7b) (see Banfield 1982:28ff. for an exhaustive list).

- (7) a. Our football coach shouted: “In that corner!”
 a.’ *Our football coach shouted that in that corner.
 b. The policeman cried to the crowd: “Stop thief!”
 b.’ *The policeman cried to the crowd that stop thief.

However, grammatical processes that go beyond the boundary of the direct speech clause, e.g. *wh*-extraction, are blocked in these constructions, as can be seen in the direct speech sentences in (8a-a’). In contrast, such processes are impossible in indirect speech (8b-b’).

- (8) a. Daniëla asks her mother: “What have you bought?”
 a.’ ?“What,” Daniëla asks her mother, “have you bought?”
 b. Daniëla asked her mother_i what she_i had bought.
 b.’ What did Daniëla ask her mother_i that she_i had bought?

Another reason for the ungrammaticality of the sentences in (6) might be a semantic-pragmatic one. When judging the sentences that are presented later in this chapter in (12), the informants remarked that it is not possible to quote someone’s utterance if it is denied that this utterance is expressed.

From (5) above it can be concluded that in NGT, just like in ASL, the absolute duration of the non-manual negation marker can be used to reveal syntactic embeddedness in complex sentences, though nothing more than that. In particular, the results in (5) do not say anything about the complement status of the subordinated clause. The distributional dependency test showed that semantic complement clauses of the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, and *to doubt* are syntactic argument clauses, see chapter 3. The fact that these syntactic argument clauses fall within the scope of the negation of the main clause corroborates the subordinated status of these argument clauses. However, for the complement-taking predicates *to ask* and *to tell*, the distributional dependency test could not give a clear result. The potential complement clauses of these verbs can be argument clauses or adjunct clauses. The findings of the non-manual negation test change nothing with respect to this result. It could be established in (5h-i) that the potential

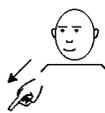
complement clauses of *to ask* and *to tell* are syntactically subordinated, but whether they are argument clauses or adjunct clauses has still not been determined. Additional information is needed to find out what the exact status of these latter clauses is. This information will be given in the next chapter.

Unlike ASL, it does not seem to be the case that in NGT the dependency relationship of the clauses in complex sentences determines the absolute duration of the negation marker. In case the event referred to by the matrix predicate is negated in NGT, this can be done too by expressing the negation marker over the complement-taking predicate only, as can be seen in (9) where examples are given for all investigated classes of complement-taking predicates.

(9) a.



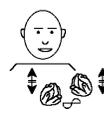
INGE



POINT_{right}



neg
WANT



ROLAND_{left.back}



left.back VISIT_{left.front}



MARIJKE



POINT_{left.front}

‘Inge does not want Roland to visit Marijke.’

b.



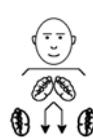
INGE



neg
signer SEE_{neu.sp}



MARIJKE



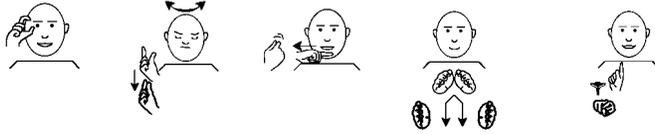
HOUSE



signer GO.TO_{neutral.space}

‘Inge does not see Marijke going home.’

c.



INGE neg MARIJKE HOUSE signerGO.TO^{neutral.space}

'Inge does not like (the fact) that Marijke goes home.'

d.



TWO.OF.US neg JOHAN ILL

'The two of us do not pretend that Johan is ill.'

e.



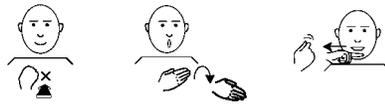
MARIJKE POINT_{right} neg INGE leftCOME_{right}

'Marijke, does not know that Inge is coming to her.'

f.



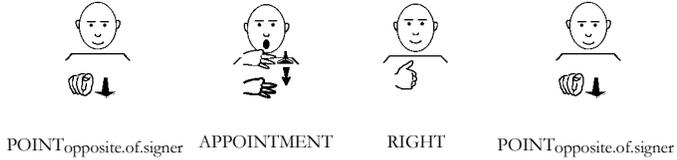
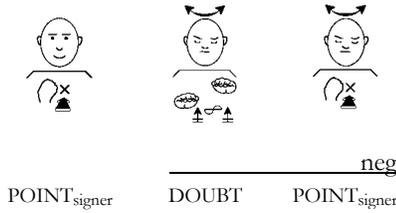
INGE neg BELIEVE POINT_{right}



POINT_{signer} signerVISIT_{left} MARIJKE

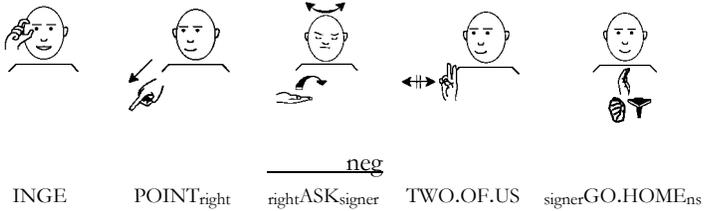
'Inge does not believe that I visit Marijke.'

g.



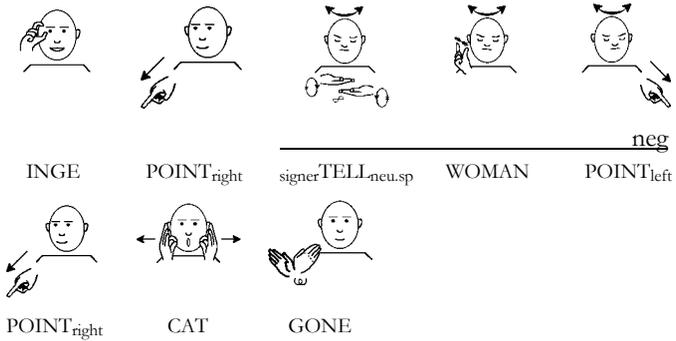
‘I do not doubt that the appointment is right.’

h.



‘Inge does not ask me if the two of us are going home.’

i.

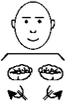
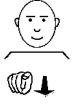


‘Inge_i does not tell the woman that her_i cat is gone.’

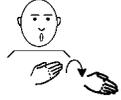
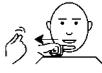
(NGT)

One of the three informants considers sentences as in (10) with the complement-taking predicate *to want* and coreferential subjects for matrix and complement clause ungrammatical. According to her the non-manual negation marker obligatorily has to extend over the complement clause in these constructions. The other two informants, however, can use a negation marker

over the complement-taking predicate only in these constructions, as can be seen in (11).

- (10)
- | | | | |
|---|---|---|---|
|  |  |  |  |
| $\%POINT_{addressee}$ | <u>neg</u>
WANT | SWIM | $POINT_{addressee}$ |
- ‘You do not want to swim.’

(NGT)

- (11)
- | | | | |
|---|---|---|---|
|  |  |  |  |
| INGE | <u>neg</u>
WANT | signer VISIT _{left} | MARIJKE |
- ‘Inge does not want to visit Marijke.’

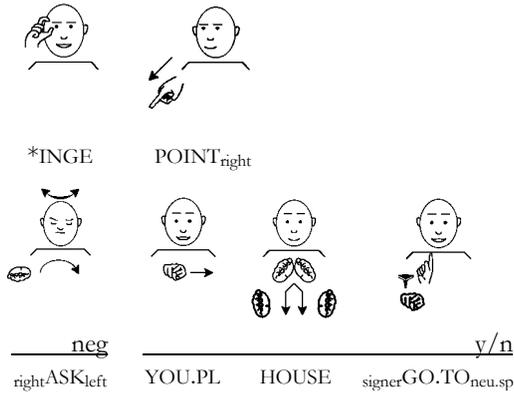
(NGT)

In utterance predicates with direct speech complements it is not possible to use a non-manual negation marker over the complement-taking predicate only (12). This is not so obvious from a syntactic point of view, since the negation marker does not cross a clause boundary here. Apparently, there is a semantic-pragmatic reason for the ungrammaticality of the sentences in (12), because, according to the informants, you cannot quote someone’s utterance if you deny that that person expressed that utterance.⁵

⁵ Anne Baker suggested that the examples in (12) might be grammatical in contrastive contexts, as in (i). Unfortunately, there has been no opportunity to test this suggestion.

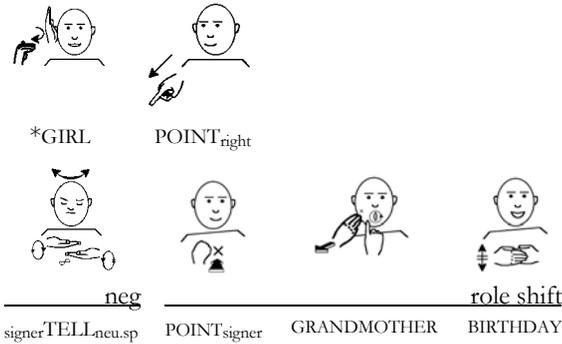
(i) Inge did not ask them: “Are you going home?”, but Marijke did.

(12) a.



‘Inge does not ask them: “Are you going home?”’

b.

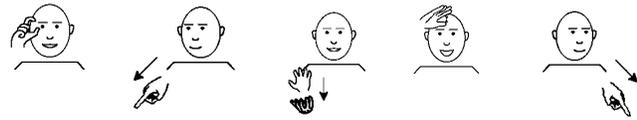


‘The girl does not say: “It’s my grandmother’s birthday.”’

(NGT)

As well as having a negation marker occurring over the complement-taking predicate only, it is also possible to have a negation marker that is expressed synchronically with the embedded predicate only. In the latter case, it is just the event that the complement predicate is referring to that is negated. In (13) are examples for all classes of complement-taking predicates, including utterance predicates with direct speech complements.

(13) a.



INGE POINT_{right} WANT MAN POINT_{left}



neg
PRESENT_{left}GIVE.PRESENT_{right}

‘Inge_i wants the man not to give her_i a present.’

b.



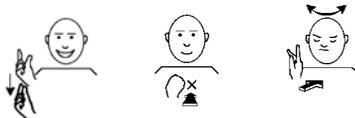
INGE POINT_{right} signer-SEE_{left} BOY POINT_{left}



neg
DANCE POINT_{left}

‘Inge sees that the boy is not dancing.’

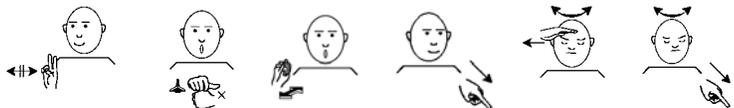
c.



neg
LIKE POINT_{signer} right-SEE_{signer}

‘I like (the fact) that he does not see me.’

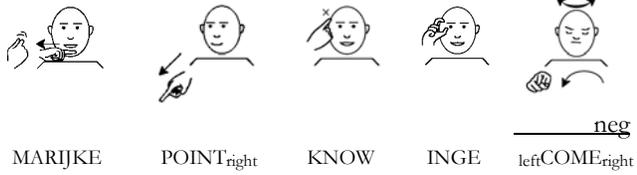
d.



neg
TWO.OF.US PRETEND JOHAN POINT_{left} ILL POINT_{left}

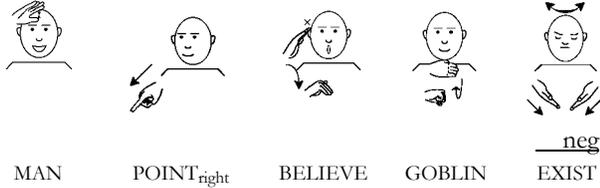
‘The two of us pretend that Johan is not ill.’

e.



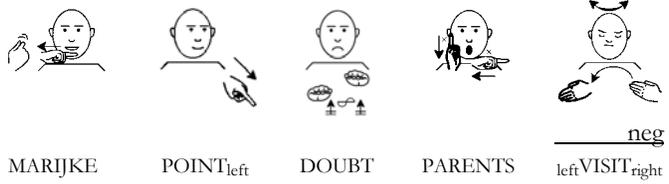
‘Marijke; knows that Inge does not come to her;.’

f.



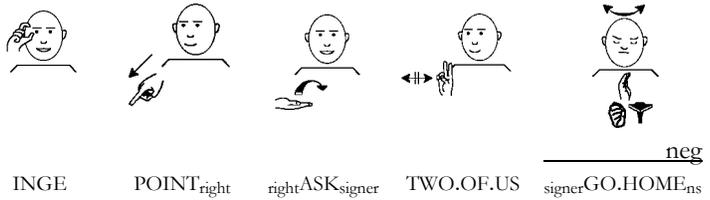
‘The man believes that goblins do not exist.’

g.



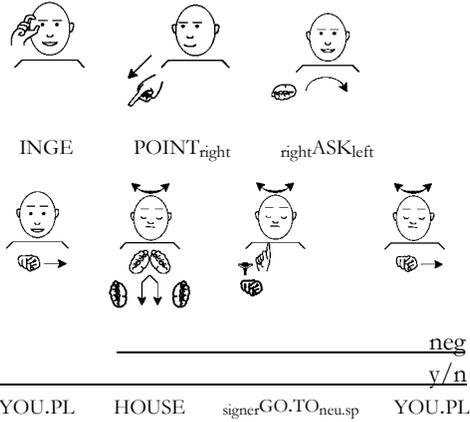
‘Marijke; doubts whether she; will not visit her; parents.’

h.



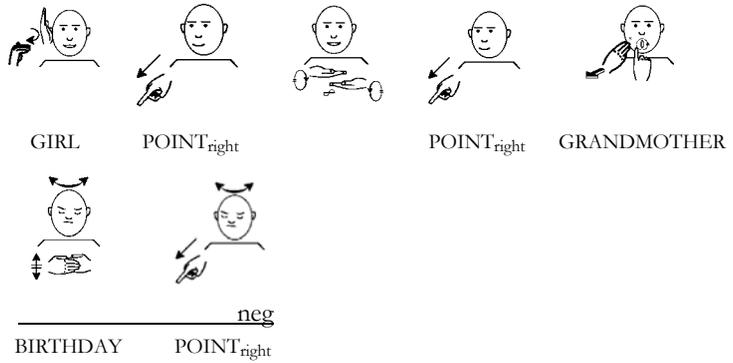
‘Inge asks me if the two of us are not going home.’

i.



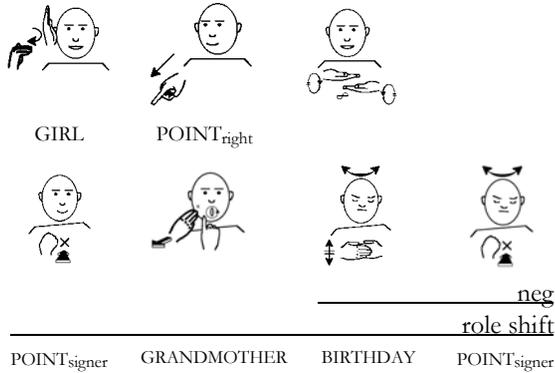
‘Inge asks them: “Are you not going home?”’

j.



‘The girl_i says that her_i grandmother is not having her birthday.’

k.

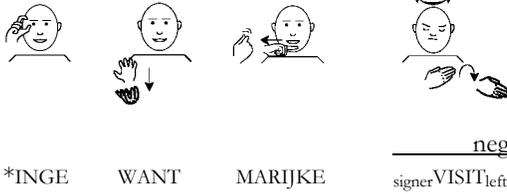


‘The girl says: “My grandmother is not having her birthday.”’

