The World Beyond Verb Clusters

Aspects of the Syntax of Mennonite Low German

Habilitationsschrift

Philologische Fakultät
Albert-Ludwigs-Universität
Freiburg im Breisgau

vorgelegt von
Göz Kaufmann

Januar 2016

meinem Vater Diethelm Kaufmann (1934–2012)

meinem Doktorvater Klaus J. Mattheier

meinem Freund Horst Ochmann

Denn der wahre Dichter und Künstler findet und hofft seine Belohnung nicht erst in dem Effekt, den sein Werk machen wird, sondern er findet in der Arbeit selbst Vergnügen, und würde dieselbe nicht für verloren halten, wenn sie auch niemanden zu Gesicht kommen sollte

from *Anton Reiser* by Karl Philipp Moritz

Table of Contents

I. List of Tables

II. List of Figures

III. List of Summarizing Boxes

IV. Representational Conventions for MLG and Abbreviations

(a) Representational Conventions for MLG

A total of 454 Mennonite Low German (MLG) translations is presented. It is important to realize that their presentation does not claim phonetic accurateness. Many differences to Standard German (SG) are not visualized in order to avoid making recognition too difficult for readers with knowledge of SG. This concerns, for example, the quality of vowels and the frequent palatalization of MLG /k/ as, for example, in the pronoun *ik* (‘I’) in (ii). In the literature, this sound is normally represented as <tj> (cf. THIESSEN 2003 and SIEMENS 2012). Furthermore, nouns are written with capital letters as in SG. Further information with regard to the representation of the tokens will be provided for examples (ia-d) and (ii):

stimulus <15> Spanish: **Si tiene que vender la casa ahora, se va a poner muy triste**
Portuguese: **Se ele tiver que vender a casa agora, ele vai ficar muito triste**
English: If he has to sell the house now, he will be very sorry

(i) a. *wann dü muts vondaag din Hüs verköpe dann [0.6] wirsch dü trürig sene* (Bol-9; m/43/MLG)
if you must-VERB1 today-ADVERB your house sell-VERB2 ~~then~~ […] will you Ø sad be

b. *wann hei sin Hüs nu verköpe soll dann wird her sehr trürig sene* (Bra-2; m/55/MLG)
if he his house now-ADVERB sell-VERB2 shall-VERB1 ~~then~~ will he very sad be

c. *wenn hei daut Hüs nü verköpe mut dann wird her trürig sene* (Men-12; m/18/SG>MLG-71%)
if he the house now-ADVERB sell-VERB2 must-VERB1 ~~then~~ will he Ø sad be

d. *wann hei sin Ha- Hüs nü verköpe mut her würd daut sehr [äh] bereue* (Men-47; f/60/MLG)
if he his ~~hou-~~ house now-ADVERB sell-VERB2 must-VERB1 he would it much [eh] repent

stimulus <31> Spanish: **No me gustan las personas que hacen mucho ruido**
English: I don’t like people who make a lot of noise

(ii) *ik gleich nich die Persone die: viel: Krach meake* (Men-36; f/18/MLG)
I.NOM like not the persons.ACC who much noise make

The headlines of the tokens start with the coding number of the stimulus sentence (*stimulus <15>* and *stimulus <31>*, respectively). The stimulus sentence in (ia+c+d) and (ii) was presented in Spanish, (ib) in Portuguese. The respective lines, therefore, appear in bold print. If English was not the language of the stimulus sentence, the English version nevertheless appears in non-bold print (cf. Appendix (a) for all versions of all stimulus sentences). The lines following the headlines present the translation(s) into MLG and the English gloss(es). They begin with the coding number of the examples, in this case *(ia-d)* and *(ii)*. Additional information needed to understand the representation of the translations and the English glosses are presented in the following tables: The first one explains the informants’ characteristics as in *(Men-12; m/18/SG>MLG-71%)* in (ic), the second one the special markers used for the translations, and the third one the special markers used for the glosses.

Table I: The informants' characteristics

Characteristic	Explanation
origin	USA=USA; Mex=Mexico; Bra=Brazil; Bol=Bolivia; Men=Menno, Paraguay; Fern=Fernheim, Paraguay
coding number	number of the interview, counted separately for each colony
sex	m=male; f=female
age	age in years
dominant language(s)	MLG=Mennonite Low German; SG=Standard German; E=English; S=Spanish; P=Portuguese If MLG is not the dominant language, we indicate the dominant language as well as the level of knowledge of MLG. In (ic), the SG-dominant informant Men-12 evaluated his knowledge of MLG with 10 out of 14 points (71%; cf. Table 2-2 for this quantification). His dominant language is thus indicated by *SG>MLG-71%.* For some US-American and Brazilian informants, we do not have the precise evaluation for the languages they know, but we do have their competence hierarchy. In this case, an English-dominant informant will be characterized by *E>MLG-Ø*. A Brazilian informant equally dominant in MLG and Portuguese will be characterized by *MLG+P*

Table II: Special markers used in the translations

Token	Element	Explanation
(ia)	*[0.6]*	an unfilled pause between 0.55 and 0.64 seconds Unfilled pauses are indicated with brackets if they are longer than 0.25 seconds (always rounded). This cutoff point was chosen since it is close to the time span of 0.28 seconds used in the marking of *length or runs* in studies on foreign language fluency (cf. BÄRENFÄNGER 2002: 132). In the glosses, all unfilled pauses are presented as *[…]*
(id)	*[äh]*	a filled pause (sometimes also *[ähm]*) in the glosses, they appear as *[eh]* and *[ehm]*
(id)	*sin Ha-*	break-offs and repairs are marked with a hyphen
(ii)	*die: viel:*	colons represent the prolonged pronunciation of phonetic segments

Table III: Special markers used in the glosses

Token	Element	Explanation
(ia-d); (ii)	VERB1; ACC	only grammatical information relevant for the current analysis is given This can, for example, be the embedding level of verbal elements as in (1a-d) or a relevant (frequently 'deviating') gender or case of determiners, nouns, or noun phrases as in (ii)
(ia+b)	you; today; your; his; etc.	underlining represents a semantic deviation from the stimulus sentence
(ia)	∅	∅ represents a word which was not translated although it appears in the stimulus sentence (in this case *muy*; 'very')
(ia-d)	~~then~~; ~~hou-~~	elements crossed out indicate words which the informant included although they were not present in the stimulus sentence. Doubled elements in the case of repetitions and repairs are also crossed out Obviously, this does not mean that these translations are wrong or cannot be used; it just means that they deviate from the stimulus sentence. An additional translation into English is only given when the translation contains major deviations from the stimulus sentence

(b) Abbreviations

MLG = Mennonite Low German *SG* = Standard German

NOM = nominative *ACC* = accusative *DAT* = dative

MASC = masculine *FEM* = feminine

SubjNP Noun phrase functioning as external complement of the verb

ObjNP Noun phrase functioning as internal complement of the verb

ObjPP Prepositional phrase functioning as internal complement of the verb

NR-variant **N**on-**R**aising variant with the basic sequence *ObjNP/PP-Verb2-Verb1* as in (ib+c)

VPR-variant **V**erb **P**rojection **R**aising variant with the basic sequence *Verb1-ObjNP/PP-Verb2* as in (ia)

VR-variant **V**erb **R**aising variant with the basic sequence *ObjNP/PP-Verb1-Verb2* as in (1-8) in Chapter 1

How compact your bodies are! And what a variety of senses you have!
This thing you call language though. Most remarkable!
You depend on it for so very much. But
is anyone of you really its master?

Medusan ambassador Kollos mind-linked to Spock

1. Introduction

This is not a book on Mennonite Low German! This is an attempt to slightly improve our understanding of the most fascinating faculty of human evolution: Language. That it is the language of an Anabaptist group which may shed some new light on this evolutionary whim bears a certain irony. Nonetheless, the extensive amount of variation in Mennonite Low German (MLG) unearths the intricate complexity and interlacement of language phenomena which often remain invisible in less restless speech communities.

