On degree phrases and result clauses
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IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
1998

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):
6.1 Introduction

In the previous chapter we saw that result clause constructions, noun phrases with relative clauses, coordination and comparatives share a number of properties. These similarities indicate that these constructions share the same structural configuration. In addition, we saw that the proposed structure, a conjunction phrase, is able to account for several of the properties discussed. In some cases, the account involves conjunction at different levels, so to speak: a result clause can be conjoined with AgrSP, as in (1), or with AgrOP, as in (2):

(1) a Zoveel mensen hebben Pride and Prejudice gekocht dat het binnen een week uitverkocht was
so-many people have Pride and Prejudice bought that it within a week out-sold was
`So many people bought P&P that it was sold out within a week'

b [conj [agrp zoveel mensen hebben P&P gekocht] [: [dat...]]]

(2) a Vestdijk heeft zoveel boeken geschreven dat ze niet op deze plank zouden passen
Vestdijk has so-many books written that they not on this shelf would fit
`Vestdijk wrote so many books that they would not fit on this shelf'

b Vestdijk heeft [conj [agrop zoveel boeken geschreven] [: [dat...]]]

c [conj Zóveel boeken geschreven dat ze niet op deze plank zouden passen] heeft-ie!
so-many books written that they not on this shelf would fit has-he
Even though topicalization of a conjunction phrase provides clear support for AgrOP conjunction (cf. (2c)), it might still seem ad hoc to assume that in some cases a result clause is conjoined with part of a clause, while in other cases it appears to be conjoined with the entire matrix clause. However, these hypotheses are supported by additional evidence from result clauses in Frisian on the one hand, and negative polarity items in result clauses on the other hand.¹

6.2 Frisian result clauses

This section shows how Frisian result clauses exhibit main clause or subclause properties exactly as predicted by the conjunction analysis.

6.2.1 Test for conjunction with the matrix clause

Overdiep (1932) observes that Frisian result clauses can have a main clause word order, with the finite verb (KRIGE `gets' in (3)) in second position:

(3) mar dat leit er jo sa dúdlik út, dat sa'n Frysk wiif KRIGE it op 'e simmels
    *but that lays he you so clearly out that such+a Frisian woman gets it on the nerves*
    `but he explains it to you so clearly that a Frisian woman like that gets it on her nerves'

(Overdiep 1932, pp.41, 44)

He suggested that result clauses like this are structurally coordinated with the main clause, even though they are functionally subordinate. This is exactly in line with the conjunction phrase analysis proposed here.

De Haan (1990) presents Overdiep's line of reasoning, and provides additional evidence for his suggestion: De Haan shows that the result clauses with verb second word order exhibit other characteristics of main clauses as well. These are: the unavailability of a weak personal pronoun as subject, and the availability of left dislocation and of interjections (cf. subsections 6.2.1.2-4).

In the analysis of result clause constructions presented here, a result clause is conjoined with at least AgrSP if the antecedent degree head zo `so' is part of the

¹ Thanks to Ger de Haan for bringing the Frisian result clauses with verb second to my attention.
constituent in subject position. Let us assume that conjunction with the matrix clause provides a result clause with main clause status. If so, we can interpret the ability of a result clause to exhibit main clause properties as an indication that the result clause is indeed conjoined with the matrix clause containing its antecedent degree phrase. That is to say, whenever a result clause exhibits main clause properties, it is conjoined with the matrix clause. On the other hand, if main clause properties in a result clause yield ungrammaticality, the result clause is clearly not conjoined with the matrix clause, but will be conjoined with part of the matrix clause, or with (part of) a subclause (like a relative clause).

That is to say, we can use the availability of main clause properties in result clauses in Frisian to determine when conjunction with the matrix clause is possible. We will see that conjunction with the matrix clause is possible when the degree phrase antecedent occurs in several positions (e.g. adverbials, predicative degree phrases), not only when it occurs in structurally high ones like the subject position.

The flip side of the coin is more important: the ungrammaticality of main clause features in a result clause is conclusive evidence that a result clause is not conjoined with the matrix clause, but with part of it (or with a subclause). In those cases, topicalization of the conjunction phrase may indicate which part of the matrix clause the result clause is conjoined with.