(NGT)

To express a negation marker over the complement predicate only is not possible with the complement-taking predicate *to want* with coreferential subjects for main and complement clause, as can be seen in (14).

(14)



*INGE WANT MARIJKE
 'Inge wants not to visit Marijke.'

(NGT)

Apparently, in complement constructions with the complement-taking predicate *to want* as in (14), the relationship between the predicates is much stronger than in sentences where the complement clause has a different subject than the main clause. In some languages the relationship between the clauses in a complex sentence becomes so strong that the sentence is analysed as *clause union* (a term from Relational Grammar, Perlmutter 1980) or *restructuring* (Burzio 1986, Rizzi 1982). In clause union a main clause and a subordinate clause become one clause. This analysis is commonly applied to infinitive constructions in Romance languages. Matthews (1997:55) gives the following example from Italian.

(15) La farò venire
 her I.will.make to.come

In Italian the sentence in (15) is considered as a single clause that is derived from the complex sentence *I will make she to come*, a main clause that contains a causative verb (*will make*) with a complement clause. In NGT, the complement verb in constructions as in (14) (that are grammatical without the non-manual marker) is not infinite, since the complement clause MARIJKE_{signer}VISIT_{left} can occur on its own as an independent sentence in the right context in which the null subject refers to INGE. Nonetheless, one informant could form sentences

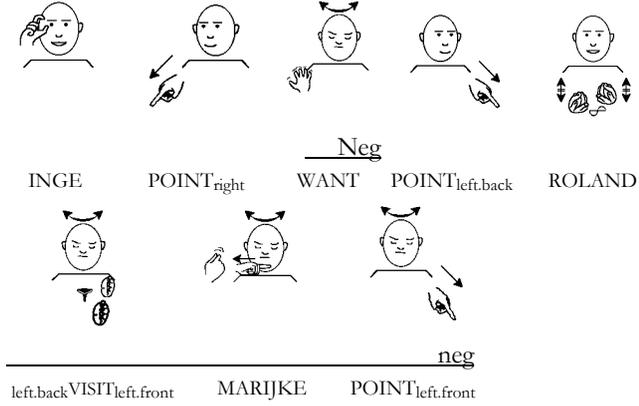
as in (16) where the object of the complement clause is raised to the matrix clause and expressed before the matrix predicate, which is only possible if the two predicates are analysed as one, or at least as having a tighter relationship than between a complement-taking predicate and its embedded predicate.

- (16)
-
- %INGE POINT_{right} MARIJKE POINT_{left} WANT right VISIT_{left}
- ‘Inge wants to visit Marijke.’
- (NGT)

The other two informants, however, judged sentences as (16) as ungrammatical. For this reason, and in absence of other evidence, I do not want to consider NGT constructions such as the affirmative version of (14), and (16) as clause union yet. But it might be the case that these constructions are currently developing into clause union in NGT.

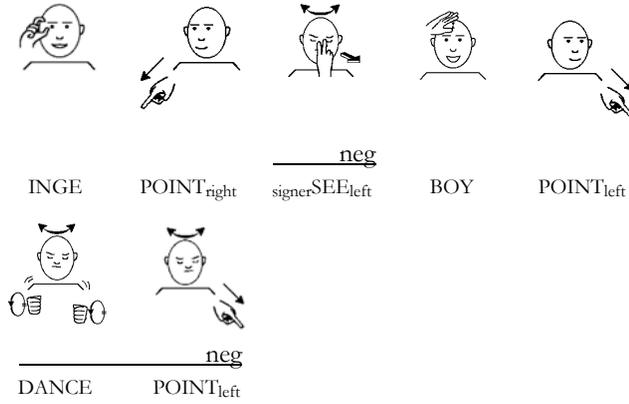
So far, we have seen three possibilities of the occurrence of the non-manual negation marker in NGT-complex sentences. First, the event expressed by the main predicate can be negated by having the negation marker occurring over this main predicate only. Negation of the event expressed by the main predicate can also be established by spreading the negation marker from the matrix predicate onto the complement clause. Third, negation of the complement event can be established by having a negation marker over the complement predicate. The fourth possibility, negating the main and embedded event is possible, too, in NGT. In this case, each predicate occurs with its own negation marker. Examples for each class of complement-taking predicates are in (17). Thus, in (17a) both the want-event and the visit-event are negated by a separate non-manual marker, which results in a negation of both events in the meaning of the sentence.

(17) a.



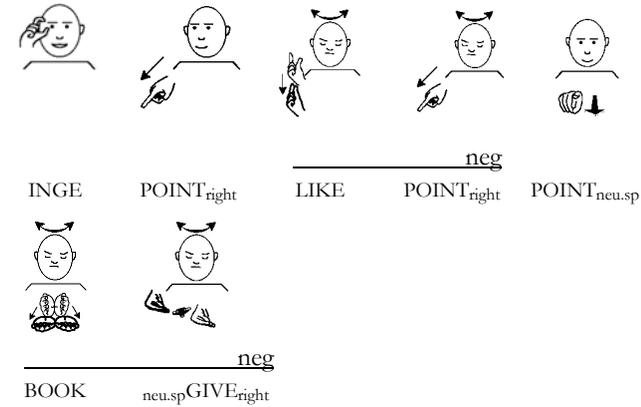
'Inge does not want Roland not to visit Marijke.'

b.



'Inge does not see that the boy is not dancing.'

c.



'Inge_i does not like (the fact) that you do not give her_i the book.'

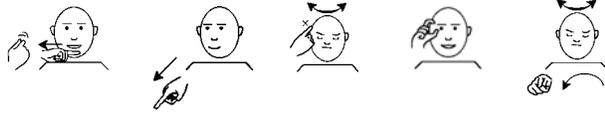
d.



TWO.OF.US neg JOHAN neg
 PRETEND ILL

‘We do not pretend that Johan is not ill.’

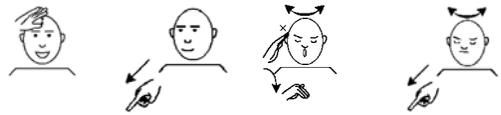
e.



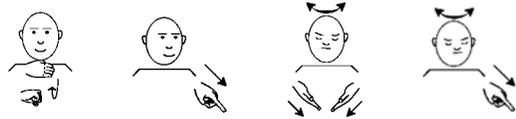
MARIJKE POINT_{right} neg INGE neg
 KNOW leftCOME_{right}

‘Marijke_i does not know that Inge does not come to her_i.’

f.



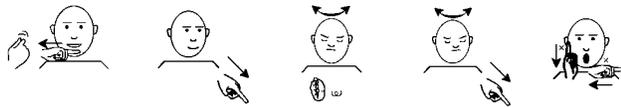
MAN POINT_{right} neg POINT_{right}
 BELIEVE



GOBLIN POINT_{left} neg POINT_{left}
 EXIST

‘The man does not believe that goblins do not exist.’

g.



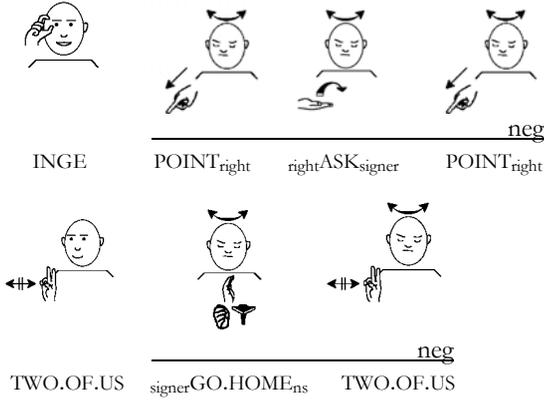
MARIJKE POINT_{left} neg DOUBT POINT_{left} PARENTS



neg
 leftVISIT_{right} POINT_{left}

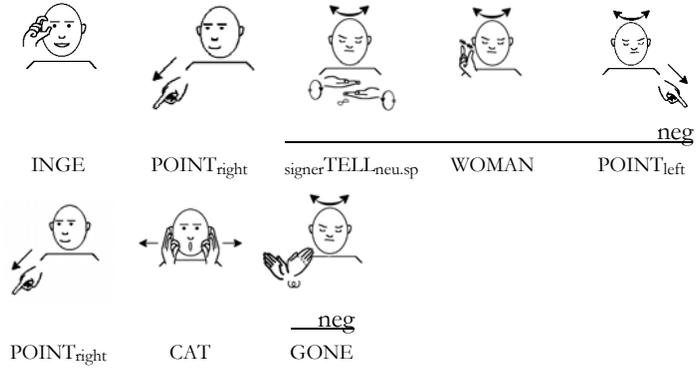
‘Marijke_i does not doubt that she_i will not visit her_i parents.’

h.



‘Inge does not ask me if the two of us are not going home.’

i.

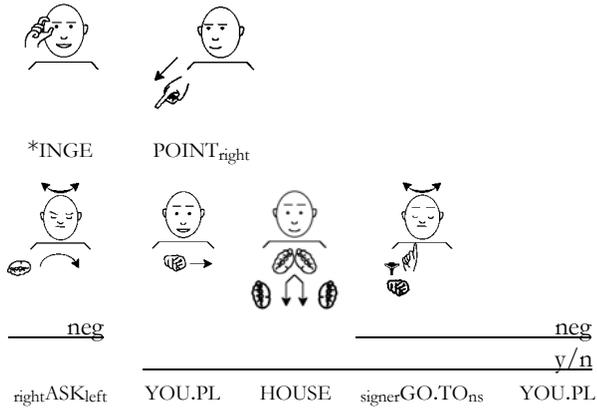


‘Inge; does not tell the woman that her; cat is not gone.’

(NGT)

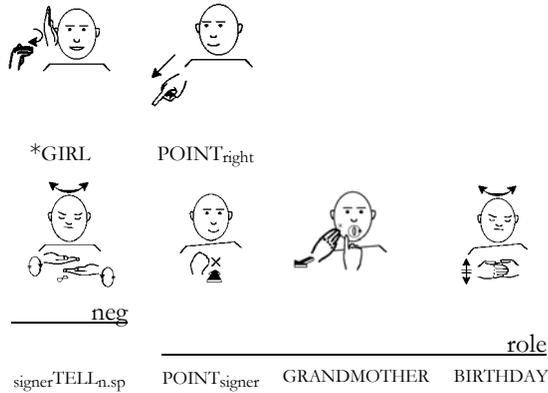
Since the informants judged that it is not possible to quote an utterance if it is denied that that utterance is expressed in the first place (see (12) above), double negation is not possible with utterance predicates that are followed by a direct speech complement, as shown in (18).

(18) a.



‘Inge does not ask them: “Are you not going home?”’

b.

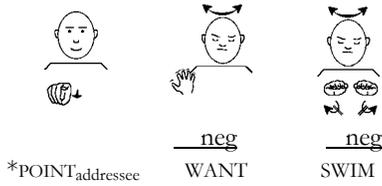


‘The girl does not say: “My grandmother is not having her birthday.”’

(NGT)

Another exception to this fourth possibility of non-manual negation marking in complex NGT-sentences are complement constructions with *to want* and coreferential subjects in both clauses, as can be seen in (19). This is not at all strange in view of the discussion of (14) above, which has shown that in such sentences there might be a tighter relationship between the matrix verb and its complement predicate.

(19)



‘You do not want not to swim.’

(NGT)

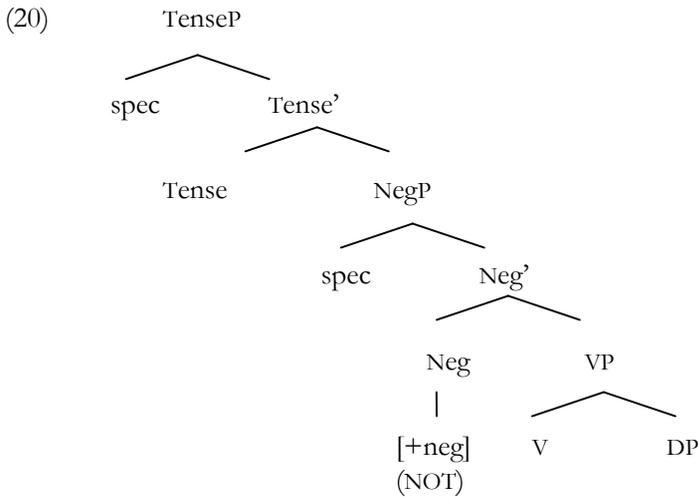
As shown above, the non-manual negation marker headshake in NGT can occur in different positions in complex sentences which results in different meanings. First of all, the non-manual marker can occur over the matrix predicate only. In this case, the event of the matrix clause is negated. The same meaning is obtained if the marker spreads from the matrix clause predicate over the complement clause. The headshake can also accompany the complement clause predicate only in which case the complement predicate is the only one that is negated in the meaning of the sentence. Finally, a combination of negation is possible too, that is, two separate negation markers occur in a complex sentence, one above the matrix clause predicate and one above the complement clause predicate. In this latter case both matrix and complement events are negated.

If the headshake spreads from the matrix clause to the complement clause, it must be concluded that the complement clause is syntactically embedded under the matrix clause, otherwise this extension would not be possible. Hence, the non-manual negation marker can be used in NGT to reveal syntactic subordination.

5.4 Analysis

Negation in ASL is analysed by Neidle et al. (2000) in the following way (20).⁶ Neidle et al. assume a NegP directly above VP, because the manual negation sign, that is the negation particle, precedes the verb (see example (2) above). Manual tense markers in ASL are not in the scope of negation (Neidle et al. 2000:80). Therefore, the NegP is situated below TenseP.

⁶ The structure given in (20) is simplified. The projections AspP, AgrsP, and AgroP intervene NegP and VP (Neidle et al. 2000:3).



Neidle et al. further assume that V does not raise to Neg. Furthermore, the non-manual negation marker is the overt realisation of the *syntactic* feature [+neg]. According to Neidle et al. the head Neg is filled with [+neg], and optionally with the negation sign NOT. The non-manual negation marker obligatorily attaches to lexical material. So, if NOT is present in Neg, the marker attaches to NOT and can occur over this negation sign only, as in (21a). Optionally, the non-manual marker can spread over the lexical material that is in the c-command domain of [+neg], see (21b). If NOT is not present, there is no lexical material in Neg for the non-manual marker to attach to. In order for the sentence not to become ungrammatical, the marker attaches to the lexical material in VP that is in the c-command domain of [+neg], as in (21c).

- (21) a. $\overline{\text{neg}}$
 JOHN [_{NegP} [_{Neg} NOT] [_{VP} BUY HOUSE]]
 'John is *not* buying a house.'
- b. $\overline{\text{neg}}$
 JOHN [_{NegP} [_{Neg} NOT] [_{VP} BUY HOUSE]]
 'John is not buying a house.'

- _____ neg
- c. JOHN [_{NegP} [_{Neg} +neg] [_{VP} BUY HOUSE]]
- ‘John is not buying a house.’

(ASL)

In this analysis of negation it is immediately clear why the non-manual negation marker obligatorily spreads over material to its right in the absence of a manual negation sign, and why it is not only the verb that the negation marker cooccurs with, but rather everything that the [+neg] feature c-commands, thus the verb and its object, even if this object is a complement sentence.