When I started this project, my focus was solely on verb clusters, a much researched topic in Continental West Germanic varieties such as Standard Dutch, Flemish, and Swiss German. I had become aware of the enormous amount of variation in MLG verb clusters while working on questions of language contact and language maintenance in Mennonite communities in Ciudad Cuauhtémoc, Chihuahua, Mexico and Seminole, Texas, USA (cf. KAUFMANN 1997). There and then, the idea was born to create stimulus sentences in order to investigate MLG verb clusters (cf. Section 2.2). These 46 sentences were then translated from English, Spanish, or Portuguese into MLG by 313 informants from six Mennonite colonies in Brazil, Paraguay, Bolivia, Mexico, and the USA. This rather time-consuming endeavor led to a data set of roughly 14,000 sentences.

It quickly became clear, however, that in real life, i.e. outside laboratories, it is impossible to reconcile the linguist's focus on one particular phenomenon with the performance of informants whose language is characterized by variation on all levels. Aside from producing much unwanted variation, the informants disregarded, every now and then, parts of the stimulus sentences and frequently added elements not present in the stimulus sentences (cf. KAUFMANN 2005). At first, this performance caused much frustration because it seemed to undermine the project's central focus. The frustration, however, quickly abated once it became clear that the informants' behavior was actually a blessing in disguise. Not only had they discovered and mended some incongruities in the stimulus sentences, not only had they managed to immediately visualize contexts for the stimulus sentences thus diminishing the gap between a context-free translation task and natural conversation – no, their translations also attested to an enormous scale of linguistic ingenuity.

Thanks to this ingenuity, we will not only learn a lot about verb clusters, but we will also be able to appreciate rare, but robustly occurring translations such as (1-1) (cf. Section IV for the representational conventions used). This translation will turn out to follow well-defined syntactic rules although, at first sight, it appears entirely ungrammatical due to the pre-complement position of the finite verb in the dependent clause (cf. Section 5.5 for a thorough analysis).

stimulus <2> Spanish: **Juan no cree que conozcas bien a tus amigos**
English: John doesn’t think that you know your friends well

(1-1) *[äh] Johann gleuf nich daut dü: gut kenns sine Frend* (Mex-26; m/34/MLG)
[eh] John believes not that you well know-VERB his friends

Thanks to this ingenuity, we will be able to understand the logic behind even rarer translations that either exhibit an unexpected doubling of *dune* (‘do’) as in the conditional clause of (1-2) or a semantic incongruity of aspectual *dune* as in the relative clause of (1-3). Such rare, but comprehensible translations will offer unique insights into specific areas of the grammar of some particularly innovative speakers (cf. Section 5.1.3.3 for a thorough analysis).

stimulus <12> English: **If he does his homework, he can have some ice-cream**

(1-2) *if der dät sein*[1] *[1.0] homework dun dann kann her waut [0.3] ice-cream han*
(USA-17; f/14/E>MLG-Ø)
if he ~~does~~-VERB1 his […] homework do.VERB2 ~~then~~ can he ~~some~~ […] ice-cream have

stimulus <31> English: **I don’t like people who make a lot of noise**

(1-3) *ik gleich*[2] *nich Menschen waut [0.5] dun viel Lüts meaken* (USA-6; m/20/E>MLG-79%)
I like not people that […] ~~do~~-VERB1 much loudness make-VERB2

Thanks to this ingenuity, we will be able to demonstrate the intriguing ways in which speakers of MLG indicate different degrees of clause linkage, ranging from extreme syntactic integration as in (1-4) – a translation, which features the correlate *daut* in the matrix clause, the homophonous complementizer, and the verbal sequence *ObjNP-V2-V1* in the complement clause – to extreme syntactic disintegration as in (1-5) – a translation, in which neither correlate nor complementizer are present and in which the finite verb of the complement clause appears in second position (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3 for thorough analyses).

stimulus <3> English: **Don’t you see that I am turning on the light?**

(1-4) *kos dü daut nich sehen daut ik det Lich answitchen du* (USA-86; f/18/E>MLG-64%)
~~can~~ you ~~that~~-CORRELATE not see that-COMPLEMENTIZER I the light on-switch-VERB2 ~~do~~-VERB1

stimulus <7> English: **Peter is convinced that he has understood the book**

(1-5) *Peter gleuft hei: haft daut Bük verstonden* (USA-39; m/46/MLG)
Peter believes Ø he has-VERB1 the book understood-VERB2

Thanks to this ingenuity, we will be able to gauge the usefulness of multiple marking of grammatical features in MLG. Some informants, for example, mark definiteness by means of

[1] It is hard to say why informant USA-17 uses the Standard German (SG) form of the possessive determiner. The MLG form would be *sin*. Unfortunately, we do not know this informant’s competence level in SG.
[2] Confer Table 8-1 for an analysis of this highly interesting verb.

several {d-}-words as in (1-6) (article ***de***, complex relative marker *waut* ***da***, resumptive pronoun ***dei***) or in (1-7) (article ***de***, proper name *João*, resumptive pronoun ***de:r***) (cf. Section 8.2.2 for a thorough analysis).

stimulus <36> Spanish: **El doctor que quiere ver mi pie está muy preocupado**
English: The doctor who wants to see my foot is very worried

(1-6) *de Doktor [0.7] waut da min Fuut sehne will dei is [äh] [1.1] sehr begone* (Bol-4; m/44/MLG)
the doctor […] that 'there' my foot see wants ~~he~~ is [eh] […] very <u>experienced</u>

stimulus <2> Portuguese: **O João não acha que tu conheces bem os teus amigos**
English: John doesn't think that you know your friends well

(1-7) *de João de:r gleuft du kenns nich gut dine Fre- dine Frend* (Bra-56; m/20/P>MLG-75%)
~~the~~ John ~~he~~ believes Ø Ø you know ~~not~~ well ~~your~~ ~~frie-~~ your friends

Thanks to this ingenuity, we will be able to perceive converging tendencies of relative and complement clauses in the translations of some particularly intrepid informants. Token (1-8) bears witness to the all-too-well-known process of a relative particle, in this case MLG *waut*, turning into a complementizer (cf. Excursus 7.2.2.1 for first indications and Section 8.2.3 for a thorough analysis).

stimulus <8> Spanish: **¿Estás seguro que él arregló la silla?**
English: Are you sure that he has repaired the chair?

(1-8) *bis dü sicher waut her daut [0.6] [äh] den Stuhl haf fertiggemeakt* (Mex-13; m/28/MLG)
are you sure that-COMPLEMENTIZER he ~~the~~ […] [eh] the chair has ready-made

Thanks to this ingenuity, there are several tokens supporting one central assumption of this research, namely the conviction that the MLG verb cluster with the serialization pattern *ObjNP-V1-V2* (traditionally described as verb raising; here labeled VR-variant) is the consequence of verb projection raising plus scrambling (cf. Section 3.2 for detailed explanations). The extreme rarity of translations like (1-9), in which the scrambling-unfriendly indefinite ObjNP *en Mensch* ('a person') surfaces before the two verbal elements and not in between them, supports this conviction. Likewise, the position of the quantifier *alle* ('all') in (1-10) suggests a scrambled ObjNP *dine Frend* ('your friends'). Furthermore, the position of the stranded preposition *tu* ('to') in (1-11) demonstrates that traces can be raised together with prepositions and verbal elements. This reinforces the hypothesis of an equally scrambled ObjNP *mine Mame* ('my mom') since the trace of this phrase may also be located between *du* ('do') and *einloden* ('invite') (cf. Section 4.3.2 and the second part of In-Depth Analysis 5.1.4 for thorough analyses).

stimulus <17> English: **If he really killed the man, nobody can help him**

(1-9) *wann dei en Mensch haf todgemeak dann keiner kann den helpen* (USA-76; m/47/MLG)
if he <u>a</u> <u>person</u> has-VERB1 killed-VERB2 ~~then~~ nobody can him.ACC help

stimulus <35> English: **Is this the film you want to show to all your friends?**

(1-10) *is det daut tape waut dü dine Frend willst alle wiesen* (USA-21; m/15/E>MLG-Ø)
is this the tape that you your friends want-VERB1 all-QUANTIFIER show-VERB2

stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: This is the journey I am inviting my mother on

(1-11) *det is die Reise wo ik mine Mame du tu einloden* (Mex-51; m/22/MLG)
this is the journey where I my mother ~~do~~-VERB1 to-PREPOSITION invite-VERB2