The next four subsections briefly present the four main clause features are exhibited by Frisian result clauses.

### 6.2.1.1 Verb second

Frisian is a "verb second" (V2) language; the finite verb is usually the second element in a main clause, following any WH- or topicalized material or the subject. Subclauses, in contrast, find their finite verb at the end of the clause:

(4) a MAIN CLAUSES: FINITE VERB IN `SECOND' POSITION (V2):
Sa'n Frysk wiif KRIGE it op 'e simmels
*such+a Frisian woman gets it on the nerves*

b SUBORDINATE CLAUSES: FINITE VERB IN FINAL POSITION:
..., dat sa'n Frysk wiif it op 'e simmels KRIGE
*such+a Frisian woman it on the nerves gets*

Overdiep (1932) observed that result clauses can have the main clause word order:
The verb second feature is the most important indication that a result clause has main clause status. In the next three subsections it will always be the result clause with the verb second word order that also exhibits the other main clause property at issue, in contrast to a result clause with the finite verb in final position. Therefore, in the discussion of several result clause examples later on, I will take the availability of verb second as indicative of conjunction with the matrix clause.

### 6.2.1.2 Weak subject pronouns

Frisian has two forms for the third person singular masculine pronoun: a full and a weak version. In the first position of a main clause, the full form is obligatory, whereas in all other environments the weak version is obligatory.

The following example shows that in a result clause with verb second, the weak version of the third person singular masculine, *e* or *er*, cannot replace the full version *hy* `he' in result clauses:

(6) mar dat leit sa'n Frysk wiif jo *ea* dúdlik út, *da* sa'n Frysk wiif KRIGE it op 'e simmels  
*but that lays such+a Frisian woman you so clearly out that he gets it on the nerves*  
`but a Frisian woman like that explains it to you so clearly that he gets it on his nerves'  

This supports the assumption that a result clause with verb second has main clause status and is conjoined with the matrix clause.

### 6.2.1.3 Left dislocation
Left dislocation is typically possible in main clauses, but not in subclauses. The next example shows that in a result clause with verb second, left dislocation (of *sa'n Frysk wiif* `such-a Frisian woman`) is grammatical:

(8) mar dat leit er jo *sa dúdlik út, dat sa'n Frysk wiif*, dy KRIGE it op 'e simmels  
*but that lays he you so clearly out that such+a Frisian woman that gets it on the nerves*  
`but he explains it to you so clearly that a Frisian woman like that, she gets it on her nerves`

Again, the result clause seems to behave like a main clause.

### 6.2.1.4 Interjections

The fourth feature indicating that a result clause may have main clause status is the distribution of discourse elements like interjections. The following paradigm (De Haan 1990, ex. 35-36) shows that such discourse elements can occur in result clauses with verb second, but not in result clauses with a final finite verb (the `proper' subclauses):

(9) a mar dat leit er jo *sa dúdlik út, dat* sa'n Frysk wiif it op 'e simmels KRIGE  
*but that lays he you so clearly out that such+a Frisian woman it on the nerves gets*  
`but he explains it to you so clearly that a Frisian woman like that gets it on her nerves`

b * mar dat leit er jo *sa dúdlik út, dat, godskes*, sa'n Frysk wiif it op 'e simmels KRIGE  
*but that lays he you so clearly out that gosh such+a Frisian woman it on the nerves gets*

(10) a mar dat leit er jo *sa dúdlik út, dat* sa'n Frysk wiif KRIGE it op 'e simmels  
*but that lays he you so clearly out that such+a Frisian woman gets it on the nerves*

b mar dat leit er jo *sa dúdlik út, dat, godskes*, sa'n Frysk wiif KRIGE it op 'e simmels
Overdiep (1932) and De Haan (1990) suggest that `that', which is morphologically identical to a complementizer, is in fact the coordinator.  