I have shown in the former section that negation in NGT is different from negation in ASL. First of all, negation is established only by a non-manual negation marker and not by a negative particle. The marker in NGT is attached to the predicate and optionally stretches over the predicate’s object. It is because of this optionality of the spreading of the non-manual marker that Neidle et al.’s analysis of negation in ASL cannot be applied to NGT.

In DGS and Catalan Sign Language (LSC, *Llengua de Signes Catalana*) the same kind of optional spreading of the non-manual negation marker as in NGT is observed (Pfau 2002:287, 2003:14, Pfau & Quer 2003). In the same articles it is stated that both DGS and LSC are underlyingly SOV.⁷

- _____ neg
- (22) a. MOTHER FLOWER BUY
- _____ neg
- b. MOTHTER FLOWER BUY
- ‘Mother is not buying a flower.’

(DGS)

⁷ The spreading of the negative headshake onto the object has interpretive consequences in LSC where it yields a contrastive reading ‘Santi does not eat meat, but fish he does’ (p.c. Josep Quer).

- (23) a. SANTI MEAT EAT neg
 _____neg
 b. SANTI MEAT EAT
 ‘Santi does not eat meat.’

(LSC)

However, DGS and LSC are unlike NGT and resemble ASL in that they make use of an optional negation particle, a manual sign, which in contrast to ASL occurs in sentence-final position. The two European signed languages differ from each other in that in LSC the non-manual marker can be combined with the negation sign only (24), whereas this is not possible in DGS (25).

- (24) a. SANTI MEAT EAT NOT neg
 _____neg
 b. SANTI MEAT EAT NOT
 ‘Santi does not eat meat.’

(LSC)

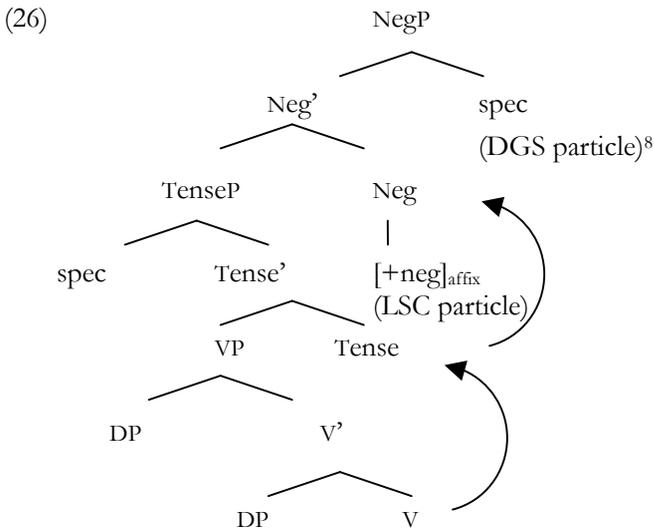
- (25) a. *MOTHER FLOWER BUY NOT neg
 _____neg
 b. MOTHER FLOWER BUY NOT
 ‘Mother is not buying a flower’

(DGS)

Pfau & Quer (2003) give a unified account for the three signed languages DGS, LSC and ASL (see also Pfau 2002, 2003). First of all, they adopt Neidle et al.’s analysis for ASL. They further assume that [+neg] in DGS and LSC is not a syntactic feature, as it is in ASL, but rather an affix as in Turkish for example (see Pfau 2002 and 2003 for examples), thus, a *morpheme*. The affix is seen as a featural affix without phonological content (cf. Akinlabi 1996) that triggers a prosodic alteration of the base form to which the affix is attached (in this case the predicate is expressed with a headshake). This is in line with

current ideas in which many non-manual facial markers are considered to have a prosodic function in signed languages that can be compared to intonational contours in spoken languages (Nespor & Sandler 1999; Sandler 1999; Wilbur 2000; see also fn. 3 in the gloss conventions).

Pfau & Quer claim that the negation affix occupies the head Neg of the projection NegP. In LSC the manual negation particle optionally occupies Neg as well, whereas in DGS the particle is located in spec,NegP. This latter assumption can explain the difference in grammaticality between (24a) and (25a). If no manual material, i.e. the negative particle, is present in Neg, the Stray Affix Filter, that requires that every affix attaches to a host (Baker 1988:140), triggers V-to-Neg raising in DGS and LSC and results in (22a) and (23a) with the negation marker accompanying only the predicate. V-to-Neg raising thus always occurs in DGS (25), because the negation particle is located in spec,NegP. Whereas in LSC the verb does not have to raise to Neg if the negation particle is present in Neg, and a headshake accompanying the negative particle only is grammatical (24a). The relevant structure for DGS and LSC is in (26) (from Pfau & Quer 2003).



⁸ Pfau & Quer (2003) assume that the negative particle NICHT in DGS is lexically specified for headshake.

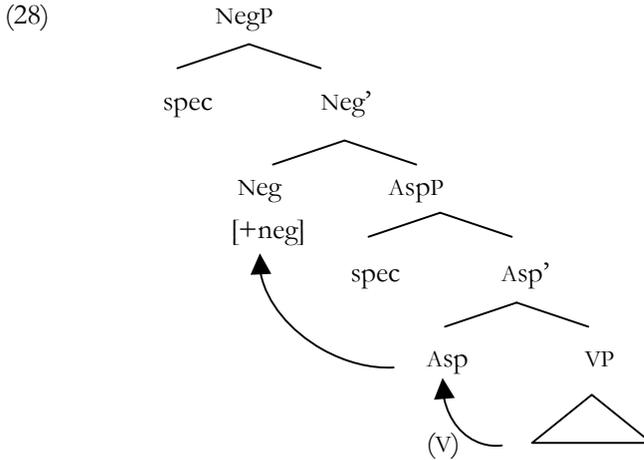
In ASL [+neg] cannot be an affix because V-to-Neg raising is blocked, as can be seen in example (27).

- neg
- (27) *JOHN [_{NegP} [_{Neg} [_V BUY]]] [_{VP} HOUSE]]
- ‘John is not buying a house.’

(ASL)

By analysing [+neg] as a prosodic feature Pfau (2002, 2003) can account for the spreading of this feature across word boundaries (see (22) and (23)). He compares the spreading of headshake with external tone sandhi phenomena in tonal languages like Setswana (spoken in South Africa and Botswana) and Tsonga (a Bantu language spoken in Mozambique and South Africa) (see Pfau 2002, 2003 for examples).

The analysis of Pfau (2002, 2003) and Pfau & Quer (2003) can be adopted for NGT. As in DGS and LSC the spreading of the non-manual marker headshake is optional in NGT. This means that the spreading is not syntactically determined, as opposed to ASL, and that [+neg] can therefore be analysed as a featural affix that occupies the head Neg of NegP. Since NGT has no negative particle, neither Neg nor spec, NegP is filled with manual material. V-to-Neg raising is triggered then, as a result of the Stray Affix Filter. This results in a headshake obligatorily accompanying the predicate which can optionally spread onto the object of the predicate. The relevant structure for NGT is in (28).



As can be seen in structure (28), I leave open whether the object is base-generated pre- or post-verbally. It was already shown in example (7a) in chapter 1 that objects in NGT can occur pre-verbally and post-verbally without there being any difference in meaning.^{9,10} Since in NGT aspect rather than tense is expressed by an affix on the predicate (Schermer & Koolhof 1990), I assume an AspP above VP, where the verbs obligatorily moves to, to check its aspect feature. If this assumption is right, it is of no consequence whether the object is base-generated before or after the verb in VP. To derive the SVO order no further movement of the object is needed, since V already moved to a position before O, namely to the head Asp. To derive the SOV order the object has to move to spec,AspP from both base-generated positions. Therefore, I adopt the structure in (28). Of course, more research needs to be done, just as more data

⁹ In the grammar of one informant specificity in meaning with respect to the position of the object seems to play a role with one verb only, namely with the complement-taking predicate *to want*. The signer considers sentence (ia) with SVO order as grammatical. A sentence with *to want* and the object in preverbal position is judged as grammatical only if the object is specific. This is done in (ic) by using a POINT sign that functions as demonstrative pronoun which becomes clear from the meaning of this sentence (only the glosses are given in (i)).

- (i)
- a. POINTsigner WANT COFFEE
'I want coffee.'
 - b. *POINTsigner COFFEE WANT
 - c. POINTsigner COFFEE POINTright WANT
'I want this/that coffee.'

¹⁰ It seems to be the case that children acquiring NGT as their native language use as many OV as VO orders in the two-sign-stage (p.c. Carola Rooijmans).

need to be collected to confirm the movement of V to higher functional projections in NGT.

5.5 Conclusion

In NGT, the main clause negation marker does not have to extend over the embedded clause obligatorily, as was shown in (9). In this respect NGT differs from ASL where it is obligatory for the headshake to extend over all the signs in a complex sentence, including the complement clause, that fall within the scope of the matrix predicate negation. Negation in NGT, therefore, has to be analysed differently from negation in ASL. The analysis of Pfau & Quer (2003) for negation in DGS and LSC, in which [+neg] and its phonological realisation as a headshake is a featural affix rather than a syntactic feature, is adopted for NGT. By considering [+neg] as an affix, it is possible to explain why the non-manual negation marker in NGT optionally spreads over its object, which can be a DP or a complement clause.

Although the main clause negation marker does not stretch over the embedded clause obligatorily, the absolute duration of the non-manual negation marker can be used in NGT as a diagnostic for syntactic embeddedness. If this marker spreads from the matrix predicate onto the second clause, this second clause must be in the c-command domain of the matrix clause, and hence, be subordinated to it. With the aid of the absolute duration of the non-manual negation marker I have shown that the potentially embedded clauses with the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, *to doubt*, *to ask* and *to tell* are syntactically subordinated.

However, the argument status of these syntactically subordinated clauses has not been established yet. Since NGT is a pro-drop language, it could still be the case that a null referential pronoun saturates the argument structure of the investigated complement-taking predicates in which case the subordinated clauses are not complement clauses but adjunct clauses.

4th adventure: *Wh*-extraction

We are definitely back on the right track again. The previous adventure did not only confirm this, it also yielded new evidence that brings us closer to our goal. But we still lack a final piece of proof. The new adventure looks exciting, and hopefully it will give us the decisive clues.

6.1 Introduction

Wh-extraction of elements from potentially embedded clauses is another way to test whether a clause is syntactically embedded or not. Ross (1967) stated that extraction of elements from coordinate structures is universally severely restricted. This is shown for an English *wh*-question in (1a). Elements from subordinated clauses, however, can be extracted in a large number of languages, as in example (1b), but not if these subordinated clauses are adjunct clauses, as can be seen in example (1c).

- (1) a. *What song_i did Ellie buy a book and sang t_i for me?
b. What song_i did Ellie say that she sang t_i for me?
c. *What song_i was Daniëla angry after Ellie sang t_i for me?

These observations imply that if *wh*-extraction of an element out of the potential complement clause to the main clause is possible in NGT, this potential complement clause is not only syntactically subordinated to the main clause, but also occupies an argument position of the main predicate. The

potential complement clause is thus not an adjunct clause but a syntactic complement clause.

For ASL, Padden (1988) used topicalisation, another type of *wh*-extraction, to show whether a clause is embedded in another clause. Her examples, which I have already mentioned in chapter 2, example (12), are repeated here in (2). In (2a) the second clause ${}_2\text{GIVE}_i$ is subordinated to ${}_1\text{INDEX } {}_1\text{TELL}_2$. Topicalisation of a constituent from this second, subordinated clause to the main clause is possible. In (2b), however, the second clause ${}_j\text{GIVE}_1$ is not subordinated but coordinated to the matrix clause ${}_2\text{GIVE}_1$ MONEY. Topicalisation out of this second clause is therefore prohibited.

- (2) a. ______t
 TICKET, ${}_1\text{INDEX } {}_1\text{TELL}_2 {}_2\text{GIVE}_i$
 ‘Those tickets, I told you to give to him.’
- b. ______t
 *FLOWER, ${}_2\text{GIVE}_1$ MONEY, ${}_j\text{GIVE}_1$
 ‘Flowers, he gave me money but she gave me.’

(ASL; Padden 1988:91ff., exx.32 and 38)

In this chapter I will investigate whether extraction of elements can uncover the relation between clauses in (potential) NGT complement constructions. I will look at *wh*-extraction in *wh*-questions and topicalisation. It should be kept in mind that the results from the extraction data work one way only. If *wh*-extraction in complex sentences is possible, this is evidence for syntactic subordination. If, however, *wh*-extraction is not possible, this does not prove that the clauses under investigation are not in a subordinated relation to each other. In these cases, the ban on *wh*-extraction may be due to other factors, such as improper government (Chomsky 1986b, Lasnik & Saito 1984).

In section 6.2 extraction of *wh*-signs and *wh*-constituents will be considered. First, I will show that extraction of *wh*-signs does give evidence for the subordinated status of (potential) complement clauses, but not in every case (6.2.1). Then I will go into the issue of sentence-final *wh*-constituents and rightward *wh*-movement. The data in my corpus contradict the claim that in NGT, *wh*-constituents, if not *in situ*, always occur sentence-finally. I will propose to analyse the NGT non-*in situ* sentence-final *wh*-constituents as a

result of doubling and “*wh*-drop” (6.2.2), just like some cases of pronominal right dislocation was analysed by Bos (1995). Furthermore, it is shown for ASL that although sentence-final *wh*-constituents occur in this language, a rightward movement analysis of these *wh*-constituents as proposed by Neidle et al. (2000) is not required; the doubling and drop analysis can be applied in these cases as well (6.2.3). In section 6.3 I will discuss topicalisation, another type of *wh*-movement. Although at first sight, this test yields promising results, it turns out that these results are deceptive. What looks like topicalisation of an element from the potentially embedded clause (section 6.3.1) turns out to be left dislocation, that is base-generation of a topic constituent with a coreferent null pronoun in the second clause (6.3.2). Nevertheless, the possibility of left dislocation is also evidence in favour of syntactic dependency between clauses in complex constructions.

6.2 Extraction of *wh*-signs

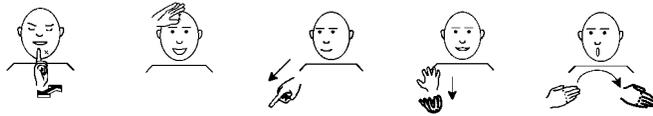
After I have presented the data on extraction in complex *wh*-questions in NGT in section 6.2.1, I will discuss the related issues of the sentence-final placement and rightward movement of *wh*-signs. In section 6.2.2, I will argue against the claim made in recent NGT grammars that the *wh*-constituent in simple NGT questions always occurs *in situ* or in sentence-final position. I will show that a sentence-final *wh*-constituent in NGT stands, in fact, *in situ*, or can be compared to a right dislocated pronoun. For ASL, Neidle et al. (2000) argue that a sentence-final *wh*-sign in this language results from rightward movement of the *wh*-constituent. I will dispute their arguments in 6.2.3.