Finally, it is thanks to this ingenuity that we will be able to meticulously reconstruct the reanalysis of superficial V2-causal clauses into structural V2-causal clauses in some varieties of MLG (cf. Section 6.3). Trapped between the Scylla of not being able to follow their preference for scrambling and the Charybdis of not being able to indicate syntactic disintegration, scrambling-friendly informants killed two birds with one stone by reanalyzing causal clauses. An example for this is (1-12):

stimulus <26> English: **He needs glasses, because he can't see the blackboard**

(1-12) *ihm fehlt ne Brill wejen hei kann nich die Waundtofel sehen* (USA-1; f/29/MLG)
him lacks a glass because he can-VERB1 not the blackboard see-VERB2

All these discoveries come at a price though. As valid and traceable results are our utmost concern, we will develop all analyses step by step, furnishing quantitative support for most of them. Methodologically, this procedure abides by POPPER's (1935: 56–57) comment with regard to chains of logical reasoning:

> Um eine logische Beweiskette zu sichern, gibt es nur *ein* Mittel: sie in möglichst leicht nachprüfbarer Form darzustellen, d.h. die Kettendeduktion in viele einzelne Schritte zu zerlegen, so daß ihr jeder, der die mathematisch-logische Umformungstechnik gelernt hat, zu folgen vermag. Sollte jemand dann noch Zweifel hegen, so bleibt uns nichts übrig, als ihn zu bitten, einen Fehler in der Schlußkette nachzuweisen oder sich die Sache doch nochmals zu überlegen. Ganz analog muß jeder empirisch-wissenschaftliche Satz durch Angabe der Versuchsanordnung u. dgl. in einer Form vorgelegt werden, daß jeder, der die Technik des betreffenden Gebietes beherrscht, imstande ist, ihn nachzuprüfen.[3]

We do not have any doubt that some readers may find this detailed procedure cumbersome, but we would rather risk losing them than inviting such scorching criticism as expressed by PULLUM (2007: 36) and HAIDER (2007: 389):

> Looking back at the syntax published a couple of decades ago makes it rather clear that much of it is going to have to be redone from the ground up just to reach minimal levels of empirical accuracy. Faced with data flaws of these proportions, biology journals issue retractions, and researchers are disciplined or dismissed.

[3] Translation taken from POPPER (1968: 99): There is only one way to make sure of the validity of a chain of logical reasoning. This is to put it in the form in which it is most easily testable: we break it up into many small steps, each easy to check by anybody who has learnt the mathematical or logical technique of transforming sentences. If after this anybody still raises doubts then we can only beg him to point out an error in the steps of the proof, or to think the matter over again. In the case of the empirical sciences, the situation is much the same. Any empirical scientific statement can be presented (by describing experimental arrangements, etc.) in such a way that anyone who has learned the relevant technique can test it.

> Generative Grammar is not free of post-modern extravagances that praise an extravagant idea simply because of its intriguing and novel intricacies as if novelty and extravagance by itself would guarantee empirical appropriateness. In arts this may suffice, in science it does not. Contemporary papers too often enjoy a naive verificationist style and seem to completely waive the need of independent evidence for non-evident assumptions. The rigorous call for testable and successfully tested independent evidence is likely to disturb many playful approaches to syntax and guide the field eventually into the direction of a serious science. At the moment we are at best in a pre-scientific phase of orientation, on the way from philology to cognitive science.

One may thus accuse us of sometimes being too explicit, but one may not accuse us of lacking empirical accuracy. A quantitative reason for this is the sheer number of 14,000 sentences at our disposal. Handling such a huge amount of data makes a descriptive approach and descriptive analyses crucial. We will, therefore, illustrate the investigated phenomena with the help of 454 translations.[4] Obviously, the huge number of 14,000 sentences does not guarantee that they are valid representations of MLG. After all, and in spite of the informants' impressive capability of visualizing contexts for context-free stimulus sentences, one must not forget that we are working with translations, not with naturally occurring speech. However, as many of our findings are consistent with well-known facts about other languages, one can assume a general validity of the MLG data set. At this point, we will just list some of these findings:

(a) The influence of certain matrix verbs and of negated matrix clauses on complementizer deletion in the MLG data set coincides with claims elaborated by HOOPER and THOMPSON (1973), by REIS (1997), by AUER (1998), and by STELL (2011) for English, Standard German (SG), and Afrikaans (cf. Section 7.1).

(b) The behavior of correlates in complement sentence compounds in the MLG data set is, in many respects, comparable to the assumptions developed by BREINDL (1989) and HAIDER (2010) for modern SG and even to some of the assumptions put forward by AXEL-TOBER (2012) for Old High German (cf. Section 7.2).

(c) The converging behavior of relative and complement clauses in the MLG data set coincides with findings from languages such as Latin or Pennsylvania German (cf. Excursus 7.2.2.1 and Section 8.2.3).

(d) Much of what LENERZ (1993) discovered about pronouns in SG resembles the behavior of pronouns in the MLG data set (cf. Section 4.6).

(e) Some aspects regarding the insertion of *dune* ('do') in the MLG data set is bound to remind the reader of the history of *do*-support in English as described by ELLEGÅRD (1953) and KROCH (1989) (cf. Section 5.1.3.3).

It would truly be odd if the informants behaved in a familiar way in well-known phenomena, while they behaved strangely in less familiar phenomena. Therefore, we must, for example, propose an explanation for the somewhat worrisome fact that 66 informants translated sentence <5> as in (1-13). Instead of a negation particle in the matrix clause, this translation features negation particles in both clauses (cf. In-Depth Analysis 7.1.3.3). Such an inter-clausal doubling would simply invert the meaning of a comparable sentence compound in SG.

[4] Some few of these 454 tokens are shown more than once. There are 142 tokens each from the US-American and the Mexican colonies, 87 tokens from the Brazilian colony, 36 tokens from Menno, 29 tokens from Fernheim, and eighteen tokens from Bolivia. The comparatively low number of tokens from Paraguay (Menno and Fernheim) is the consequence of the strong influence from Standard German there. This influence hampers many linguistic developments.

stimulus <5> Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn't know that he can leave the country

(1-13) *Henrik weit nich daut hei nich üt dem Land rütfohren kann* (Mex-96; f/18/MLG)
Henrik knows not-NEGATION that he ~~not~~-NEGATION out the country out-drive can

Obviously, the necessity to offer meaningful explanations also concerns the translations presented in (1-1) through (1-12). In any case, due to the huge amount of analyzed data, it should not come as a surprise that some parts of this book have to be considered inductive. Aside from this not entirely unproblematic fact, the book's general framework could be called somewhat eclectic since it falls back on concepts and techniques from both variation linguistics and more formal branches of linguistics. With regard to syntax proper, we will basically follow the framework of principles and parameters. We will, however, not consider too many technical details. Our adherence to concepts and techniques of the government and binding theory is due to the comparatively easy applicability of this model and its highly successful handling of questions of language variation and change (cf., e.g., the work of LIGHTFOOT and KROCH). Our rejection of too many technical details is caused, among other things, by our conviction that the inflationary creation of phrasal categories, a tendency that has now left the clausal level and entered the submorphemic level in nanosyntax, is theoretically dubious and empirically problematic (cf. ADLI et al. (2015: 12–15) for a critical evaluation of the empirical base of much work in generative linguistics).

Talking about generative linguistics, it is important to mention the fact that we share one basic problem with historical linguists. We have a lot of data and these data will enable us to make some stunning discoveries, but we have nothing more than these data. As AXEL-TOBER (2012: 29) states:

> Eine weitere Schwierigkeit besteht darin, dass in sprachgeschichtlichen Untersuchungen keine konstruierten Daten zur Verfügung stehen. Für die Analyse mancher gegenwartsdeutscher Nebensatztypen wurde zum Beispiel untersucht, ob sie im Skopus der Negation oder von Fokuspartikeln im Bezugssatz stehen können. In sprachgeschichtlichen Korpora sind solche speziellen Beispielklassen oft nicht auffindbar, was natürlich nicht bedeuten muss, dass die entsprechenden Konstruktionen ungrammatisch waren, sondern einfach darauf zurückzuführen sein kann, dass sie generell niederfrequent sind und daher nur bei umfangreicheren Textmengen überhaupt bezeugt sind.[5]

As we deal with a variety spoken by people today, we could theoretically examine the grammaticality/acceptability of constructed sentences including relevant phenomena, but doing this would not undo the problem of the absence of these phenomena in the stimulus sentences. The reason for this is that it is impossible to meaningfully compare the translations of 313 speakers with the judgments of a few informants. In view of this, the well-meant suggestions we received frequently from generative linguists that we should look at cases of

[5] Translation by G.K.: A further difficulty is that no constructed data is available in investigations about older varieties. For the analysis of some modern types of German subordinate clauses, for example, analyses were carried out to see whether negation or focus particles in the matrix clause have scope over them. In historical corpora, these special classes of subordinate clauses can frequently not be found. Obviously, this does not necessarily mean that the relevant constructions were ungrammatical; it may just mean that they are so infrequent that they could only be found in more extensive data sets.

long extraction or review the scopal behavior of certain quantifiers are all in vain. Every now and then, we will nevertheless present the results of a judgment test that was concerned with the same phenomena as the translation task. These presentations, however, only serve illustrative purposes.