Zwart (1997, p.235, fn.46) notes that result clauses exhibiting verb second are an exception to the generalization that verb second (a property of root clauses) is not allowed in adjunct clauses (cf. Iatridou & Kroch 1992, citing De Haan, p.c.). Moreover, it is an exception that has not been accounted for yet: why would an adjoined clause behave like a root clause?  

In my conjunction analysis of result clauses, the availability of verb second in result clause can be made sense of. I claim that result clauses with embedded verb movement are conjoined with the matrix clause, a claim that is supported throughout in the next section. Apparently, conjunction with a matrix clause provides the result clause with root properties like verb second.\footnote{Overdiep (1932) and De Haan (1990) suggest that dat `that', which is morphologically identical to a complementizer, is in fact the coordinator.} This makes sense, because the configuration of two coordinated main clauses is identical (in the conjunction phrase analysis proposed here) to that of a result clause conjoined with a matrix clause.  

The availability of verb second in Frisian result clauses, then, provides additional conceptual support for the conjunction analysis, as well empirical support.  

The next section shows that where a result clause is arguably conjoined with part of a matrix clause, verb second is ungrammatical. In examples in which a result clause may be conjoined with the matrix clause, verb second is possible.  

6.3 Applying the test  

So far, we have established that whenever it is possible to have verb second word order in a result clause, that clause behaves like a main clause in other respects as well. In the conjunction analysis of result clauses it is conjoined with the matrix clause.
If a result clause is not conjoined with the matrix clause, it is conjoined with (part of) a subclause (e.g. a relative clause) or with part of the matrix clause (e.g. AgrOP or PredP). If it is conjoined with a subclause or part of a subclause, the conjunction phrase analysis predicts that verb second will not be grammatical, because it is not conjoined with the matrix clause. The following example shows that this prediction is borne out.\(^3\)

\[ (11) \]
\[ a \] de jongen dy't \textit{sa} meager is \textit{dat} hy KIN wol efter in reid skûlje \\
\textit{the boy that so skinny is that he can PRT behind a reed shelter} \\
\textit{`the boy, that is so skinny that he can hide behind a reed'}

\[ b \] de jongen dy't \textit{sa} meager is \textit{dat} hy wol efter in reid skûlje KIN \\
\textit{the boy that so skinny is that he PRT behind a reed shelter can}

In (11a) we see that verb second is ungrammatical.

With respect to conjunction with lower levels of the matrix clause, e.g. PredP, we should be careful not to look at sentence-final result clauses. The reason for this is that both result clauses that are conjoined with the matrix clause and result clauses that are conjoined with part of it will occur sentence-finally. The former do allow verb second, the latter are predicted not to allow it, but since they both occur sentence-finally we do not know which one we are looking at. Therefore, we should look at an example in which matrix clause conjunction is absolutely excluded and then see if verb second is possible.

Recall that we can topicalize a conjunction phrase:

\[ (12) \]
\[ a \] Die jongen is \textit{zo} mager \textit{dat} hij wel achter een rietje kan schuilen \\
\textit{that boy is so skinny that he PRT behind a reed can shelter} \\
\textit{`That boy is so skinny that he could hide behind a reed'}

\[ b \] [\textit{[conj zo mager dat} hij wel achter een rietje kan schuilen\textit{]} is die jongen]

\[ (13) \]
\[ a \] Dy jongen is \textit{sa} meager \textit{dat} hy wol efter in reid skûlje kin \\
\textit{that boy is so skinny that he PRT behind a reed shelter can}

\[ b \] [\textit{[conj sa meager dat} hy wol efter in reid skûlje kin\textit{]} is dy jongen]

\[ (14) \]
\[ a \] Ik ha \textit{sa}folle boeken kocht \textit{dat} se net yn 'e kast passe \\
\textit{I have so-many books bought that they not in the bookcase fit}

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\(^3\) I'd like to thank Pytsje van der Veen for translating my data into Frisian and providing me with her judgments. I would also like to thank Ger de Haan and Rienk Withaar for their judgments.
'I bought so many books that they do not fit in the bookcase'

b [\textit{sa\textordmasculine}olle boeken kocht dat se net yn 'e kast passe] ha ik (net) 
\textit{so-many books bought that they not in the bookcase fit have I not}

In such examples - in which part of a clause is topicalized with the result clause - the result clause cannot possibly be conjoined with the entire matrix clause. If it were conjoined with the whole matrix clause, what is topicalized in the (b) examples would not be a constituent.