6.2.1 *Wh*-extraction in complex NGT sentences

In NGT it is possible to extract a *wh*-constituent from the potentially embedded clause to the main clause in complex sentences. Strangely enough, this is only possible for *wh*-subjects and -objects with the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, and *to know* (3a-e). Extraction of a *wh*-constituent from the potentially embedded clause of the complement-taking predicates *to believe*, *to doubt*, *to ask*, and *to tell* is not possible. This can be seen in (3f-i). The non-manual *wh*-marker in NGT, glossed in the examples as ‘whq’,

consists of the elements lowered eyebrows and a raised chin (see the gloss conventions).¹

(3) a.



whq

WHO

BOY

POINT_{right}

WANT

right VISIT_{left}

ℓ_{who}

‘Who does the boy want to visit?’

b.



whq

WHO

signerSEE_{opposite}
of.signer

ℓ_{who}

BOOK

STEAL

POINT_{you}
or

‘Who do you see stealing the book?’

c.



whq

WHERE

POINT_{left}

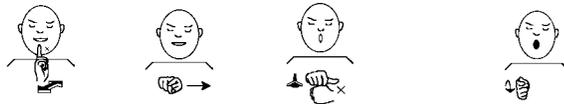
LIKE

POINT_{right}

signerGO.TO_{ns}

‘Where does he like her going to?’

d.



whq

WHO

POINT_{you}.PL

PRETEND

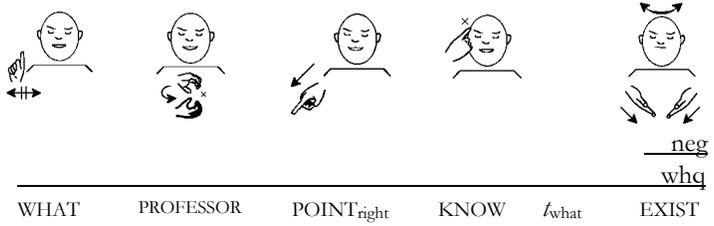
ℓ_{who}

BOSS

‘Who do you pretend is the boss?’

¹ In (3), the object traces are mentioned post-verbally. However, I do not assume an underlying SVO-structure, as already explained in the former chapter, section 5.4.

e.



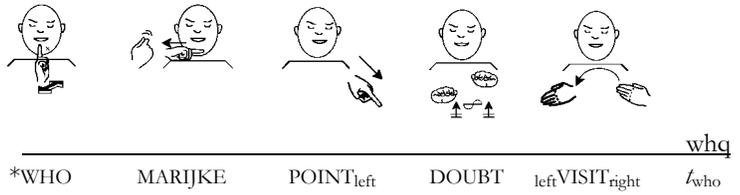
‘What does the professor know that does not exist?’

f.



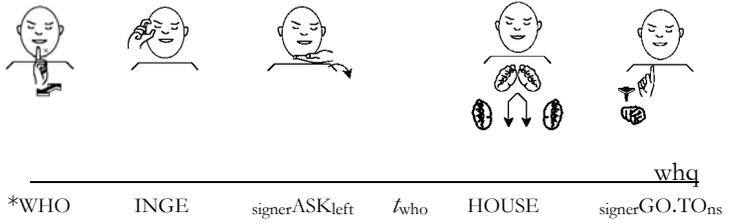
‘Who does Inge believe visits him?’

g.



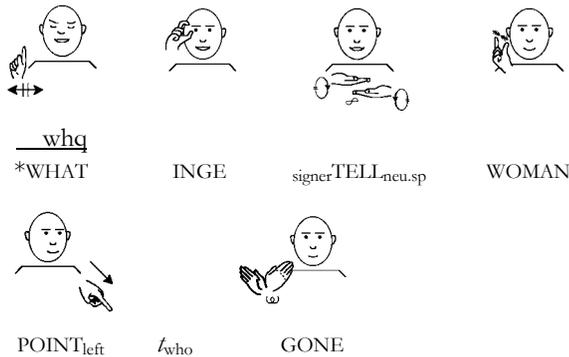
‘Who does Marijke_i doubt she_i will visit?’

h.



‘Who_i does Inge ask him if (he_i) went home?’

i.



“What does Inge tell the woman is gone?”

(the non-interrogative sentence is: ‘Inge tells the woman that the cat is gone.’)

(NGT)

Thus, the boundary for extraction of *wh*-constituents from potential complement clauses lies between the complement-taking predicates *to know* and *to believe* (cf. table 2, chapter 2). Both *to know* and *to believe* belong to the third level in Functional Grammar terms, so it cannot be the level a predicate belongs to that distinguishes between extraction and non-extraction. The discriminating factor might be factivity, i.e. the speaker’s attitude towards the truth of the dependent state of affairs. The predicate *to know* is factive, whereas *to believe* and *to doubt* are non-factive.

On the second level no reference can be made to truth value. The counterpart of factivity on this level is implication which says something about the logical entailment of the dependent state of affairs by the matrix predicate (Dik 1997b:114, see table 2 in chapter 2 and the discussion of presupposedness there). However, as can be seen in (3) all predicates on the second level allow *wh*-extraction, regardless of their type of implication (*to want* is a non-implicative verb, *to see* and *to like* are both implicative verbs, and *to pretend* is a contra-implicative verb). Moreover, factivity, or better, presupposedness does not play any role within predicates that belong to the fourth level (here *to ask* and *to tell*). Thus, designating factivity or presupposedness as the discriminating factor is not really plausible either. Furthermore, it has been reported in the literature on

extraction that factive clauses can be (weak) islands for extraction (among others, Barbiers to appear, section 4.4 for Dutch and Roorijck 1992:343 for French), rather than non-factive clauses.

Nevertheless, a combination of presupposedness and predicate level might be responsible for the appearance of the dividing line between *to know* and *to believe*. Since two different forces, that is, presupposedness and predicate level, pull as it were in two distinct directions, depicted in table 1 with a horizontal and a vertical arrow, this often results in a diagonal in the scheme with a dividing line within the third predicate level. In typological studies such a division, originating from different functional forces, is often found. For example, Hengeveld (1998:373ff.) found a boundary at the same point in the scheme with the same parameters for, among others, English and Spanish adverbial clauses.

		→		
		2	3	4
↓	- presupp.	+	+	-
↓	+ presupp.	+	-	-

Table 1: a diagonal dividing line resulting from the two functional forces presupposedness and predicate level pulling in different directions; a ‘+’ indicates that extraction of a *wh*-constituent out of the potential complement clause to sentence-initial position is possible, a ‘-’ indicates that this is not possible

The data in (3) show that the extraction of *wh*-constituents from potential complement clauses gives only partial clarity about the syntactic dependency relation between two clauses in a complex sentence. For the complement-taking predicates *to believe*, *to doubt*, *to ask*, and *to tell* such a relationship cannot be inferred from extraction of *wh*-constituents. However, for the predicates *to want*, *to see*, *to like*, *to pretend*, and *to know* extraction of *wh*-constituents reveals syntactic dependency between the clauses, that is the second clauses are subordinated to the first. Moreover, as discussed in the introduction (section 6.1) extraction from adjunct clauses is not possible. Since extraction from the second clauses in the sentences in (3) with *to want*, *to see*, *to like*, *to pretend*, and *to*

know is possible, these second clauses are not adjunct clauses but occupy argument positions of the main predicates and thus are syntactic complement clauses.

I would like to look at some related topics next. First I will discuss the sentence-final position of *wh*-constituents in NGT. Finally, I will turn to the sentence-final position of *wh*-constituents in ASL and show that there is no reason for adopting a rightward movement analysis to explain the occurrence of *wh*-constituents in this position.

6.2.2 Sentence-final *wh*-constituents in NGT

In recent NGT grammars it has been proposed that the *wh*-constituent often occurs sentence-finally, e.g. by the *Dutch Sign Centre* (Nederlands Gebarententrum) in their *Introduction Language Proficiency Sign Language of the Netherlands Workbook* (Inleiding Taalvaardigheid Nederlandse Gebarentaal Werkboek 2001:54). However, when we look at the examples given by the Dutch Sign Centre, then it must be concluded that the *wh*-constituents either appear *in situ*, as in (4), or in a separate clause, which can be inferred from the slash in the glosses, see (5). The *in situ* position can coincide with the sentence-final position if it concerns an *in situ wh*-object, as in (4). In cases like (5) nothing can be said about the position of the *wh*-constituent.²

- _____ whq
- (4) POINT_{you} DRINK WHAT
‘What do you drink?’

(NGT)

- _____ whq
- (5) POINT_{you} LIVE / WHERE
‘You live, where?’
‘Where do you live?’

(NGT)

² The examples in (4) and (5) are adapted and translated from the *Introduction Language Proficiency Sign Language of the Netherlands Workbook* 2001:4-6 and 16-3, respectively. To avoid confusion, the general question sign glossed as AV, that just like the PU-sign is made by two hands with palms facing upwards, is left out of the NGT examples, because not every informant uses this sign. The ‘/’ and ‘?’ in (5) indicate a clause boundary.

In my corpus, *wh*-object constituents in NGT simple *wh*-questions occur *in situ*, as in (4), or sentence-initially, as in example (6). The sentence-initial position of the object *wh*-sign in sentence (6) must result from leftward movement of this sign, because objects do normally not occur in sentence-initial position in NGT.

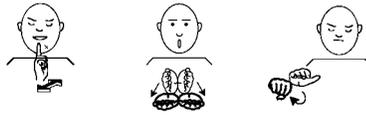
- (6)
- | | | | |
|---|---|---|---|
|  |  |  |  |
| <u>whq</u> | | | |
| WHAT | POINT _{signer} | LIKE | !what POINT _{signer} |
- ‘What do I like?’

(NGT)

Wh-subjects can appear *in situ*, as in sentences (7a) and (8a), and in sentence-final position too, as in (7b) and (8b). However, the sentences in (7c) and (8c) with doubling of the *wh*-subject suggest that the b-sentences in (7) and (8) should not be analysed as rightward movement of the *wh*-subject, but rather as doubling of the initial *wh*-subject in sentence-final position followed by deletion of the sentence-initial *wh*-sign (*wh*-drop), comparable to the analysis of pronominal right dislocation given by Bos (1995:130).³

³ It is interesting to note that just like pronominal right dislocation, the possibility of *wh*-right dislocation in NGT sentences like (7b) and (8b) seems to depend on the preference of the signer: one informant considered certain sentences with *wh*-right dislocation as questionable while the other informants judged the same sentences as perfectly grammatical (cf. chapter 4, section 4.2). Another similarity with right dislocation is that *wh*-right dislocation seems to relate to subjects mainly.

(7) a.



whq
WHO

BOOK

STEAL

b.



BOOK

STEAL

whq
WHO

c.



WHO

BOOK

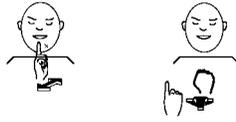
STEAL

whq
WHO

'Who steals the book?'

(NGT)

(8) a.



WHO

whq
rightCOME_{signer}

b.



rightCOME_{signer}

whq
WHO

c.



WHO

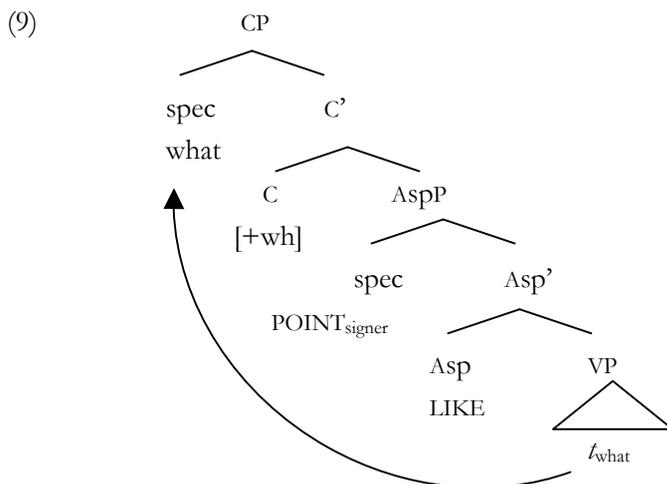
rightCOME_{signer}

Whq
WHO

'Who comes to me?'

(NGT)

Therefore, I will assume that in NGT, *wh*-constituents move leftward to the sentence-initial *spec,CP* to check their *wh*-feature [+*wh*], even though this leftward movement is vacuous for short movement of *wh*-subjects. Whether this movement takes place before or after spell-out, determines the *wh*-constituent being in sentence-initial position or *in situ*, respectively. The relevant structure for NGT is in (9).



In ASL, constructions with a sentence-initial and sentence-final *wh*-constituent occur as well (10).^{4,5} The *wh*-constituents in sentence-initial position in these sentences are analysed by Neidle et al. (2000:115ff.) as *wh*-topics. Since, their arguments are open to criticism (see the discussion below), I will not adopt their analysis for NGT.

- _____ whq
- (10) “WHAT”, JOHN BUY “WHAT”
 ‘What, what did John buy?’

(ASL; Neidle et al. 2000:115, ex.16)

⁴ The ASL sign glossed as “WHAT” in (10) is a so-called generic *wh*-sign and differs in form and distribution from WHAT without quotation marks (see Neidle et al. 2000:117, and 187, fn.14 for more details).

⁵ The status of the ASL sentence in (10) above is dubious. On the one hand, since Neidle et al. use a comma in the glosses after the first sign “WHAT”, they seem to regard this sign as an extra-clausal constituent. However, on the other hand, the whole sentence is accompanied by a continuous non-manual *wh*-marker.

Neidle et al.'s most important evidence for the analysis of sentence-initial *wh*-constituents as *wh*-topics in constructions like (10) comes from the distribution of *wh*-topics with respect to other topics (ibid.:116). First of all, they show that an ASL sentence can have two topics only (ibid.:50ff.). On the basis of this observation they predict that in a double *wh*-construction as in (10), only one other topic can occur. This prediction is borne out. Therefore, Neidle et al. conclude that the sentence-initial *wh*-constituent is a topic (ibid.:116). However, we can assume that in ASL, just like in NGT, focus elements can occur sentence-initially, too, and that sentence-initial focus elements fill one of the two sentence-initial 'topic' positions that Neidle et al. assume. Hence, it is not at all strange that as well as a sentence-initial *wh*-constituent, which is generally considered to be a focus constituent, only one other sentence-initial constituent is allowed. Thus, analysing the sentence-initial *wh*-constituents as topics is not necessary to explain the distribution of these constituents with regard to topic constituents.

Second, according to Neidle et al., the two sentence-initial constituents in ASL occur in a fixed order: a base-generated constituent precedes a moved constituent. They assume that the *wh*-constituent is base-generated and thus predict that this constituent always precedes a moved constituent. This prediction seems to be true, although Neidle et al. have to admit that "...it requires some effort to create a plausible context..." (ibid.:188, fn.15) for such a sentence. If both sentence-initial constituents are base-generated, then the order is free. According to Neidle et al. this holds, too, when one of those two constituents is a *wh*-constituent. The order between a sentence-initial *wh*-constituent and another base-generated sentence-initial constituent is, however, a matter of debate, since Lillo-Martin (1990:219-220) claims that a sentence-initial *wh*-constituent can only occur after another sentence-initial constituent.

Neidle et al. give two more arguments for considering the sentence-initial *wh*-constituent in sentences like (10) as *wh*-topics. Firstly, Neidle et al. claim that *wh*-topics have a special non-manual marking (most notably raised instead of lowered eyebrows). However, this non-manual marking does not always discriminate between *wh*-topics and regular *wh*-constituents.