In one aspect, however, we follow generative reasoning to the point and this aspect could be regarded as the project's unique feature within variation linguistics. We do take the individual syntactic behavior of the informants seriously. In Chapter 4, all informants will be meticulously characterized with regard to their syntactic behavior in two-verb-clusters. This does not mean that sociolinguistic characteristics such as age or sex are completely neglected; it does mean, however, that our main concern is the informants' syntactic behavior which we consider an expression of their competence. Relating this behavior to the phenomena presented in (1-1) through (1-13), we will be able to demonstrate the implicational links between different components of the grammar of MLG. This procedure also enables us to isolate crucial grammatical features of individuals or of groups of individuals (cf. especially Sections 5.1.3.3 and 8.2.3).

The book is structured as follows: The first part of Chapter 2 (*Some Empirical Considerations*), Section 2.1, introduces the reader to the history of the American Mennonites, which is characterized by innumerable waves of migrations. These migrations led to the foundation of many colonies in numerous countries. Much of the linguistic variation that exists between and within these colonies is caused by the fact that contact with the respective majority group and its language(s) and contact with Germany and its standard variety are defined by social norms within the colonies and by the informants' individual attitudes. Due to the importance of such contacts, the informants' language repertoires will also be discussed in this section. Section 2.2 will then give a thorough account of the central tool of data elicitation, the 46 stimulus sentences. Aside from this, this section will introduce the judgment test. In this test, the participants were asked to evaluate the acceptability and the use of sixteen sentences. The first part of Chapter 3 (*Studying Continental West Germanic Verb Clusters*), Section 3.1, introduces important methodological issues and crucial theoretical parameters researchers interested in verb clusters have to heed. In Section 3.2, we will lay out our own assumptions with regard to the structural characteristics and the derivational history of MLG clauses in general and verb clusters in particular.

In Chapter 4 (*The Indexes for Verb Projection Raising and Scrambling*), the assumptions introduced in Section 3.2 will be used to create the central tool of analysis, the indexes for verb projection raising and scrambling (cf. Sections 4.2 and 4.3). As previously mentioned, creating these indexes and applying them in the analyses of many (apparently unrelated) phenomena constitutes the major innovation of this project. The theoretical asset of this method is that our understanding of grammatical interdependencies will be furthered. Aside from this, Chapter 4 offers first analyses that go beyond the world of verb clusters. We will, for example, analyze different types of noun phrase movements and see that they all correlate with the scrambling index; a challenge for many theoretical approaches (cf. Sections 4.5 and 4.6). The major purpose of the following Chapter 5 (*Applying the Indexes to Other Verbal Complexes*) is to present analyses that show that the indexes formed in Chapter 4 account for much of the variation in the realm of verb syntax. On the one hand, the high explanatory power of the two indexes can be regarded as independent evidence of their validity. On the other hand, the co-variation found demonstrates that speakers of MLG apply the same syntactic mechanisms regardless of the type of dependent clause, the type of finite verb in the verb cluster of this clause, and the number of verbal elements contained in it. While Sections 5.1 through 5.4 offer analyses of main and dependent clauses with two to four verbal elements, Section 5.5 represents a further expedition towards the world beyond verb clusters. It deals with dependent clauses with just one verbal element. In some of these clauses, the verbal element surfaces in front of its complement as in (1-1). As there is a clear connection between these tokens and the raising and scrambling behavior of the informants responsible for them, one can conclude that dependent clauses with one verbal element are governed by the same mechanisms as clauses with verb clusters. In a more provocative line of argumentation, one could conclude that the construction we call verb cluster does actually not exist, at least not in MLG. MLG verb clusters will turn out to be the superficial epiphenomenon of general syntactic mechanisms. This in itself is obviously a truism; most approaches to verb clusters assume the interaction of different syntactic mechanisms (cf. Section 3.1). What is new is that we assume mechanisms that are not triggered by narrowly defined verb- or complement-related grammatical necessities, but by issues of parsing-friendliness and/or broadly defined syntactic functions. Parsing-friendliness is captured in Section 5; the broadly defined syntactic functions constitute the focus of Chapters 6 and 7.

Chapters 6 and 7 are entitled *Syntactic Integration of Different Clause Types* and *Clause Linkage in Complement and Conditional Sentence Compounds* and analyze the variation of verb clusters in different clausal constellations. These chapters foil part of the conclusions of Chapter 5 since, at this point, we will not only draw on the informants' syntactic preferences in order to explain the variation with regard to verb clusters, but also on the specific linguistic conditions in which they occur. The first part of Chapter 6, Section 6.1, will deal with the theory of clause linkage, embedding, and subordination thus specifying the umbrella term *dependent clause* used in the rest of the book. Sections 6.2 and 6.3 then raise the question of why there is a tendency to prefer one type of raised verb cluster, the scrambled VR-variant (serialization pattern *ObjNP-V1-V2*), in conditional and relative clauses and another type, the unscrambled V2-VPR-variant (serialization pattern *V1-ObjNP-V2* with V1 superficially in second position), in complement and causal clauses. The answer to this question is that the preference for certain verb clusters in certain dependent clause types[6] is a function of their

[6] WEIß (2013: 765) uses the concept of clause type (*Satztyp*) both for independent root clauses (declarative, imperative, interrogative, optative, and exclamative clauses) and for dependent clauses such as complement, adverbial, and relative clauses. MEIBAUER et al. (2013: 1) support this view. For dependent clauses, we will also use the term *clause type*. In order to distinguish between declarative and interrogative and between negated and

syntactic integration into the matrix clause. The less integrated the clauses are the more root clause characteristics, in our case superficial verb second, they possess. To our knowledge, the relationship between verb clusters and clause types has never been the topic of any serious study (but cf. KAUFMANN 2003a and KAUFMANN 2007 for first hints). Chapter 7, by far the longest chapter of this book, will considerably refine the analyses of Chapter 6 for complement and conditional sentence compounds. Sections 7.1 and 7.2 analyze complementizer deletion and the presence of correlates in complement sentence compounds, while Section 7.3 focuses on comparable phenomena in conditional sentence compounds, disintegrated conditional clauses and the presence of resumptive elements in the matrix clause. Among other things, we will be able to demonstrate that some speakers of MLG have developed highly complex means to indicate different degrees of syntactic (dis)integration (cf. tokens (1-4) and (1-5), In-Depth Analysis 7.2.4.2, and Section 8.2.3).

The first section of Chapter 8 (*Some Theoretical Considerations*) offers a thorough discussion on the question of whether the correlative elements of MLG investigated in Chapter 7 (correlates in complement sentence compounds; resumptive elements in conditional sentence compounds) are better explained in a system-based (structure dependency) or a usage-based framework (AUER's theory of syntactic projections in interaction). In spite of our bias towards structure dependency, we hope that this discussion will also be fruitful for readers with other affiliations. The overarching issue of Section 8.2 is the attempt to isolate grammatical features of specific groups of speakers of MLG. Section 8.2.2 will deal with aspects of definiteness. On the one hand, resumptive pronouns in cases of prolepsis will be analyzed (cf. (1-6) for relative sentence compounds and (1-7) for complement sentence compounds); on the other hand, the conditions of use of {d-}-marked relative markers such as *waut **da*** in (1-6) will be brought into focus. Section 8.2.3 refines the results of In-Depth Analysis 7.2.4.2 showing even more clearly that some speakers of MLG adapt their syntactic behavior in order to mark different degrees of syntactic (dis)integration. An additional factor that enters this discussion is the use of the default relative marker *waut* as a complementizer as in (1-8). Chapter 9 (*Conclusions*) briefly summarizes the findings of this study and formulates desiderata for future research.