The analysis, then, predicts that verb second is ungrammatical in result clauses that are topicalized together with part of the matrix clause:

(15) a [\textit{Sa} meager dat er wol efter in reid skûlje KIN] is dy jongen 
\textit{so skinny that he PRT behind a reed shelter can is that boy} 
'So skinny that he can hide behind a reed is that boy'

b* [\textit{Sa} meager dat hy KIN wol efter in reid skûlje] is dy jongen

(16) a [\textit{Sa dúdlik dat sa'n Frysk wiif it op 'e simmels KRI\textsc{G}E}] leit er dat 
\textit{so clearly that such+a Frisian woman it on the nerves gets lays he that you out} 
'So clearly that a Frisian woman like that gets it on her nerves does he explain it to you'

b* [\textit{Sa dúdlik dat sa'n Frysk wiif KRI\textsc{G}E it op 'e simmels}] leit er dat jo út

(17) a [\textit{Safolle boeken kocht dat se net yn 'e kast PASSE}] ha ik (net) 
\textit{so-many books bought that they not in the bookcase fit have I (not)} 
'So many books that they do not fit in the bookcase did I (not) buy'

b* [\textit{Safolle boeken kocht dat se PASSE net yn 'e kast}] ha ik (net)

The examples above show that this prediction as well is neatly borne out.

In section 5.9 it was observed sentences like (18) are grammatical:

(18) Zoveel boeken heb ik gekocht, dat ze niet in de kast passen

\footnote{One of the informants rates this examples acceptable.}
In (18) the antecedent degree phrase is topicalized. The grammaticality of this example contrasts with the ungrammaticality of topicalizing the antecedent degree phrase if the result clause does not occur sentence-finally (cf. section 5.9 of chapter 5 for discussion):

(19) * Zoveel boeken heb ik [\text{conj}_t [\text{dat} ze niet in de kast passen]] gekocht

The contrast was attributed to fact that in (19) the antecedent degree phrase occurs outside of the conjunction phrase, and cannot license the conjunction phrase by adjoining to it after Spell-Out. The structure of (18), on the other hand, involves conjunction with the matrix clause, including the topicalized degree phrase:

(20) [\text{conj}_p Zoveel boeken heb ik gekocht [ : [\text{dat} ze niet in de kast passen]]]

Given the test we are applying in this section, the Frisian translation of (20) is predicted to allow the finite verb in second position. Example (21b) shows that indeed it does:

(21) a [\text{conj}_p [\text{Safolle boeken ha ik kocht} [ : [\text{dat} se net yn 'e kast PASSE ]]]]
so-many books have I bought that they not in the bookcase fit
'I bought so many books that they do not fit in the bookcase'

b [\text{conj}_p [\text{Safolle boeken ha ik kocht} [ : [\text{dat} se PASSE net yn 'e kast ]]]

In sum, Frisian result clauses provide unequivocal support for the conjunction analysis presented in chapter 5. That is, result clauses are the second conjunct in a conjunction phrase: they can be conjoined with the matrix clause as a whole, or with part of it.

6.3.1 Conclusion

In this section we saw that the conjunction analysis yields perfect predictions about whether a result clause in Frisian will have main clause status and can have the verb second word order or not.

When result clauses in Frisian are conjoined with the matrix clause, the finite verb in the result clause need not be sentence-final: the result clause can have the
Some negative polarity items do not allow licensing from outside of their clause. An example is
an expression like:

(i) a Hij kan er geen klap van

verb second word order that is associated with matrix clauses. In contrast, when
the result clause is conjoined with part of the matrix clause, or with a subclause, verb second is not possible.