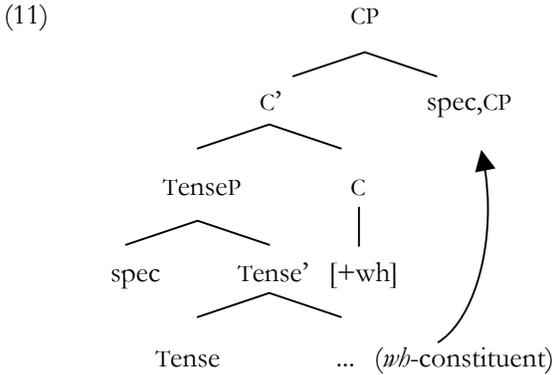
The nonmanual marking associated with *wh*-topics, ... thus exhibits some variability and does not always distinguish *wh*-topics from nontopic *wh*-phrases. (Neidle et al. 2000:115)

Secondly, Neidle et al. argue that the *wh*-topic is related to the *wh*-constituent in the sentence: the latter refers back to the *wh*-topic. However, this also holds for the “copy and delete” analysis presented above. Moreover, topics are typically followed by a short pause, whereas *wh*-topics in ASL are not (ibid.:116).

Therefore, I conclude the following for NGT *wh*-sentences with the *wh*-constituent in sentence-final position that cannot be analysed as being *in situ*. These result from copying the sentence-initial *wh*-constituent followed by optional deletion of this constituent. A similar analysis might be applicable to ASL constructions like (10) but I leave this open for further research. Sentence-initial *wh*-constituents in NGT that cannot be analysed as being *in situ* in regular and doubled constructions are analysed as being moved leftward to a sentence-initial spec, CP.

6.2.3 Rightward *wh*-movement

Neidle et al. (2000) claim that the *wh*-sign or constituent in ASL occurs *in situ* or in sentence-final position. They propose that the sentence-final position of *wh*-constituents in ASL results from these constituents moving rightward to Spec,CP that, like the head of CP, is located to the right of TP, as depicted in (11), (ibid.:109ff).



In recent generative literature claims have been made that universally all movement is leftwards (most notably Kayne 1994). The ASL data are a challenge to this proposed universal. According to Neidle et al. (ibid.:110), data on word order in ASL simple questions show that movement of the *wh*-constituent is optional but if it occurs, then it proceeds to the right. In (12) it is shown for *wh*-subjects that these occur either *in situ* or sentence-finally. The examples in (13) show for *wh*-objects that these can occur *in situ* but not sentence-initially. Of course it is not completely clear in (13a) whether the *wh*-object (vacuously) moved to the right, but the TP-final adverbial *yesterday* in (14) is taken as evidence for rightward movement of the *wh*-object in ASL.

- (12) a. _____ wh_q
 WHO LOVE JOHN
- b. _____ wh_q
 ʔ LOVE JOHN WHO_i
 ‘Who loves John?’

(ASL; Neidle et al. 2000:110, exx.1,2)

- (13) a. _____ wh_q
 JOHN LOVE WHO
- b. _____ wh_q
 *WHO JOHN LOVE
 ‘Who does John love?’

(ASL; ibid.:110, exx.3,4)

- (14) a. TEACHER LIPREAD WHO YESTERDAY whq
- b. TEACHER LIPREAD t_i YESTERDAY WHO_i whq
 ‘Who did the teacher lipread yesterday?’

(ASL; *ibid.*:111, ex.5,6)

However, the sentences in ASL where the *wh*-constituent occurs sentence-finally might also be analysed as sentences that consist of two coordinated clauses of which the first clause contains a null argument and the second clause the *wh*-argument that is coreferent with the null argument in the first clause. Ellipsis of the proposition has occurred in the second clause (cf. also Petronio & Lillo-Martin’s 1997 multi-sentence discourses).

Another analysis that can be proposed for the ASL data is the *wh*-doubling and drop analysis that was proposed in section 6.2.2 for the NGT sentences with a *wh*-subject in sentence-final position.

If one of these analyses of “sentence-final *wh*-constructions” is right, then a rightward movement analysis to a Spec,CP at the right of TP is no longer needed. Under the paratactic analysis, the adverbial YESTERDAY in (14b) would occur in the TP-final position of the first clause. The second clause that contains the *wh*-sign only, forms a clause in itself in which the *wh*-sign can be said to have vacuously moved leftwards to Spec,CP that is at the left of the TP of the second clause. Under the doubling and drop analysis the object *wh*-sign *in situ* in (14b) is doubled in sentence-final position followed by deletion of the *in situ wh*-sign.

However, Neidle et al. present two more pieces of evidence for the rightward movement analysis, one of which is evidence against the paratactic analysis. This evidence for the rightward movement analysis comes from the distribution and intensity of the non-manual *wh*-marker, which in ASL consists of furrowed brows, squinted eyes, and a slight side-to-side headshake (Neidle et al. 2000:111).

First I will discuss the distribution argument. If the *wh*-constituent stays *in situ*, then in ASL the *wh*-marker spreads obligatorily over the whole sentence, as

in the a-examples in (12)-(14) above and in (15a) and (16a). If the *wh*-constituent occurs sentence-finally, then the marker can occur over the *wh*-word or constituent only, as in (15b) and (16b), or it can spread optionally over the entire sentence, as in the c-examples.

- (15) a. _____ whq
 WHO LOVE JOHN
- b. _____ whq
 t_i LOVE JOHN WHO_i
- c. _____ whq
 t_i LOVE JOHN WHO_i
 ‘Who loves John?’
- (ASL; *ibid.*:110, exx.1, 9, 2)

- (16) a. _____ whq
 TEACHER LIPREAD WHO YESTERDAY
- b. _____ whq
 TEACHER LIPREAD t_i YESTERDAY WHO_i
- c. _____ whq
 TEACHER LIPREAD t_i YESTERDAY WHO_i
 ‘Who did the teacher lipread yesterday?’
- (ASL; *ibid.*:111ff., exx.5, 10, 6)

The optional spreading of the *wh*-marker in the c-examples above is direct evidence against the paratactic analysis. As in chapter 5 on non-manual negation I assume with Padden (1980:89ff.) that a non-manual marker can spread over a clause boundary only if one of the clauses is subordinated to the other one, but not if both clauses are adjacent, as they must be in a paratactic analysis. However, the doubling and drop analysis is still a valid option to explain the ASL data in (13a) and (14).

Neidle et al. infer further evidence for a rightward movement analysis from the intensity pattern of the non-manual *wh*-marker. They claim (*ibid.*:111) that the non-manual *wh*-marker is associated with the abstract syntactic feature [+wh]. Lexical *wh*-signs have an inherent [+wh] feature. *Wh*-signs need to move overtly or covertly, that is at LF, to spec,CP to check the [+wh] feature under

specifier-head-agreement. According to Neidle et al. the *wh*-marker is most intense at the location of this [+wh] feature. This means that if a *wh*-sign occurs clause-finally, thus in spec,CP in Neidle et al.'s analysis, then the marker is most intense above this *wh*-sign, e.g. WHO in (17). The intensity decreases in signs that are further away from [+wh]. Hence, YESTERDAY in (17) has a less intense *wh*-marking than WHO but more intense than TEACHER which has the least intense non-manual marking (the intensity of the *wh*-marker is reflected by the grey-and-black line: the most intense part is black, the least intense part light grey).

- _____ whq
- 
- (17) [[TEACHER LIPREAD _i YESTERDAY]_{TP} [+wh]_C WHO_i]_{CP}
 ‘Who did the teacher lipread yesterday?’
 (ASL)

If the *wh*-sign is *in situ*, the intensity of both [+wh] features is maximal between those features (Neidle et al. call this *perseveration* (ibid.:118)). Thus, every sign in example (18a) is made with a *wh*-marker that has the same intensity throughout the sentence, whereas in (18b) only WHO and YESTERDAY occur with a *wh*-marker that has maximal intensity.⁶

- _____ whq
- 
- (18) a. [[WHO LOVE JOHN]_{TP} [+wh]_C]_{CP}
 ‘Who loves John?’
- _____ whq
- 
- b. [[JOHN SEE WHO YESTERDAY]_{TP} [+wh]_C]_{CP} (ibid.:120, exx.27,28)
 ‘Who did John see yesterday?’
 (ASL)

⁶ In the actual representation of sentence (18b) in Neidle et al. (2000:120, ex.28) WHO and YESTERDAY are not represented with a *wh*-marker that has the same intensity. Furthermore, the *wh*-marker seems to begin above the sign SEE and not at the beginning of the sentence, above the sign JOHN. Since this is not entirely parallel to what is asserted in their main text, I consider the representation of this sentence in Neidle et al. as containing some errors which I did not take over in my representation of (18b).

However, there is a problem with this analysis. If the intensity of the *wh*-marker was indeed determined by proximity of a manual sign in clausal hierarchy to the node of origin of the [+wh] feature, that is the head C, a completely different pattern would be expected in the case of “sentence-final *wh*-constructions” than the one described by Neidle et al. It would be expected that the intensity is maximal in C which contains the [+wh] feature. The intensity is a little less in the head Tense, which is the left(!) edge of the clause in the analysis of Neidle et al., as can be seen in the structure in (11). The non-manual marker has the least intensity in the head V which is, although in the middle-field linearly speaking, most far away from C in Neidle et al.’s clausal hierarchy for ASL (see the structure in (11)). Thus, the intensity pattern of the sentence in (17) should be as depicted in (19): WHO is accompanied by the most intense *wh*-marking, TEACHER is marked less intensely than WHO but more intensely than YESTERDAY, that occurs with the least intense *wh*-marking.⁷

- whq
- 
- (19) [[TEACHER LIPREAD & YESTERDAY]_{TP} [+wh]_C WHO_i]_{CP}
 ‘Who did the teacher lipread yesterday?’

(ASL)

The non-manual pattern as depicted in (19) is clearly not what is attested in ASL. The intensity of the non-manual *wh*-marker thus forms no argument in favour of a rightward movement analysis. Rather, it is evidence for considering the non-manual *wh*-marker as prosody (cf. chapter 5 on the non-manual negation marker and Nespor & Sandler 1999; Sandler 1999; Wilbur 2000). Now, the optional spreading of the non-manual *wh*-marker, just as the optional spreading of the non-manual negation marker, can again be compared to external tone sandhi phenomena in tonal languages (Pfau 2002, 2003 and chapter 4). Unfortunately, a more detailed account of the *wh*-marker as prosody cannot be given here and must be left for future research. However, an analysis in line with the one given for negation by Pfau & Quer (2003) and in chapter 5 cannot be proposed. If the [+wh] feature in the head C of CP is considered to

⁷ I thank Josep Quer (p.c.) who drew my attention to this.

be a featural affix, then some element should move to C overtly (Stray Affix Filter). For ASL it is still a matter of debate whether the verb moves from V to a functional projection above V.⁸ As is clear from the NGT example in (6) above, the verb does not move to C in *wh*-questions, because the subject is positioned between the *wh*-object and the verb.

So far, Neidle et al. have shown on the basis of word order data and the distribution of the non-manual *wh*-marker that the *wh*-constituent in ASL occurs *in situ* or sentence-finally. However, in my view, the evidence they provide is not convincing to assume a rightward movement analysis of *wh*-constituents. Neidle et al. use the distribution of the *wh*-marker also to show that a leftward movement analysis of sentence-final *wh*-constituents in the light of Kayne's anti-symmetry proposal (1994) is not possible (ibid.:145ff.). To end up with a clause-final *wh*-constituent in an anti-symmetry framework, the *wh*-sign first moves leftward to a sentence-initial spec,CP. After that, everything else, that is the whole TenseP, needs to move to the left of the *wh*-constituent, as in (20). By that, a leftward movement account is given for sentences where the *wh*-marker accompanies the *wh*-constituent only.

- _____ whq
- (20) [_{XP} [_{TP} LOVE JOHN]_i [_{CP} WHO [_C +wh] ...*t_i*...]]
- ‘Who loves John?’
- (ASL)

To account for sentences where the *wh*-marker spreads over the entire sentence the head C with the feature [+wh] needs to move leftwards, again, to a position before the moved TenseP in order for the *wh*-marker to be able to occur over the whole sentence, see (21).

- _____ whq
- (21) [_{YP} [_C +wh]_j [_{XP} [_{TP} LOVE JOHN]_i [_{CP} WHO ...*t_j*... ...*t_i*...]]]
- ‘Who loves John?’
- (ASL)

⁸ Neidle et al. (2000:174, fn.5) claim that there is no verb raising in ASL, whereas Romano (1991) and Matsuoka (1997), among others, assert the opposite.

This second movement proposed by Neidle et al. is only necessary, because they associate the *wh*-marker with the syntactic [+wh] feature. If, however, the *wh*-marker is regarded as prosody, this optional spreading of the marker is not matched that strictly to syntax as Neidle et al. claim.

Thus, ASL “sentence-final *wh*-constructions” can indeed be analysed within a leftward movement approach with the doubling and copy analysis that was proposed for the NGT sentences with a sentence-final *wh*-sign. The only thing that still needs to be given is a trigger for the obligatory leftward movement of TenseP, and thereby an explanation for the ungrammaticality of sentence (13b) in ASL. I leave this for future research, just like the optional spreading of the non-manual *wh*-marker.

6.3 Topicalisation

Topicalisation is the grammatical process by which an element is extracted from its canonical position within the sentence to sentence-initial position. In general, the topicalised constituent moves to Spec,CP or Spec,TOP as depicted in (22).⁹

$$(22) \text{ [}_{\text{TOP/CP}} \text{ X}_i \text{ [}_{\text{CP/IP}} \text{ ... } t_i \text{ ...]] }$$

The topicalised constituent, that is, the topic of the sentence or what the sentence is about, is almost always in the literature put on a par with the constituent that provides old information. Interestingly, however, in NGT it can also be the constituent that provides new information, that is the focus constituent, that is moved to a position at the beginning of the sentence. Moreover, this ‘topicalised’ focus constituent can occur with the same non-manual markings as the topicalised topic constituent (see also Coerts 1992:83, fn.13). This non-manual marker can consist of the following elements: raised eyebrows, a lowered chin and wide opened eyes (see the gloss conventions).

⁹ In the literature on topicalisation, two general types of analyses of topicalisation can be found. The one given above in (22) and the analysis given by Chomsky (1977) in which the topicalised constituent is base-generated in a projection outside the sentence, TOP, while the coreferent *wh*-argument moves to what we call nowadays Spec,CP and is deleted obligatorily (i).

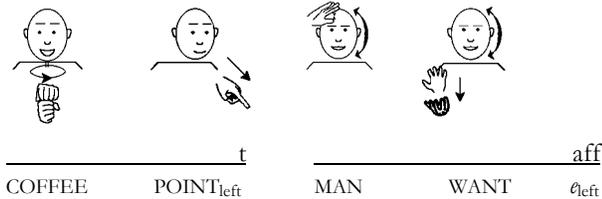
$$(i) \text{ [}_{\text{TOP}} \text{ X}_i \text{] [}_{\text{CP}} \text{ wh}_i \text{ [}_{\text{IP}} \text{ ... } t_i \text{ ...]] }$$

The occurrence of focus constituents with special prosody in sentence-initial position is also observed by Rizzi (1997) for Italian, among others. He calls this movement of focus constituents to sentence-initial position *focalisation* and he assumes different projections for topicalised and focalised constituents in sentence-initial position (before IP). In the remaining discussion I will not discriminate between topicalisation and focalisation since this is not relevant for the present analysis. I will therefore use the marker ‘ t’ in the glosses for both topicalised and focalised constituents that occur with the non-manual characteristics as described above. What is important in this study is whether a constituent from the potential complement clause can be extracted to the main clause. For, this will be syntactic evidence that the potential complement clause is a syntactic complement clause.