Scattered throughout the book, the reader will find two types of subsections: First, there are five excursus. These excursus furnish additional information with regard to aspects of MLG which we deem important enough to discuss and analyze, but which are not directly connected to the central line of argumentation. Readers pressed for time may, therefore, skip these subsections without running the risk of losing the thread. Second, there are six in-depth analyses. Not reading these subsections would not only mean that readers will not entirely understand our argumentation; it would also mean that they will deprive themselves of some fascinating facts about MLG. In order to facilitate the localization of the excursus and in-depth analyses, they are numbered according to the section in which they occur and are listed

---

non-negated main/matrix clauses, however, we will use the term *clause mode* (cf. ÖHL & SEILER 2013: 168–169 and Footnote 116 in Chapter 5).

in the Table of Contents. Aside from these subsections, the reader will find fifteen summarizing boxes which condense the most important findings. The precise position of these boxes and of all tables and figures can be found in Sections I through III.

I would like to finish this introduction by mentioning the people who frequently discussed this project with me and to whom I am very thankful. These are Ellen Brandner, Sandra Hansen-Morath, Vanessa Siegel, Peter Auer, Sjef Barbiers, Josef Bayer, Hans Bennis, Hardarik Blühdorn, Hans Broekhuis, Hubert Haider, Mark Louden, Peter Öhl, Martin Pfeiffer, Oliver Schallert, Guido Seiler, Heinrich Siemens, Philipp Stöckle, Tobias Streck, John Thiessen, and Sascha Wolfer. I am grateful to Sarah Signer for improving my non-native English. Obviously I am most obliged to the Mennonite informants in North and South America. They did not only translate 46 sentences and were always able to satisfy my never-ending curiosity; they also proved to be most hospitable in every possible respect. *Veelmol Dankscheun!*

2. Some Empirical Considerations

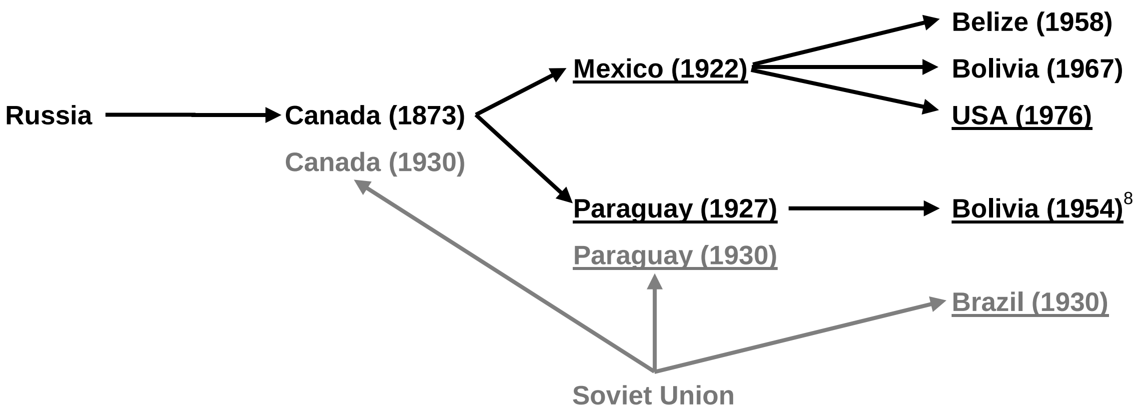
2.1 History and languages of Mennonites in North and South America

The ancestors of the MLG-speaking Mennonites in the Americas emigrated from Russia in the 1870s and from the Soviet Union in the 1930s. Mennonites had lived in the southern region of present-day Ukraine since the end of the eighteenth century. Originally, they had formed Anabaptist communities in East Holland, Frisia, Flanders, and present-day Northwest Germany during the time of the Reformation. Due to religious persecution, many of these Mennonites emigrated to West Prussia during the sixteenth century. It was there that a koiné variety developed from the varieties the Mennonites had brought with them and the local variety of Low German. When the Prussian government imposed stricter rules in the eighteenth century, Mennonites started to look for other places to live and gladly accepted an invitation by Catherine II of Russia to settle in the southern part of the Ukraine (cf. URRY 1989 for details of Mennonite life in Russia). This region had fallen to Russia after the fifth Russian-Turkish war (1768–1774). The first Mennonite settlers arrived in 1789 and founded a colony which they named Chortitza after an island in the nearby Dnieper River. Being the first colony on Russian soil, this colony is also called Old Colony, a term which is still used today to denominate its descendants. A few years later, in 1803, a second colony was founded and named Molotchna after a small river that bordered the settlement. Due to the different periods of emigration, the slightly different geographic origins, and the different social compositions of the emigrants, two MLG dialects developed in Russia, one in Chortitza and one in Molotchna (cf. SIEMENS (2012: 30–70) for a detailed discussion). An important difference between these dialects is that the dialect from Molotchna has always enjoyed more prestige. Whether and how these varieties differed in terms of syntax in the nineteenth century is unknown; the most visible current differences concern pronunciation and the lexicon.

In Russia, the Mennonites lived in almost complete isolation for an entire century. At the end of the nineteenth century, however, Russian officials started to change their policies towards the Mennonites and introduced laws to ensure a certain level of integration. This led the more conservative Mennonites, most of them from Chortitza, to emigrate to Canada around 1870. When the situation for German-speaking people in Canada became difficult during and after World War I, it was again the more conservative members who decided to move on. Most left for Mexico, where they predominantly settled in the state of Chihuahua, especially around the city of Ciudad Cuauhtémoc (cf., e.g., SAWATZKY 1986). Others found a home in Paraguay and set up the colony Menno (cf., e.g., KLASSEN 1991 and 2001 and RATZLAFF et al. 2009). Mennonites from Mexico founded several daughter colonies, namely Santa Cruz de la Sierra in Bolivia (cf. SCHARTNER & SCHARTNER 2009), various communities in Belize (cf., e.g., STEFFEN 2006), and one in Seminole, Texas, USA (cf. KAUFMANN 1997).

The Mennonites who stayed in Russia in 1870 accepted their new situation and introduced a more elaborate schooling system by sending future teachers to Germany to study there and sometimes even inviting teachers from Germany to teach in their colonies. Due to this improved schooling, the Mennonite colonies thrived economically and various daughter colonies in the Ural region and Siberia were founded. Alas, it was precisely the economic success that caused disaster when Stalin came to power. Innumerous Mennonites were killed and large parts of the Mennonite population decided to leave in 1930. Those who succeeded, emigrated to Canada, Paraguay, and Brazil. In Paraguay, they set up the colony Fernheim a mere twenty kilometers from Menno (cf., e.g., ROHKOHL 1993); in Brazil, they first established a colony in the state of Santa Catarina, but later either moved north to Paraná or south to Rio Grande do Sul (cf., e.g., KLASSEN 1995). The changes between 1870, when the first wave of Mennonites left Russia, and 1930, when the second wave left the Soviet Union, are important for the present study because the Mennonites who left in 1930 predominantly spoke the more prestigious Molotchna dialect and arrived in the Americas with a much higher degree of formal learning and a much better command of SG.[7] Figure 2-1 represents the major migration paths of the Mennonites in North and South America:

Figure 2-1: Major migration paths of the Mennonites in the nineteenth and twentieth century



The upper part of Figure 2-1 in black print represents the migration that started in Russia around 1870, while the lower part, in grey print, represents the migration that started in the Soviet Union around 1930. The six colonies in which syntactic data were elicited between April of 1999 and October of 2002 are underlined.[9] Two of these colonies can be considered

[7] Interestingly, in spite of the fact that conservative Mennonites frequently express their aversion towards all things worldly, the more modern Mennonites often exert a strong influence on their more conservative brethren. This can, for example, be seen in the two colonies in Paraguay, where Fernheim decisively influenced Menno (cf. KAUFMANN 2003b and 2011 for the linguistic consequences of this influence).

