The quest for syntactic dependency. Sentential complementation in Sign Language of the Netherlands
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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 complements 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.
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

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<th>distributional dependency</th>
<th>right dislocation</th>
<th>negation marker</th>
<th>wh-constituent extraction</th>
<th>left dislocation</th>
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<tr>
<td>to begin</td>
<td>no tests applied because no complex sentences are possible in NGT</td>
<td></td>
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<tr>
<td>to be busy</td>
<td>no tests applied because no complex sentences are possible in NGT</td>
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<td>to want</td>
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<tr>
<td>to tell</td>
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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
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 $\textit{wh}$-extraction the argument status of the subordinated clause can be established, however, whether or not $\textit{wh}$-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, \textit{e.g.} $\textit{to be certain}$ and $\textit{to be possible}$. 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 $\textit{wh}$-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.