6.3.1 Topicalisation in NGT

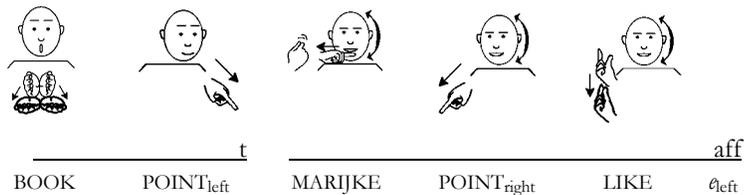
Coerts (1992) has already observed for simple NGT sentences that constituents can be topicalised to sentence-initial position. Some examples from my own corpus are given in (23).¹⁰

(23) a.



‘As for the coffee, the man wants (some).’

b.



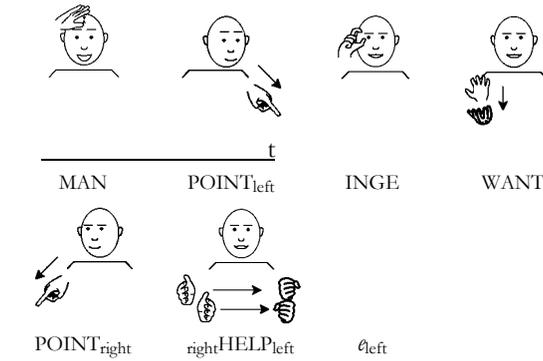
‘As for the book, Marijke likes (it).’

(NGT)

¹⁰ It will become clear below why I used ‘*el*’ (= empty category) in the glosses instead of ‘*?*’ (=trace).

In complex NGT sentences it is possible that an element from the (potentially) embedded clause occurs in sentence-initial position. This is shown in (24) for all classes of investigated complement-taking predicates. For example, in sentence (24b) the object of the second clause, BOOK POINT_{right}, is not standing in its common position before or after the verb STEAL but in sentence-initial position. Furthermore, it is accompanied by the non-manual topic marker.¹¹

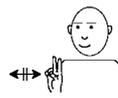
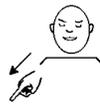
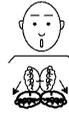
(24) a.



‘As for the man_i, Inge_j wants him/her_k to help (him_i).’

¹¹ As can be seen in the sentences (24d-f) subjects can also be extracted from the (potential) complement clause. No so-called *that*-trace effects seem to occur due to the fact that there is no overt complementizer in NGT. This might also be interpreted as NGT having no covert complementizer, or any other “barrier” that blocks proper government of the subject trace by the topicalised constituent (Lasnik & Saito 1984, Chomsky 1986b, Rizzi 1990). However, as will become clear below, in the sentences in (24) there is actually no topicalisation of object or subject constituents at all.

b.



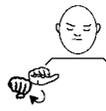
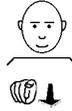
BOOK POINT_{right}

TWO.OF.US

YESTERDAY

signerSEE

opposite.of.signer



MAN

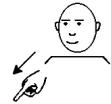
POINT<sub>opposite.
of.signer</sub>

STEAL

ℓ_{right}

‘As for the book_i, the two of us saw the man stealing (it)
yesterday.’

c.



AMERICA

INGE

LIKE

MARIJKE

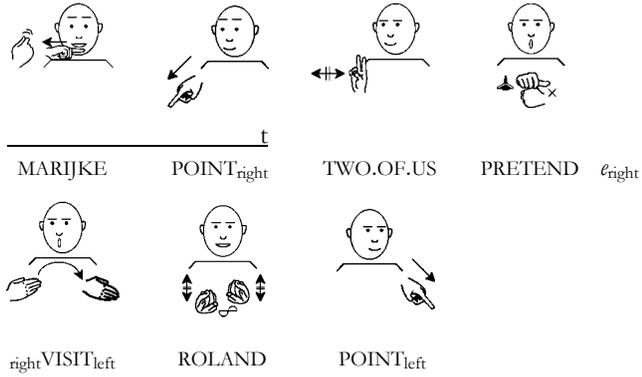
POINT_{right}



signerGO.TO_{neu.sp} ℓ_{america}

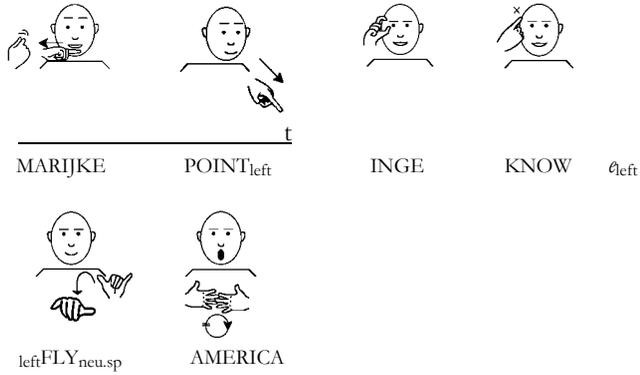
‘As for America_i, Inge likes (the fact) that Marijke goes there.’

d.



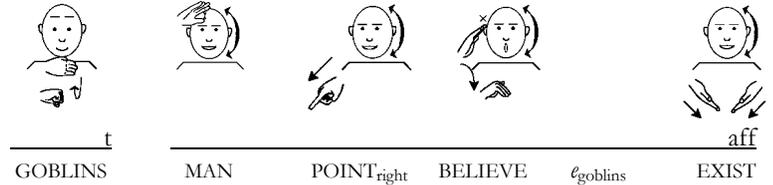
‘As for Marijke, the two of us pretend that (she;) will visit Roland.’

e.



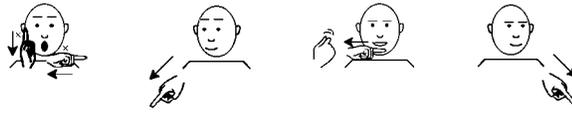
‘As for Marijke, Inge knows that (she;) will fly to America.’

f.



‘As for goblins, the man believes that (they;) exist.’

g.



_____ t
 PARENTS POINT_{right} MARIJKE POINT_{left}



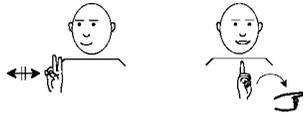
DOUBT TOMORROW leftVISIT_{right} ℓ_{right}

‘As for her_j parents_i, Marijke_j doubts if she_j should visit (them)_i tomorrow.’

h.



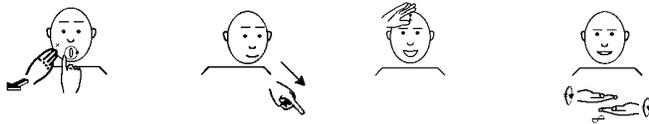
_____ t
 SOCCER POINT_{left} INGE POINT_{right} rightASK_{signer}



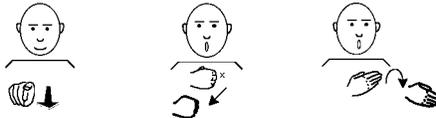
TWO.OF.US signerGO.TO_{left} ℓ_{left}

‘As for the soccer, Inge asks me if the two of us are going (there).’

i.



_____ t
 GRANDMOTHER POINT_{left} MAN opposite.of.signerTELL_{signer}



POINT_{opposite.} SON signerVISIT_{left} ℓ_{left}

of.signer

‘As for grandmother_j, the man_j tells me that his_j son visits (her)_i.’

(NGT)

From the results in (24), it could be concluded that the second clauses are syntactically subordinated to the complement-taking predicates, since topicalisation of an element from the potentially embedded clause to the main clause is possible. However, we have to consider more carefully whether the sentences in (24) really involve topicalisation.

6.3.2 Left dislocation

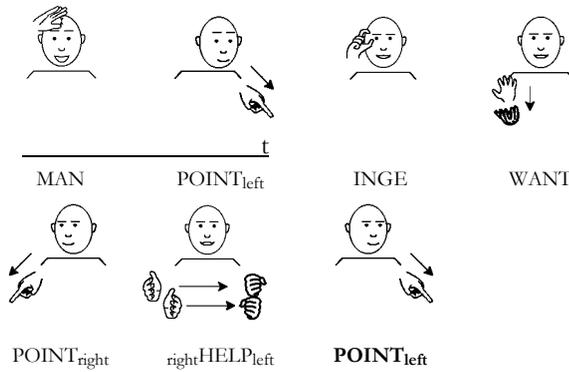
NGT is a pro-drop language, which means that arguments can be left unexpressed. Consequently, it could well be the case that the ‘extracted’ constituent is base-generated in sentence-initial position in the above sentences and that a null resumptive pronoun is present in the canonical argument position licensed and identified by the phonologically overt or covert agreement of the potentially embedded verb, as exemplified in (25b) for sentence (24a). Following this line of reasoning, the syntactic structure of (24a) would not be the one in (25a) where a trace indicates the position from which the constituent $MAN\ POINT_{left}$ would have been moved to sentence-initial position, but rather (25b) where $MAN\ POINT_{left}$ has been base-generated and *pro* indicates the location of the resumptive empty pronoun that is licensed and identified by the object agreement of the verb HELP.

- (25) a. $\overline{\quad\quad\quad t}$
 [[_{TOP/CP} $MAN\ POINT_{left\ i}$]] [_{CP/IP} INGE WANT
 [_{CP} $POINT_{right\ right}HELP_{left\ t_i}$]]]
- b. $\overline{\quad\quad\quad t}$
 [[_{TOP/CP} $MAN\ POINT_{left\ i}$]] [_{CP/IP} INGE WANT
 [_{CP} $POINT_{right\ right}HELP_{left\ pro_i}$]]]
 ‘As for the man_i, Inge_j wants him/her_k to help (him_i).’
 (NGT)

The assumption that the topics in (24) are not extracted but base-generated is supported by the fact that overt pronouns that corefer with the ‘‘extracted’’ constituent can be inserted into the potential complement sentences. This is shown for the sentences in (24a) and (24b) in (26), the resumptive pronouns are in boldface. If the structure in (25b) is the right one,

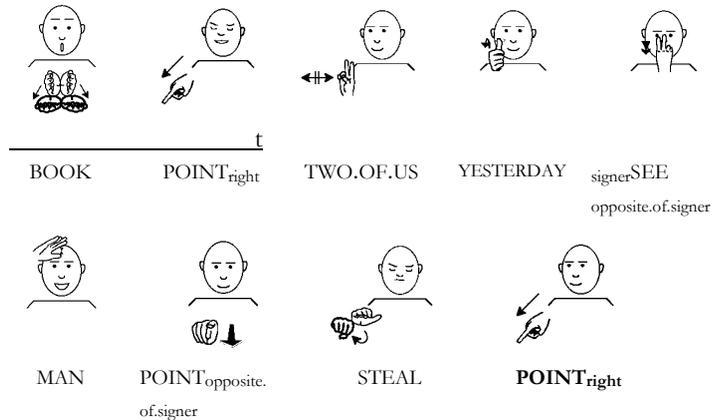
then we are dealing here with *left dislocation* rather than topicalisation. In left dislocation no extraction takes place.¹²

(26) a.



‘As for the man_i, Inge_j wants him/her_k to help him_i.’

b.

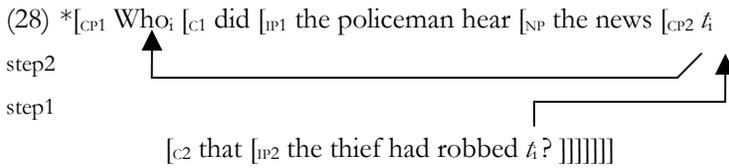


‘As for the book_i, the two of us saw the man stealing it yesterday.’

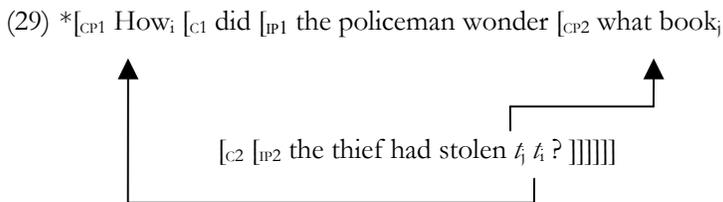
(NGT)

Whether or not topicalisation has taken place in the sentences in (24) can be tested with *subjacency*. Topicalisation is an instance of *wh*-movement. Subjacency is a universal condition on *wh*-movement. It states that *wh*-movement cannot cross more than one ‘bounding node’ (Chomsky 1973:247ff,

¹² For ASL, Aarons (1994) assumes that topicalisation and left dislocation are expressed by two different facial expressions. Such a difference could not be found in NGT.



In (29) *how* cannot move successive cyclically via Spec,CP2 to Spec,CP1, because the *wh*-constituent *what book* already moved to Spec,CP2. Therefore, *how* crosses two boundary nodes, IP2 and IP1 and thereby violates subadjacency. Clauses that are introduced by a *wh*-word in Spec,CP are so-called *wh*-islands.

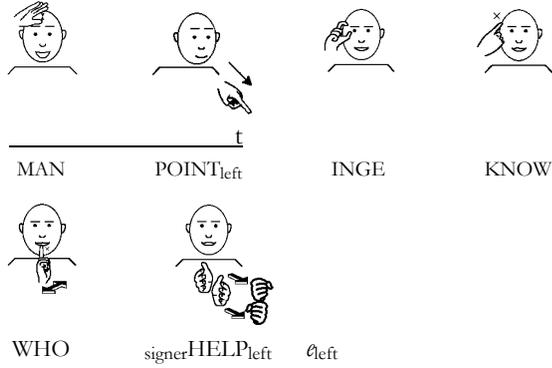


Although subadjacency can be tested with many different constructions, among others with *wh*-islands, complex NP-clauses, or adjunct clauses, I tested subadjacency in NGT only with one kind of *wh*-island. The reason for this is that for NGT it is not clear at the moment how certain sentence constructions behave, or even, if they exist at all. However, in my corpus, *wh*-islands can be found as the potentially embedded clauses of the complement-taking predicates *to know* and *to doubt*. From the results of the distributional dependency test (cf. chapter 3, sections 3.3.6 and 3.3.8) and the non-manual negation test (cf. chapter 5, section 5.3) it can be concluded that these *wh*-islands are syntactically subordinated to these complement-taking predicates.

To test what the identity of the empty category *e* in the second clauses in (24) is, a *wh*-trace left after topicalisation or an empty pronoun *pro*, I will embed these clauses in *wh*-islands. This is done in (30). If the empty category is a *wh*-trace, a violation of subadjacency will appear and the sentence will be ungrammatical or at least dubious. Subadjacency is violated in those sentences, because the interrogative pronoun has already moved to the embedded Spec,CP position. Consequently, the “extracted” constituent has to cross more than one

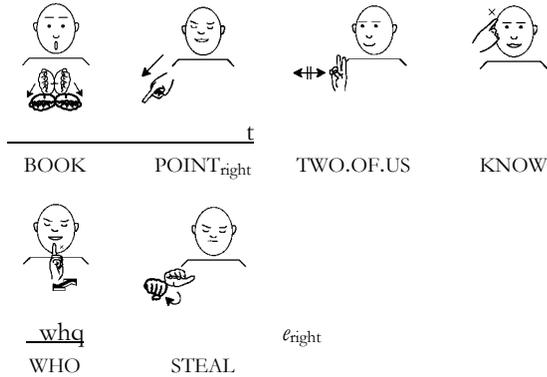
bounding node, namely two clause boundaries. If the sentence is grammatical, then subadjacency is not violated and the empty category must be an empty pronominal. These results can then be applied to the sentences and their empty categories in (24).¹⁶

(30) a.