[8] Aside from the Mennonites who left Mexico for Bolivia in the 1960s, a smaller contingent left the Paraguayan colony Menno ten years earlier. The reason for this emigration were the changes in Menno resulting from the contact with the more modern Mennonites from Fernheim. The eight Bolivian informants belong to this smaller Paraguayan group.

[9] In April of 1999 and October of 2002, the necessary data were elicited in Seminole, Texas, USA (67 informants). The Mexican data stem from two field trips in April of 2001 and October of 2002 (103 informants). The colony in Brazil was also visited twice, the first time in October of 1999, the second time in July of 2002 (56 informants). The Paraguayan and Bolivian data are the result of one long field trip starting in August of 2001 (42 informants in Menno, 37 informants in Fernheim, and 8 informants in Bolivia). Comparable data were also elicited from 24 speakers of the Hunsrückisch variety in Rio Grande do Sul, Brazil (November of 2002; cf. the

big, each one counting roughly 50,000 Mennonite inhabitants (Ciudad Cuauhtémoc in Chihuahua, Mexico and Santa Cruz de la Sierra in Bolivia). Medium-sized colonies are Menno in Paraguay with 9,000 inhabitants, Fernheim in Paraguay with 4,000 inhabitants and Seminole in Texas, USA also with 4,000 inhabitants. The Brazilian colony in Colônia Nova in Rio Grande do Sul has to be considered small. Roughly 1,000 Mennonites live there.

The MLG-speaking Mennonites in North and South America can be characterized as a non-prototypical speech community, first because the *ethnoscape* (cf. APPADURAI 1990) they cover is huge, but discontinuous, and second because both their autochthonous variety, MLG, and their language repertoire are characterized by a high degree of diversity. The reasons for this are the different periods of emigration, the different migration paths, and in particular the different degrees of readiness to interact with members of the majority group (cf. KAUFMANN 1997 for the North American colonies and KAUFMANN 2004 for the colonies in Brazil and Paraguay). Aside from MLG and SG, the language repertoire includes the majority language of each colony's homeland and frequently, outside the United States, English as an international language. Spanish as the majority language in Mexico still has some importance for older US-American Mennonites, while Portuguese is becoming a more and more important language for Paraguayan Mennonites. On the one hand, this is due to Portuguese being the language of the powerful neighbor Brazil; on the other hand, it is connected to the fact that many Brazilians live in the Chaco region of Paraguay. Guaraní, the official language in Paraguay and local tribal languages also play a certain role in Menno and Fernheim.

As syntactic convergence of MLG to either SG or to one of the other contact languages is a possibility that should not be discarded lightly and, as cases of language attrition have to be distinguished from cases of linguistic innovation, all informants were asked which languages they knew and which language they knew best, second-best, third-best, and so on. Table 2-1 presents the answers to these questions.[10]

Table 2-1: Dominant language(s) of 313 Mennonite informants in six colonies →

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (informants)	67	103	8	56	42	37	313
dominant in MLG	27	81	7	27	28	20	190
	40.3%	78.6%	87.5%	48.2%	66.7%	54.1%	60.7%
dominant in English	29	3	0	0	2	0	34
	43.3%	2.9%	0%	0%	4.8%	0%	10.9%
MLG-English-bilingual	9	2	0	0	1	0	12
	13.4%	1.9%	0%	0%	2.4%	0%	3.8%

discussion of tokens (3-5) and (5-21e)) and from twenty speakers of Pomeranian from the same Brazilian state (September of 2013 and September of 2014).

[10] In the tables of this book, cells are shaded if their value/share is above the average value/share in the same line or in the same column. Non-significant differences are not highlighted. In Table 2-1, the different degrees of shading refer to the lines (cf. the column *Total*).

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
dominant in Portuguese	0	0	0	19	0	0	19
	0%	0%	0%	33.9%	0%	0%	6.1%
MLG-Portuguese-bilingual	0	0	0	10	0	0	10
	0%	0%	0%	17.9%	0%	0%	3.2%
dominant in Spanish	2	6	0	0	2	0	10
	3%	5.8%	0%	0%	4.8%	0%	3.2%
MLG-Spanish-bilingual	0	7	1	0	1	0	9
	0%	6.8%	12.5%	0%	2.4%	0%	2.9%
dominant in SG	0	1	0	0	4	12	17
	0%	1%	0%	0%	9.5%	32.4%	5.4%
MLG-SG-bilingual	0	3	0	0	4	5	12
	0%	2.9%	0%	0%	9.5%	13.5%	3.8%

In total, 190 of the 313 informants claim that MLG is the language they know best (60.7%). The (vast) majority of informants outside the US-American and the Brazilian colonies belong to this group. Another 43 informants (13.7%) indicate an equally high knowledge of MLG and one other language. This is twelve times SG (9 informants in Paraguay, 3 in Mexico), twelve times English (9 informants in the USA, 2 in Mexico, 1 in Menno, Paraguay), ten times Portuguese (all in Brazil), and nine times Spanish (7 informants in Mexico, 1 in Bolivia, 1 in Menno, Paraguay). Eighty informants claim to speak another language better than MLG. In 34 cases, this is English (29 informants in the USA, 3 in Mexico, 2 in Menno, Paraguay); in nineteen cases, it is Portuguese (all in Brazil). Spanish is mentioned first by ten informants (6 informants in Mexico, 2 in the USA, 2 in Menno), while the competence in SG surpasses the competence in MLG in seventeen cases (16 informants in Paraguay, 1 in Mexico).

At first glance, the eight indications of English as the sole strongest language or in combination with MLG in Mexico and Menno, Paraguay are unexpected. The fact that six of these eight informants are women (4 younger women) is quite telling though,[11] since it demonstrates that English and the North American culture behind it represent attractive assimilation targets even for people who have spent most of their life in Mexico or Paraguay. The four younger women, who are between fifteen and eighteen years old have lived on average twelve years in Mexico and Paraguay, but only four years in either Canada or the United States. Nevertheless these rather short sojourns to English-speaking countries were enough to result in an outstanding knowledge of this language (13 of 14 points; cf. the discussion above Table 2-2 for explanations). In contrast, their average competence in Spanish is very low with five points (for the 8 relevant informants: 13.5 and 5.4 points, respectively). Spanish thus does not constitute an equally attractive assimilation target for these mostly female informants. This conclusion is supported by the fact that sixteen of the nineteen informants that claim Spanish as (one of two) best language(s) are men, among them two male informants from the United States. For these informants, no conspicuous age distribution can be detected, a clear indication for the fact that Mennonite men of all

[11] These are 9.2% of 65 women in these two colonies compared to only 2.5% of eighty men. The share of younger women is even higher at 15.4% (4 of 26 informants).

generations are responsible for interethnic contacts with Spanish-speaking people.

More precise information with regard to language competence was elicited for the majority of the 313 informants (this information is missing for 27 US-American and 14 Brazilian informants). Aside from the questions mentioned above, these 272 informants were asked to evaluate their competence in each language they knew as very good, good, OK, or bad. The answer to this question and the answer with regard to the above-mentioned competence hierarchy were then translated into a scale from zero points (no knowledge at all) to fourteen points (native speaker competence).[12] Table 2-2 compares the competence levels of the six colonies in four languages. For five of the six colonies, an equal number of informants in three age groups (14-25 years; 26-40 years; 41-75 years) and for the two sexes was randomly selected. This should help avoid sociolinguistic skewing. Depending on the amount of available interviews, different numbers of informants were selected for each of the six age-gender-subgroups. For Mexico, this number is ten, for the USA, Brazil, and Menno, Paraguay six, and for Fernheim, Paraguay five.[13] The figures in Table 2-2 represent the competence of the participating informants correctly for each colony. However, they do not necessarily represent the situation of all Mennonites in all colonies correctly. The biggest deviation in this respect concerns the Mexican colony, since most Mennonites there could not have taken part in this study due to their insufficient competence in Spanish. Therefore, the actual competence in Spanish in Mexico is probably lower than Table 2-2 suggests. The Bolivian figures have to be interpreted with even more caution, since only eight men could be interviewed there.