Zwart (1997, p.235) notes that result clauses are a well known exception
to the restriction that verb second is not possible in Frisian adjunct clauses. The
conjunction analysis proposed in this thesis provides an answer to this puzzle: the
result clause is not an adjunct clause at all. Rather, it is conjoined with the matrix
clause when verb second is allowed. Apparently, conjunction with a matrix clause
provides the result clause with matrix clause properties as well. If the result clause
were right-joined to the clause (or to part of a clause) that it is associated with,
the availability of matrix clause properties in some cases, but not in other, is
inexplicable. This means that the availability of verb second in Frisian result
clauses when they are conjoined with the matrix clause provides conceptual
motivation for the conjunction analysis as well.

6.4 Negative polarity items

In this section I will look at negative polarity items in result clauses and show how
negative polarity items in result clauses can be licensed by negation in the matrix
clause.

First, consider the observation that a negative polarity item is allowed when
it occurs in the c-command domain of negation (e.g. Hoekstra 1991, chapter 3).
A very clear negative polarity item in Dutch is the expression ook maar `even':

(22) a Hij heeft nooit ook maar één boek gelezen

\[he\ has\ never\ NPI\ one\ book\ read\]

`He never read even one book'

b # Hij heeft ook maar één boek nooit gelezen

\[he\ has\ NPI\ one\ book\ read\]

With this c-command requirement in mind, negative polarity items in result clauses
that are licensed by negation in the matrix clause provide us with an extra clue
about the structural position of the result clause.\(^5\)

\(^5\) Some negative polarity items do not allow licensing from outside of their clause. An example is
an expression like:

(i) a Hij kan er geen klap van
Recall that when the degree phrase occurs in the object constituent in [spec,AgrOP], we have a conjunction of AgrOP and the result clause. Topicalization of the conjunction phrase corroborates this:

(23)  
\[ \text{He possessed so-much land that he there a castle on could let build} \]  
\[ \text{He owned so much land that he could have a castle built on it} \]

(24)  
\[ \text{He didn't own so much land yet that he could build even a tiny little house on it} \]

(25)  
\[ \text{Nobody bought so many books that any (one) shop ran out} \]

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*b* # Ik vind niet dat hij er een klap van kan  
*I don't think he is at all able to do it*

Such expressions will not be licensed at all by negation in the matrix clause if they occur in a result clause: hence they do not provide any information about the structural position of the result clause with respect to the negative licensor. Therefore, I will restrict myself in the discussion to follow to *ook maar `even’, which clearly does allow licensing from outside of its own clause.*
Examples in which `so' is part of a predicative degree phrase can also involve conjunction of the result clause at a low level. The prediction that negative polarity items in result clauses in those examples are licensed by negation preceding the degree phrase is borne out again:

(26) Ik heb nog nooit [\text{cont}_{\text{z}} \text{ zo snel gelopen (: [dat ik \text{ook maar} \text{ één record gebroken heb})]}]
    `I have still never so fast run that I NPI one record broken have'
    `I never ran so fast that I broke even one record' 

The judgments about Frisian are roughly the same as those about the Dutch examples:

(27) a Hy hie safolle lân dat er der in kastiel op bouwe litte koe
    `He had so much land that he there a castle on build let could'
    `He had so much land that he could have a castle built on it'

b [\text{cont}_{\text{s}} \text{ safolle lân (: [dat er der in kastiel op bouwe litte koe ])]} hie er noch net
    `So much land that he there a castle on build let could had he still not'
    `So much land that he could have a castle built on it, he didn't have yet'

c ? Hy hie noch net [\text{cont}_{\text{s}} \text{ safolle lân yn besit (: [dat er der \text{ek mar} in lyts hûske op bouwe koe ])]}
    `He didn't own so much land yet that he could build even a tiny little house on it'there a castle on could let build

(28) Nimmen / net ien hie [\text{cont}_{\text{s}} \text{ safolle boeken kocht (: [dat der \text{ek mar} ien winkel útverkocht wie ])]}
    `Nobody bought so many books that any (one) shop ran out'
ADDITIONAL EVIDENCE FOR THE CONJUNCTION ANALYSIS