‘As for the man_i, Inge_j knows who helps (him_i).’

b.



‘As for the book_i, the two of us know who stole (it_i).’

¹⁶ Note that the *wh*-signs in the sentences in (30) can trigger a *wh*-prosody (marked with ‘whq’).

c.

_____ t
 AMERICA INGE POINT_{right} KNOW

_____ whq
 WHO signerGO.TO_{neu.sp} ℓ_{america}

‘As for America_i, Inge knows who goes there.’

d.

_____ t
 MARIJKE POINT_{left} INGE KNOW

WHERE ℓ_{left} leftFLY_{neutral.space}

‘As for Marijke_i, Inge_j knows where (she_i) will fly to.’

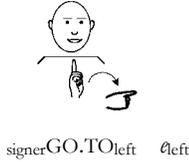
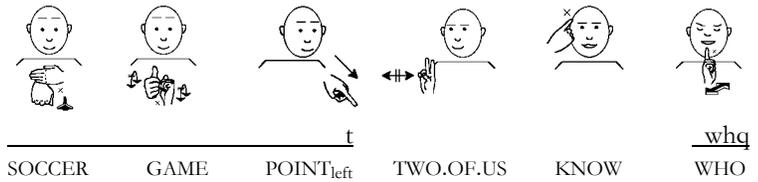
e.

_____ t
 PARENTS POINT_{right} MARIJKE POINT_{left}

DOUBT _____ whq
 WHO signerVISIT_{left} ℓ_{right}

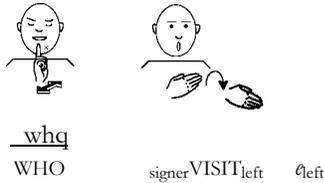
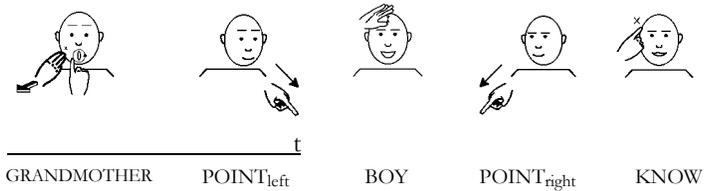
‘As for her_j parents_i, Marijke_j doubts who will visit (them_i).’

f.



‘As for the soccer game_i, the two of us know who will go (there_i).’

g.



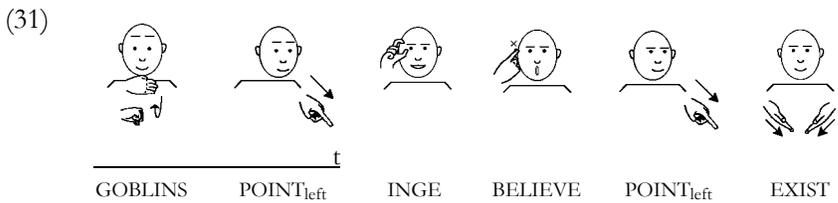
‘As for grandmother_i, the boy knows who visits (her_i).’

(NGT)

The sentences in (30) are all grammatical which means that they do not violate the subadjacency condition on *wh*-movement. This in turn means that the sentence-initial constituents that occur with topic prosody are not moved at all to this position. Rather, these constituents are base-generated in sentence-initial position. Thus, the sentences in (24) must be analysed as left dislocation constructions instead of topicalisation constructions. As a consequence, the empty categories in the sentences in (30) (and in (24)) are empty pronouns, i.e. *pro*-s. Empty pronouns need to be licensed and identified. This is done in (30a) and (30d-g) by the agreement of the closest verb, that is the predicate in the second clauses in (30). The second clause predicates in (30b-c), however, do

not show agreement. This is no problem since, as explained in chapter 1, section 1.4, although these verbs show no overt agreement, they possess the necessary agreement features to license and identify the empty pronouns (Zwitzerlood 2003, Zwitzerlood et al. 2003).

For reasons of time no subjacency data could be obtained for the complement clause in (24f) with the complement-taking predicate *to believe*. However, the following sentence in (31) with *believe* and with a sentence-initial constituent that cooccurs with topic prosody and an overt coreferent pronoun is available in the corpus which strongly suggests that there is no topicalisation in this case either.



‘As for goblins_i, Inge believes that they_i exist.’

(NGT)

From the results in (30) it must be concluded that no *wh*-extraction occurs in the complex NGT sentences in (24). Although at first sight it seemed that a constituent from the (potential) complement clause was topicalised to a position at the beginning of the main clause, subjacency data showed that we are dealing with left dislocation instead of topicalisation in these cases. In left dislocation constructions, the sentence-initial constituent is not moved but base-generated. In NGT, its canonical position in the (potential) complement clause is filled with an overt or covert coreferential pronoun.

Nonetheless, the left dislocation constructions in (24) can be taken as evidence with respect to the syntactic relation between clauses in (potential) NGT complement constructions. In (32) it is shown for English that left dislocation cannot take place with a constituent from the second clause in a coordinated construction, whereas this is possible if the second clause is embedded to the first one.

- (32) a. *As for that song_i, Ellie bought a book and sang it_i for me.
 b. As for that song_i, Ellie said that she sang it_i for me.

From the results in (24) and (30) it must be concluded that left dislocation of a constituent from the second clause is possible with all investigated classes of complement-taking predicates in NGT. This means that these second clauses are syntactically embedded.¹⁷

6.4 Conclusion

I have shown that extraction of *wh*-constituents is possible in complex sentences in NGT and can therefore be used to indicate syntactic complementation, although not for every complement-taking predicate. Topicalisation, however, is not a proper test to uncover syntactic dependency in NGT complex sentences. With the aid of a subadjacency test it could be shown that topicalisation is not possible at all in these NGT sentences. What looked like topicalisation of a constituent from the potential complement clause turned out to be left dislocation. But left dislocation data can also give information about the syntactic dependency relation between clauses in complex sentences. It has become clear from the data on left dislocation that the potential complement clauses of all investigated complement-taking predicates in NGT are syntactically subordinated to these predicates.

However, the argument status of the subordinated clauses with the predicates *to believe*, *to doubt*, *to ask*, and *to tell* has not been established yet. The extraction of *wh*-constituents could establish the argument status for the subordinated clauses with *to want*, *to see*, *to like*, *to pretend*, and *to know*, but not for the subordinate clauses with the former four predicates. In chapter 3, section 3.4, I already discussed the possibility that the potential complement clauses in NGT are adjunct clauses. The argument structures of these predicates are saturated then by a referential overt or null pronoun. Though, from the Dutch examples in (57) in chapter 3, it became clear that this is not possible with all

¹⁷ Unfortunately, I have no data on left dislocation in complex sentences with a syntactic coordination relationship between the clauses.¹

classes of complement-taking predicates. In Dutch, it is possible to saturate the argument slot with a referential pronoun only with predicates of the second level, as can be seen in (34a). For predicates of the third and fourth level such an option is not available, as can be seen in (34b-e). If this paradigm holds crosslinguistically, then it might also be the case that the argument structures of the third and fourth level predicates *to believe*, *to doubt*, *to ask*, and *to tell* in NGT cannot be saturated by a referential pronoun either. In that case, it can be concluded that the subordinated clauses with these predicates are argument clauses.

However, if data from other languages are taken into account, the results vary. For English and German holds that like Dutch, a referential pronoun in argument position is not possible with predicates of the third and fourth level, while this is possible with predicates of the second level, see the examples in (33)-(35). However, in Spanish a referential pronoun in argument position is possible with predicates of the third and fourth level too, see the examples in (36).

- (33) a. Daniëla regrets it that Ellie sang that song to me.
 b. *Daniëla believes it that Ellie sang that song to me.
 c. *Daniëla doubts it whether Ellie sang that song to me.
 d. *Daniëla asks it whether Ellie sang that song to me.
 e. *Daniëla says it that Ellie sang that song to me.

(English)

- (34) a. Daniëla betreurt het dat Ellie dat liedje voor mij gezongen heeft.
 b. ?*Daniëla gelooft het dat Ellie dat liedje voor mij gezongen heeft.
 c.¹⁸ *Daniëla twijfelt het dat Ellie dat liedje voor mij gezongen heeft.
 d. *Daniëla vraagt het dat Ellie dat liedje voor mij gezongen heeft.

¹⁸ If the Dutch verb *twijfelen* and the German verb *zweifeln* in (34c) and (35c) are replaced by the verbs *betwijfelen* and *bezweifeln*, respectively, both meaning ‘to doubt’, the sentences are judged as better or even as grammatical by native speakers. However, the argument structures of *betwijfelen* and *bezweifeln* are different from *twijfelen* and *zweifeln*.

- (i) a. ?Daniëla betwijfelt het of Ellie dat liedje voor mij gezongen heeft.
 b. Daniëla bezweifelt es dass Ellie das Lied für mich gesungen hat.

- e. *Daniëla zegt het dat Ellie dat liedje voor mij gezongen heeft.
(Dutch)

- (35) a. Daniëla bedauert es dass Ellie das Lied für mich gesungen hat.
 b. *Daniëla glaubt es dass Ellie das Lied für mich gesungen hat.
 c. *Daniëla zweifelt es dass Ellie das Lied für mich gesungen hat.
 d. *Daniëla fragt es dass Ellie das Lied für mich gesungen hat.
 e. *Daniëla sagt es dass Ellie das Lied für mich gesungen hat.
 (German)

- (36) a. Daniela lo lamenta, que Ellie me cantara esa canción.
 b. Daniela se lo cree, que Ellie me cantó esa canción.
 c. Daniela lo duda, que Ellie me cantara esa canción.
 d. Daniela lo pregunta, si Ellie me cantó esa canción.
 e. Daniela lo dice, que Ellie me cantó esa canción.
 (Spanish)

Thus, the crosslinguistic data in (33)-(36) do not give any clue with respect to the argument status of the subordinated clauses with predicates of the third and fourth level in NGT. Although I have shown in this study that the potentially embedded clauses with *to believe*, *to doubt*, *to ask*, and *to tell* in NGT are syntactically subordinated, their argument status remains unclear.

End of the quest: summary and conclusion

And so we finally reach the end of this linguistics quest. We have been through four thrilling adventures that not always led us directly to our goal. But we have learned many things. At last we have found the evidence that we were looking for, although we had to gather this proof piece by piece. So here this story ends. For the time being, there is nothing more to say.

7.1 Summary

The goal of this study was to uncover the syntactic relationship between the clauses of semantic complement constructions in NGT. My initial observation was that complex sentences in NGT do not have any formal clue for syntactic subordination, e.g. there is no complementizer or special word order. It might therefore very well be the case that the clauses in NGT semantic complement constructions are coordinated, has been claimed for Diegueño and Lango (Noonan 1985, see the examples in (3) in chapter 1).

In order to reach the goal, five tests were carried out using eleven complement-taking predicates. These predicates were chosen on the basis of three semantic criteria: predicate level (used in functional grammar), time dependency, and presupposedness (see chapter 2, section 2.1.1). Based on these semantic criteria, I compiled the following set of complement-taking predicates: *to begin*, *to be busy*, *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, *to doubt*, *to ask*, and *to tell*. The data were elicited from three third generation native speakers of NGT. The results per test for all classes of investigated complement-taking predicates are schematically presented in table 1.

	distributional dependency	right dislocation	negation marker	<i>wh</i> -constituent extraction	left dislocation
to begin	no tests applied because no complex sentences are possible in NGT				
to be busy	no tests applied because no complex sentences are possible in NGT				
to want	+	-	+	+	+
to see	+	-	+	+	+
to like	+	-	+	+	+
to pretend	+	-	+	+	+
to know	+	-	+	+	+
to believe	+	-	+	-	+
to doubt	+	-	+	-	+
to ask	-	-	+	-	+
to tell	-	-	+	-	+

Table 1: *results per test for all classes of complement-taking predicates; a '+' indicates that the test shows syntactic subordination or complementation, a '-' indicates that syntactic subordination or complementation could not be revealed*

7.1.1 Distributional dependency

The first test that was carried out was the distributional dependency test (van Valin & LaPolla 1997:449). This test concerns the distribution of the clauses in complex sentences. If the clauses of a complex sentence can occur on their own as independent sentences, the syntactic relation between them in the complex sentence is coordination. If one of the clauses of a complex sentence cannot occur on its own as an independent sentence, then there is a syntactic dependency relation between the clauses in the complex sentence. In the potential complement constructions that I investigated in this study this dependency relation must be subordination.

It turned out that complex sentences with the complement-taking predicates *to begin* and *to be busy* are not considered as NGT by all three informants, but as NmG (Sign Supported Dutch). Therefore, these predicates were not used further in this study. For the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, and *to doubt* this test showed that

the potential complement clauses of these predicates are syntactically subordinated to them. For the predicates *to ask* and *to tell*, however, the distributional dependency test did not give conclusive evidence. The predicates *to ask* and *to tell* obligatorily have a subject and a Recipient argument, but not necessarily a Theme. Two outcomes are possible now. Either, the predicates *to ask* and *to tell* are two-place predicates in which case the Theme clause is in a coordination relation with these predicates, since both the clause with *to ask* and *to tell* and the Theme clause can occur on their own as independent sentences. Or, *to ask* and *to tell* are ambiguous between a two- and a three-place predicate. In this latter case the Theme clause is syntactically subordinated to the predicates *to ask* and *to tell*.

7.1.2 Pronominal right dislocation

In the second test, the distribution of pronominal right dislocation was investigated. Liddell (1980) and Padden (1988) used this test to uncover syntactic subordination in ASL, because in ASL a right dislocated pronoun of the main clause subject can only occur after the expression of the subordinated clause. In NGT the distribution of right dislocated pronouns is completely different. The right dislocated pronoun in NGT appears directly behind the clause that contains the argument it is a copy of. This result was found for all nine investigated complement-taking predicates. Thus, the right dislocation test could not give any evidence for or against syntactic subordination, or even complementation in NGT.

Furthermore, it was found that pronominal right dislocation of arguments of subordinated clauses (with the predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, and *to doubt*) and potential subordinated clauses (with the predicates *to ask* and *to tell*) appear immediately after this clause as well. For this reason Neidle et al.'s (2000) analysis of pronominal right dislocation in ASL, i.e. right adjunction of the copied pronoun to the highest CP, is not applicable to the pronominal right dislocation data in NGT. Nor is the analysis that Kayne (1994) proposes for this phenomenon in Romance languages, i.e. that the right-dislocated constituent should be considered an argument.

7.1.3 Non-manual negation marker

The absolute duration of the non-manual negation marker is used as another test to find out the syntactic relationship between clauses in potential complement constructions. With Padden (1988) I assume that a non-manual marker can stretch over clause boundaries only if these clauses are not coordinated. With this third test it was shown that potential complement clauses of all investigated predicates are syntactically subordinated to these predicates, since the negation marker could stretch over the potential complement clause while only negating the event of the main clause.