Table 2-2: Language competence of 198 sociolinguistically balanced informants in the USA, Mexico, Paraguay, and Brazil and eight male informants from Bolivia (Engl.=English; Span.=Spanish; Port.=Portuguese)

	USA	**Mexico**	**Bolivia**	**Brazil**	**Menno**	**Fernheim**	**Total**
n (informants)	36	60	8	36	36	30	206
competence in MLG	11.8	12.9	13.8	11.8	12.7	13.2	12.5
	F (5,200) = 3.7, p=0.003**						
competence in SG	5	7.7	6.3	7.2	10.3	11.4	8
	F (5,194) = 28.2, p=0***						
competence in the majority language	Engl.	Spanish		Port.	Spanish		
	11.3	8	7.6	11.4	7.6	7	8.9
	F (5,200) = 18.4, p=0***						
competence in one further foreign language	Span.	English					
	3	4.4	1.5	2	3.9	3.1	3.3
	F (5,200) = 3.1, p=0.01*						

[12] The scale for the absolute question was seven points (*very good*), five points (*good*), three points (*OK*), and one point (*bad*). Intermediate values were allotted if an informant, for example, answered that his knowledge was in between *good* and *OK* (4 points). For the language hierarchy, the language(s) the informant spoke best received seven points. Second-best and third-best language(s) received intermediate values depending on the number of languages spoken, and the worst language(s) received one point. The most frequent point distributions for this question were 7-5-3-1 points for four languages or 7-4-1 points for three languages. The point values of the two questions correlate strongly in all colonies. This may be taken as an indication for the reliability of this subjective competence measure (cf. KAUFMANN (1997: 135–138) for more details).

[13] For six of these 198 informants, the selection criterion could not be met since the necessary number of informants was not available in all cells. In such a case, the respective cell was complemented by an informant from a comparable cell. In the case of a younger woman, this would be either a middle-aged woman or a younger man.

The fact that there are significant differences for all languages (one-way ANOVA[14]) is strong evidence for the different language repertoires in the colonies. MLG is still the unrivaled language in Mexico, Bolivia, and Paraguay. The role of MLG is weakest in the United States and Brazil, where the competence in the respective majority language almost equals the competence in MLG. In view of this result, the fact that only five of a total of 272 informants (1.6%) must be classified as semi-speakers of MLG is important. Their competence ranges from four to seven points. The vast majority of the 226 informants (83.1%), however, obtained values between twelve and fourteen points; 144 informants (52.9%) reached the highest level of fourteen points. Thus, most of the speakers with a dominant language other than MLG still speak MLG well. For 58 of these eighty informants, precise information is available. Their average competence in MLG equals 9.8 points. Judging from the fact that the highest possible value in this case is twelve, not fourteen points (MLG was not mentioned as strongest language), this competence level is unproblematic.

With regard to SG, the two Paraguayan colonies benefit from their modern school system in which this prestigious variety is both a subject of learning and a medium of instruction (cf. WARKENTIN 1998). Younger and middle-aged Paraguayan Mennonites can maintain a conversation with a SG-speaking person from Europe without any problem. Granted, many schools in the conservative colonies in the USA, Mexico, and Bolivia also teach SG and use it as a medium of instruction, but the variety used there represents an antiquated Bible-based form of SG and most of the inhabitants of these colonies would have a hard time conversing with speakers of European SG. The huge difference in the competence in SG will be one crucial factor for the different syntactic behavior of the Paraguayan informants on the one hand and the North American informants on the other hand. The very low US-American competence level in SG in particular has enabled many innovative changes in MLG. Just like in Fernheim, Paraguay, SG used to play an important role in the Brazilian colony. However, due to severe linguistic repression in the time of the so-called *Estado Novo* in the 1930s and 1940s, SG has lost its roofing position in Brazil to Portuguese.

The two Paraguayan colonies do not only have the highest competence levels in SG, they also represent the most stable colonies with regard to language repertoires. In the four languages analyzed in Table 2-2, only SG in Menno exhibits a significant difference that is influenced by the factors *age* and *sex*. The relevant multiple ANOVA model explains 16.5% of the extant variation and *age* is selected as significant factor (model: F=2.6* / adjusted R^2: 0.165 / age: F=5.6**). With 10.3 points, the SG competence level of all 42 Menno informants

[14] For (quasi-)interval scale variables such as these language competences, age, or the indexes formed in Chapter 4, Pearson's Bivariate Correlation Analysis and One-Way or Multiple ANOVAs are applied. If there are more than two groups in an ANOVA, an additional Post Hoc Scheffé-Analysis is sometimes carried out in order to determine where significant differences can be found. The level of statistical significance is presented with its precise value. One asterisk * means that SPSS calculates the probability for a Type I-error between 1% and 5% ($0.01 \leq p < 0.05$), two asterisks ** that the probability is smaller than 1% ($0 < p < 0.01$), and three asterisks *** that it is virtually 0% ($p=0$). We are aware of the fact that this value can never be reached, but follow the indication provided by SPSS. One asterisk in brackets ⁽*⁾ indicates a statistical tendency with an error margin of 5% to 10% ($0.05 \leq p < 0.1$).

is identical to that of the 36 randomly selected informants in Table 2-2. Younger men, however, exhibit a level of 11.8 points; younger women reach the second-highest level with 10.9 points. The lowest level with nine points is encountered among middle-aged men. As Menno was founded by conservative immigrants from Chortitza, the fact that younger informants claim to have a higher competence in SG than middle-aged and older informants is a clear sign of the influence from the more progressive Fernheim Mennonites (cf. Footnote 7 in this chapter). Our observations on several visits to Menno confirm this claim.

While the Paraguayan colonies seem to be a refuge of linguistic stability, the other colonies transmit an utterly different picture. Table 2-3 presents the distribution for the 103 Mexican informants:

Table 2-3: Language competence in four languages of 103 Mexican informants

	n	age	MLG	SG	Spanish	English
total	103		12.8	7.6	8.1	4.5
Multiple ANOVA			ns	model: F=3.7** adjusted R^2: 0.118 age: F=2.8$^{(*)}$ sex: 13.4***	model: F=4.9** adjusted R^2: 0.159 sex: 16.8***	model: F=4** adjusted R^2: 0.128 age: F=5.5** sex: F=4.4* age x sex: F=2.9$^{(*)}$
younger men	19	14-25	12.3	6	9.3	4.6
younger women	18	14-25	12.9	7.9	6.8	6.9
middle-aged men	21	26-40	12.9	7.6	8.2	3.8
middle-aged women	17	26-40	12.7	9.3	6.7	3.1
older men	18	41-75	12.8	6.5	9.8	3.6
older women	10	41-75	13.5	9.1	7.7	5.8

In Mexico, all languages but MLG show differences with regard to age and sex (cf. also Kaufmann 1997: 253–304). However, the explained variation ranges from 11.8% in the case of SG to 15.9% in the case of Spanish, i.e. the two factors' influence is not very big. The colony, therefore, is linguistically still rather stable. The most important factor is the informants' sex. Women speak SG much better (8.7 vs. 6.7 points) and English better (5.2 vs. 4 points; cf. Kaufmann 1997: 181–184), while men excel in their knowledge of Spanish (9.1 vs. 7 points). This confirms the argumentation with regard to the differing prestige of Spanish and English in the discussion of Table 2-1. Age is a less important factor in Mexico. The statistical tendency with regard to SG may be connected to the fact that younger people have less experience in church matters, while the higher competence in English among younger Mennonites illustrates a trend which has accelerated since the time of data elicitation. The role of English in the Mexican colony is currently even stronger than it used to be at the turn of the century. Table 2-4 illustrates the dynamic situation in the US-American colony:

Table 2-4: Language competence in four languages of forty US-American informants

	n	age	MLG	SG	English	Spanish
total	40		11.9	5.2	11.1	3.1
Multiple ANOVA			model: F=2.5* adjusted R^2: 0.161 age: F=3.6*	ns	model: F=4.5** adjusted R^2: 0.311 age: F=10.4***	model: F=15.6*** adjusted R^2: 0.651 age: F=29.4*** sex: F=13.1** age x sex: F=2.5$^{(*)}$
younger men	7	14-25	9.7	5.4	13	0.9
younger women	4	14-25	12	5.8	13	0.5
middle-aged men	7	26-40	11.6	4.9	11.7	3
middle-aged women	7	26-40	11.9	5.6	12	0.3
older men	7	41-75	13.1	4	8	8.3
older women	8	41-75	13	5.8	9.6	4.3

The fact that the explained variation now ranges from 16.1% in the case of MLG to an impressive 65.1% in the case of Spanish is evidence of the dynamics in Seminole, Texas. The situation of Spanish illustrates two things: On the one hand, the strong gender difference resembles the Mexican situation. This is not surprising, since the US-American Mennonites came from Mexico, i.e. they just transported the existing gender difference from their old homeland to their new homeland. On the other hand, the much lower prestige of Spanish in comparison to English becomes evident when one realizes that only older men still possess a solid knowledge of Spanish. The competence in this language has rapidly petered out over the years; the younger informants virtually have no knowledge whatsoever, although they visit their Mexican relatives quite frequently. The comparison with the Mexican colony, where English is on the rise among younger people, is very instructive in this respect.