(29)  
\[I k \ ha \ noch \ \text{ne}a \ [c_o\text{on}] \ sa \ hurd \ r\text{ûn} \ [\ : \ [\text{dat} \ ik \ \text{ek} \ \text{mar} \ \text{ien} \ \text{rekord} \ \text{brutsen} \ \text{ha} \]]\]
\[I \ have \ still \ never \ so \ fast \ run \ \text{that} \ I \ \text{NPI} \ \text{one} \ \text{record} \ \text{broken} \ \text{have}\]
`I never ran so fast that I broke even one record'

With respect to English examples of this type, speakers do not as readily judge them well-formed as Dutch speakers do the Dutch examples. A straightforward explanation of the relative unclarity of the English data is that the English negative polarity item *any* allows other interpretations as well (e.g. "free choice *any*" as in "choose *any* of the books you like"). These interpretations interfere with the negative polarity item reading. Still, the following examples were rated acceptable by all speakers of American-English that I asked:**

(30)  
a  He hadn’t bought [so many books that he could fill *any* book shelf with them]
b  Nobody bought [so many books that *any* (one) shop ran out]
c  He didn’t own [so much land that he could *ever* build a house on it]
d  I *never* ran [so fast that I broke *any* records]

In short, negative polarity items in object- and predicative degree phrase-related result clauses, provide additional support for the hypothesis that these result clauses are conjoined with part of the matrix clause.

Of course, the conjunction analysis also predicts that negative polarity items in subject-related result clauses can not be licensed by negation that is structurally lower than the subject. This prediction originates in the assumption that such result clauses are conjoined with (at least) AgrSP and that, hence, negation will not c-command the result clause or any negative polarity items in it. Again, the prediction is borne out; such examples are almost uninterpretable:

(31)  
\[^{*} \ [c_{o\text{onj}} \ \text{Zoveel} \ \text{mensen} \ \text{hadden} \ \text{Star} \ \text{Wars} \ \text{nog} \ \text{nooit} \ \text{in} \ \text{de} \ \text{bioscoop} \ \text{gezien} \ [: \ [\text{dat} \ \text{er} \ \text{ook} \ \text{maar} \ \text{één} \ \text{stoel} \ \text{vrij} \ \text{was}]]]\]
\[so-many \ \text{people} \ \text{had} \ \text{Star} \ \text{Wars} \ \text{still} \ \text{not} \ \text{in} \ \text{the} \ \text{cinema} \ \text{seen} \ \text{that} \ \text{there} \ \text{NPI} \ \text{one} \ \text{chair} \ \text{free} \ \text{was}\]

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** Thanks to the people at UCLA for giving their judgments.
The intended meaning is:

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(i) Zoveel mensen hadden Star Wars nog nooit in de bioscoop gezien dat er zelfs niet één stoel vrij was/ dat alle stoelen bezet waren
so-many people had Star Wars still never in the cinema seen that there even not one chair free was/ that all chairs occupied were

"So many people had never seen Star Wars in a movie theatre, that even one chair was available"

In sum, we saw in this section that negative polarity items that can be licensed across clause boundaries also support the conjunction analysis of result clauses.

6.5 Conclusion

This chapter provided unequivocal support for the conjunction analysis of result clauses that was proposed in chapter 5.

The conjunction analysis correctly predicts in which configuration result clauses in Frisian can or cannot have the verb second main clause word order. In addition, it explains why result clauses can have verb second at all, which used to be an exception to the claim that adjunct clauses do not allow verb second. Result clauses are not adjunct clauses at all. Rather, a result clause is the second conjunct in a conjunction phrase, and allows verb second when it is conjoined with a matrix clause.

In addition, the conjunction analysis correctly predicts that the negative polarity item ook maar 'even' in Dutch (ek mar in Frisian) can be licensed by negation in the matrix clause.

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7 The intended meaning is:

(i) Zoveel mensen hadden Star Wars nog nooit in de bioscoop gezien dat er zelfs niet één stoel vrij was/ dat alle stoelen bezet waren
so-many people had Star Wars still never in the cinema seen that there even not one chair free was/ that all chairs occupied were

"So many people had never seen Star Wars in a movie theatre that not even one chair was empty/ that all chairs were occupied"