In ASL, the non-manual negation marker that starts in the main clause and negates the event of this main clause, obligatorily stretches over its subordinated clause. This is not necessarily so for NGT. If the main clause event is negated, the non-manual negation marker can extend from the main clause predicate to the subordinated clause, but it can also occur over the main clause predicate only. If only the subordinated event is negated, the negation marker occurs over the subordinated predicate only, and if both the main clause event and the subordinated clause event are negated, two negation markers appear: one over the main clause predicate and one over the subordinated predicate.

I adopt Pfau & Quer's (2003) analysis of non-manual negation as a featural affix without phonological content that imposes a prosodic alteration. This analysis can explain why spreading of the non-manual negation marker is optional.

The most important result of this chapter, however, is that with the absolute duration of the non-manual negation marker test it has been proven that the semantic complement clauses of all investigated complement-taking predicates are syntactically subordinated to these predicates. This was already demonstrated for the predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, and *to doubt*, with the distributional dependency test, but for the predicates *to ask* and *to tell* this was still an undecided case. Thus, for the clauses in a semantic complement construction with all investigated complement-taking predicates, a syntactic coordination relation is excluded.

7.1.4 *Wh*-extraction

It has now been established that the relationship between clauses in potential complement constructions in NGT is not one of syntactic coordination, but it cannot yet be concluded that the semantic complement clauses are also complement clauses in terms of syntax. Argument structures of complement-taking predicates can be saturated by referential pronouns in which case the semantic complement clause has no argument status but is an adjunct clause (Bennis 1986:103, see examples (57) in chapter 3).

However, on the basis of the fourth test, which involves extraction of *wh*-constituents, this suggestion can be refuted for the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, and *to know*. *Wh*-constituents from potential complement clauses with these predicates can be extracted to a position at the beginning of the main clause. This is solid evidence for the argument status of the potential complement clauses with *to want*, *to see*, *to like*, *to pretend*, and *to know*. Hence, the potential complement clauses with these predicates are in fact syntactic complement clauses.

Extraction of *wh*-constituents from the subordinated clauses to sentence-initial position is not possible with the predicates *to believe*, *to doubt*, *to ask*, and *to tell* in NGT. This means that the status of the subordinated clauses with these predicates as arguments or adjuncts is still not settled.

In the fifth test that was carried out, another form of *wh*-extraction was investigated, namely topicalisation of an argument from the potential complement clause to sentence-initial position. This seemed to be possible for all investigated complement-taking predicates. But what was taken for topicalisation, turned out to be left dislocation. Thus, the ‘topicalised’ constituents in sentence-initial position are not moved to this position from the subordinated clause but are base-generated in this position with a null or overt coreferential pronoun in the subordinated clause. Nonetheless, left dislocation constructions can give clarity about the syntactic relationship between clauses in complex sentences as well, since left dislocation is not possible from the second clause in a coordination construction. Since left dislocation is possible with all investigated complement-taking predicates, the potential complement

clauses of these predicates are syntactically subordinated. The left dislocation constructions thus confirm the results of the non-manual negation marker test.

Still, the argument status of the subordinated clauses with the predicates *to believe*, *to doubt*, *to ask*, and *to tell*, predicates of the third and fourth level, could not be established. Unfortunately, data from other languages vary at this point. In some languages, a referential pronoun cannot saturate the argument structure of predicates of the third and fourth level, but in others it can. Thus, for the moment, it remains unclear whether the argument structure of *to believe*, *to doubt*, *to ask*, and *to tell* in NGT is saturated by a null referential pronoun, in which case the subordinated clause is an adjunct clause, or not. If the latter would be the case, the subordinated clause is an argument or complement clause.

7.2 Conclusion

NGT semantic sentential complementation constructions with the complement-taking predicates *to want*, *to see*, *to like*, *to pretend*, *to know*, *to believe*, *to doubt*, *to ask*, and *to tell*, show no formal marking of syntactic subordination. Still, in this study I have been able to show that the potential complement clauses in these constructions are in fact syntactically embedded in these predicates. Evidence for this fact comes from the absolute duration of the non-manual negation marker and the possibility of left dislocation with a coreferential pronoun in the potential complement clause. The distributional dependency test also gives evidence for this, although only partially. Furthermore, for certain classes of complement-taking predicates extraction of *wh*-constituents could establish the syntactic argument status of potential complement clauses.

I hope I have shown, too, that, although one linguistic test may give excellent results with respect to a certain morphosyntactic process in one language, it does not necessarily do so in another language. For example, right dislocation works perfectly well for indicating syntactic subordination in ASL but not in NGT, because it has a different distribution in the two languages. Preferably more than one test should be carried out, since, as has become clear in this study, certain tests give decisive information only for a subgroup of investigated verb classes. And in spite of the fact that certain tests are very

language-specific, there is no harm in performing such a test just to see what the outcome will be. Of course, the results of such tests should be interpreted with great care.

Whenever only little is known about various kinds of morphosyntactic processes in a given language, and the syntactic relationship between clauses needs to be established, the distributional dependency test is a useful test to uncover syntactic subordination, because it does not depend on any specific morphosyntactic process. However, the distributional dependency test is not decisive in every case. In contrast to that, the possibility of left dislocation with a coreferent (overt or null) pronoun in the potential subordinated clause is a highly reliable test that works with all classes of complement-taking predicates. Specifically for signed languages, the absolute duration of the non-manual negation marker can also be used to test syntactic subordination. With *wh*-extraction the argument status of the subordinated clause can be established, however, whether or not *wh*-extraction is possible is highly dependent on the specific language involved.

7.3 Some topics for future study

During this study I came across many topics that I did not have time to explore. First of all, in future research on NGT sentential complementation the set of complement-taking predicates should be extended to include modal predicates and predicates that might take subject complement clauses, e.g. *to be certain* and *to be possible*. Moreover, noun complementation should also be considered. In the second place, it would be very interesting to see if syntactic subordination can be found, and how it is formally expressed, in adverbial and relative constructions. Thirdly, a closer look at the analyses for the non-manual negation marker, pronominal right dislocation, and *wh*-extraction is needed.

In conclusion I hope that this study will stimulate others to explore these and other topics, thus revealing little by little the innate capacity that shapes the grammar of NGT, and the common grammatical characteristics of signed languages in general.

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Samenvatting in het Nederlands (Summary in Dutch)

De taalkunde bestudeert natuurlijke menselijke taal. De hoofdtaak van een taalkundige is daarom het bepalen van de principes die aan natuurlijke menselijke talen ten grondslag liggen, zoals onder andere de syntaxis, de morfologie en de fonologie. De meeste taalkundige stromingen beschrijven niet alleen de grammatica van één taal maar proberen de principes te ontdekken die de grammatica van menselijke talen in het algemeen bepalen. In de generatieve taalkunde worden die principes beschouwd als de aangeboren kennis die moedertaalsprekers van taal hebben. Deze kennis wordt de Universele Grammatica of UG genoemd. Het doel van de generatieve taalkunde is om de UG te achterhalen en te onderzoeken hoe deze kennis wordt gebruikt om de moedertaal te leren (Chomsky 1965, 1986a; Katz 1964).

Omdat gebarentalen natuurlijke menselijke talen zijn, verwachten we dat sprekers van deze talen gebruik maken van dezelfde aangeboren universele kennis die sprekers van gesproken talen gebruiken, ook al zijn de modaliteiten van taalproductie en taalbegrip verschillend. Neurolinguïstisch onderzoek heeft inderdaad aangetoond dat wanneer sprekers van gebarentalen deze talen gebruiken, juist dat gedeelte van de linkerhersenhelft actief is waar (gesproken) taal is gelokaliseerd (Bellugi & Klima 1990, MacSweeney et al. 2002). Taalkundig onderzoek naar gebarentalen is daarom erg interessant en zeer relevant, omdat het kan onthullen of het gebruik van een andere modaliteit voor taalproductie en taalbegrip om natuurlijke taal te uiten, i.c. de gesticulatieve visuele modaliteit in gebarentalen in tegenstelling tot de oraal-auditieve modaliteit in gesproken talen, een effect heeft op de vorm van taaluniversalia. Naast de studie naar taaluniversalia en taalspecifieke principes is het ook interessant om erachter te komen of gebarentalen onderliggende principes hebben die modaliteitspecifiek zijn.

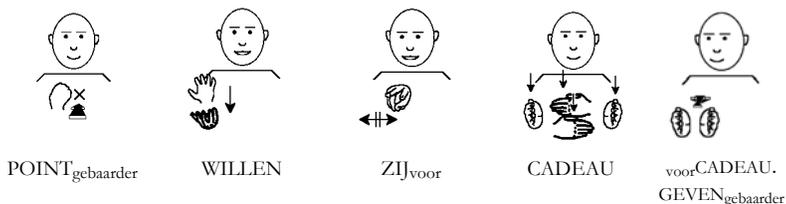
Taalkundig onderzoek naar gebarentalen is zeer recent. Een van de eersten die gebarentalen op een taalkundige wijze benaderde, was Tervoort (1953). Hij beschouwde de gebarentaal die hij onderzocht als (natuurlijke menselijke) taal en constateerde dat deze taal zich ontwikkelde. Echter, de studie van Stokoe (1960) had meer invloed. Stokoe stelde voor dat gebaren in de Amerikaanse Gebarentaal opgebouwd zijn uit kleinere delen, net als woorden in gesproken taal. Systematisch taalkundig onderzoek naar de Nederlandse Gebarentaal (voortaan afgekort als NGT) begon pas rond 1980. Omdat het taalkundig onderzoek naar gebarentalen nog zo jong is, missen we vaak beschrijvingen van de structuur van deze talen die noodzakelijk zijn om te bepalen hoe gebarentalen zich verhouden tot gesproken talen en tot de UG.

Een voorbeeld van onze gebrekkige kennis van gebarentalen is de syntactische relatie tussen de enkelvoudige zinnen van een samengestelde zin. Omdat syntactische onderschikking geen universele eigenschap van talen is, is een fundamenteel aspect van de syntaxis van elke taal of, en waar syntactische onderschikking tussen enkelvoudige zinnen aanwezig is. In deze studie wordt een beschrijvende en taalkundige analyse gegeven van één type van syntactische onderschikking in de NGT, namelijk zinscomplementatie. In zinscomplementatie functioneert de ingebedde zin als voorwerpszin van het hoofdwerkwoord. Ik beperk mij tot lijdendvoorwerpszinnen (voortaan aangeduid als complementzinnen). Voorbeelden van complementzinnen staan in (1), de complementzinnen zijn schuingedrukt.

- (1) a. Daniëla weet *dat het leven van een kakkerlak niet makkelijk is*.
 b. Ellie gelooft *dat varkens kunnen vliegen*.

In de NGT kunnen zinsconstructies aangetroffen worden die in eerste instantie lijken op zinscomplementatie. Een voorbeeld van zo'n NGT-zin staat in (2). Echter, deze zinnen hebben geen speciale markering die aangeeft dat het daadwerkelijk om syntactische onderschikking gaat, zoals bijvoorbeeld het voegwoord *dat* en de van de hoofdzin afwijkende woordvolgorde in het Nederlands.

(2)



‘Ik wil dat zij mij een cadeau geven.’

Er zijn talen waarin een onderschikkingsrelatie zoals die voorkomt in complementzinnen in het Nederlands, uitgedrukt wordt als nevenschikking of parataxis. In (3) staat hiervan een voorbeeld. De zin is afkomstig uit het Diegueño, een taal die gesproken wordt in San Diego County in Californië. De letterlijke vertaling met behoud van parataxis staat tussen dubbele aanhalingstekens.

- (3) ʔənʔaː puy ʔəxap-x-vu əwaːrp-x umaːw
 ik daar ingaan.ik willen.zij niet
 ‘Ik zal daar ingaan, zij willen het niet.’
 ‘Zij willen niet dat ik daar inga.’

(Langdon 1970, in Noonan 1985:56)

In deze studie beperk ik mij tot de volgende werkwoordklassen die een complementzin kunnen krijgen: *willen*, *zien*, *leuk vinden*, *doen alsof*, *weten*, *geloven*, *twijfelen*, *vragen*, en *vertellen*. Met behulp van een aantal verschillende soorten testen kan voor al deze werkwoordklassen worden aangetoond dat de syntactische relatie tussen de enkelvoudige zinnen in samengestelde NGT-zinnen als in (2), onderschikking is.

Echter, hiermee is nog niet aangetoond dat de ondergeschikte NGT-zin $ZIJ_{voor} CADEAU_{voor} CADEAU.GEVEN_{gebaarder}$ in (2) daadwerkelijk in de complementpositie van het hoofdzinswerkwoord *WILLEN* staat, dat wil zeggen dat het nog niet duidelijk is of de ondergeschikte zin daadwerkelijk het lijdendvoorwerp is van het hoofdzinswerkwoord. Bij sommige werkwoorden

kan deze complementpositie namelijk ingenomen worden door een voorlopig lijdend voorwerp, zoals in (4).

- (4) Ik betreur **het** *dat ik de magnetron van mijn vriendin in brand heb gezet*.

De ondergeschikte zin *dat ik de magnetron van mijn vriendin in brand heb gezet* in (4) staat in een positie die niet het voorwerp van het hoofdwerkwoord *betreuren* is want daar staat het voorlopig lijdendvoorwerp *het*. Dit betekent dat de ondergeschikte zin geen complementzin is. Nu weten we uit eerder onderzoek dat de NGT een zogenaamde *pro-droptaal* is, dat wil zeggen dat voorwerpen in deze taal niet altijd hoeven te worden uitgedrukt. Het zou dus zo kunnen zijn dat in NGT-zinnen als in (2) in plaats van de ondergeschikte zin *ZIJ_{voor} CADEAU_{voor}CADEAU.GEVEN_{gebaarder}* een fantoom voorlopig lijdendvoorwerp de complementpositie van het werkwoord *WILLEN* inneemt.

Voor de werkwoordklassen *willen*, *zien*, *leuk vinden*, *doen alsof*, en *weten* kan ik laten zien dat de ondergeschikte zinnen complementzinnen zijn, dat wil zeggen dat ze daadwerkelijk de lijdendvoorwerpspositie van het werkwoord innemen. Voor de werkwoordklassen *geloven*, *twijfelen*, *vragen*, en *vertellen* kan dit (nog) niet worden aangetoond. Voor samengestelde NGT-zinnen met hoofdwerkwoorden uit een van deze vier werkwoordklassen kan dus nog niet met zekerheid gezegd worden dat de ondergeschikte zin ook complementzin is.

Ik hoop dat deze studie anderen zal stimuleren om dit onderwerp en andere onderwerpen in gebarentalen te gaan onderzoeken, om zo de interne grammatica van de NGT, en de algemene grammaticale principes van gebarentalen te ontdekken.

Curriculum Vitae

Ingeborg van Gijn was born on 7 April 1974 In Vlaardingen. She obtained her atheneum diploma from the Groen van Prinsterer Lyceum in 1993. She studied Dutch linguistics and literature at Leiden University. In 1997 she obtained her Master's degree with a specialisation in linguistics and signed linguistics. From 1998 till 2004 she worked as a PhD student at the University of Amsterdam where she carried out the research that resulted in this thesis. In the same period she had small teaching jobs at the Hogeschool van Utrecht, the Hogeschool van Rotterdam & Omstreken, and the University of Amsterdam. She is currently working as a teacher at the Walburgcollege, a secondary school in Zwijndrecht.