The US-American age distribution of the competences in MLG and English leaves no room for much hope. MLG is a severely endangered language in Texas (cf. also KAUFMANN 1997: 253–304). Older informants are still much more fluent in MLG (13.1 points for MLG vs. 8.9 points for English), but the middle-aged generation already displays equal competences (11.9 and 11.7 points, respectively). The tide has definitely turned among younger informants (10.5 vs. 13 points). The speed of this shift – the Mennonites only arrived in Seminole 25 years before the data were elicited – is indeed impressive. In view of this, the moment of data elicitation was ideal. The highly dynamic situation and the almost complete lack of SG as a roofing variety (cf. the stable, but low competence level in SG) had led to much syntactic change, but the knowledge of MLG was still good enough to hamper syntactic change due to language attrition. Unfortunately, MLG will probably vanish before many of the fascinating syntactic innovations described in this book will have reached their endpoint. The same may be true for the equally dynamic situation in Brazil which is represented in Table 2-5:

Table 2-5: Language competence in four languages of 42 Brazilian informants

	n	age	MLG	SG	Portuguese	English
total	42		12.2	7.5	10.7	1.9
Multiple ANOVA			model: F=5.6** adjusted R^2: 0.359 age: F=12.3***	model: F=4.1** adjusted R^2: 0.273 age: F=8.3**	model: F=9.3*** adjusted R^2: 0.503 age: F=10.5*** sex: 10.3** age x sex: 3.6*	model: F=2.3$^{(*)}$ adjusted R^2: 0.133 sex: F=4.8* age x sex: F=2.9$^{(*)}$
younger men	7	14-25	10.9	7.1	13	1.9
younger women	5	14-25	8.4	7.6	13.2	2.4
middle-aged men	5	26-40	11.9	6	12	4.7
middle-aged women	6	26-40	12.2	4.7	9.3	0.3
older men	8	41-75	13.3	8.3	11.5	2.2
older women	11	41-75	14	9.4	7.5	0.9

The decrease in MLG seems to be even more dramatic in Brazil. This conclusion is based on three facts: First, the change occurs more abruptly, it predominantly happens between the middle-aged and the younger generation. The older generation is clearly dominant in MLG (13.7 points for MLG vs. 9.2 points for Portuguese), but the middle-aged generation still shares the dominance in the autochthonous variety, at least to a certain degree (12 vs. 10.5 points). It is only younger Mennonites that are definitely losing MLG (9.8 vs. 13.1 points). Second, a gender difference with regard to English never existed in the USA, but it exists in the Portuguese competence of middle-aged and older informants. This difference disappears all of a sudden in the younger generation showing that Portuguese has left the realm of interethnic communication (compare the different situation in the colonies in Spanish-speaking countries). Third, aside from MLG, SG has also lost its erstwhile important position. The lowest value in the middle-aged generation (5.3 points) is clearly the result of GETÚLIO VARGAS' language policies during the *Estado Novo*, but the improvement among the younger generation (7.3 points) should not be overestimated. The actual difference to the older generation with 8.9 points is more marked than the 1.6 points suggest. The younger generation has learned SG in a Mennonite-run community school, but one must not forget that this school was closed a few years ago, and that the younger generation speaks much better Portuguese than MLG or SG.

2.2 The MLG data set

The MLG syntax project shares its interest in dialect syntax with long-term atlas projects in Europe. The most important of these is undoubtedly the *Syntactic Atlas of the Dutch Dialects* (SAND; *Een Syntactische Atlas van de Nederlandse Dialecten*), which deals with Dutch dialects spoken in the Netherlands, Flanders, and parts of France. For the German-speaking area, two important projects are the *Syntactic Atlas of Swiss German Dialects* (SADS;

Syntaktischer Atlas der deutschen Schweiz) and the *Syntax of Hessian Dialects* (SyHD; *Syntax hessischer Dialekte*). These three projects deal with many syntactic facets of the dialects they focus on. The advantage of this is that they can offer a more comprehensive view than we could possibly hope to present in this book. The disadvantage is that they cannot concentrate on particular phenomena. All three projects, for example, deal with verb clusters, but only the SAND-atlas (cf. BARBIERS et al. 2005: 14–38) does so in a way more or less comparable to the MLG project in terms of breadth and depth.

Another advantage of institutional projects is sheer man power. In the Swiss project, the first of four questionnaires was returned by an impressive number of 2,672 informants from 344 reference points (cf. BUCHELI & GLASER 2002: 53). This number obviously exceeds the possibilities of any one-person-project without institutional backing. But again, there are also factors which favor the MLG project. One of them is that all interviews and analyses were carried out by the same person. This does not preclude errors in general, but it does diminish distortions due to different ways of actuation in the interviews and in transcription and interpretation (cf. MATHUSSEK (in print) for transcription problems). Aside from this, the MLG project focusses on just six research locations. Therefore, the number of informants per location is higher than in projects that cover many locations in an extensive geographical area. The 2,534 usable questionnaires in the first round of the Swiss project correspond to an average of 7.4 informants per research location. The MLG project counts 52.2 informants per location (313 informants in 6 locations ranging from 8 informants in Bolivia to 103 informants in Mexico). The SyHD-project, whose indirect part comprises four rounds with a total of 111 items, obtained on average between 4.7 and 5.9 informants per research locations (160 locations within Hesse, 12 close to this federal state; cf. FLEISCHER et al. 2015: 263–264). Additionally, 141 informants were directly interviewed (normally 1 informant in each location). The SAND-project first presented a written questionnaire with 424 test sentences to 368 informants in 267 research locations (cf. BARBIERS et al. 2005 (commentary): 8). The data obtained from the questionnaires were exclusively used for the preparation of the second phase, the oral interviews (cf. CORNIPS & JONGENBURGER 2001: 54). These interviews were mostly carried out with two informants per research location (in the Netherlands, 1 of the informants served as assistant interviewer). The recorded interviews, which form the base of the atlas project, contained 160 test sentences for all locations plus a variable number of area-specific items. The final phase in The SAND-project was a follow-up telephone interview phase which was carried out in order to clarify unclear cases.

The main tasks in the three European syntax projects were translation tasks, completion tasks, and multiple choice questions that asked for grammaticality/acceptability judgments and individual preferences with regard to different variants presented. These tasks were either carried out in direct interaction with the informant (interviews) or in indirect interaction (questionnaires). Only a translation task and a judgment test were applied in the MLG project. Both were carried out directly with the researcher always present at the location of data elicitation. Aside from the lack of a completion task, there are other decisive differences.

First, at least for the analyses in this book, we will almost exclusively use the results of the translation task; the judgment test will mainly serve as a means of illustrating the extant variation in selected syntactic phenomena. This does not mean that we consider judgment data outright erroneous; it just means that we are not sure whether translation tasks and judgment tests should be compared. They probably tap into different types of competences (cf., e.g., ADLI 2015 and KEMPEN & HARBUSCH 2005). Second, we did not give any contextual clues for the stimulus sentences, neither in the translation task nor in the judgment test. This differs from the two German syntax projects, in which extensive context information was given. In spite of this lack, many of our analyses suggest that the informants succeeded in visualizing contexts. However, as we did not control for the factor *context*, we cannot be sure that all of them imagined the same context.

Third, our recorded translation task was exclusively carried out orally and most importantly, it did not use stimuli in the related standard variety, but in the majority languages English, Spanish, and Portuguese. Obviously, the use of different stimulus languages is far from being a trivial problem (cf. the discussions of Tables 2-6 and 2-8, KAUFMANN 2005, and several comments in the following analyses). Another problematic point in this respect is the fact that the informants needed to have a sufficient competence in one of these languages. This means that many Mennonites, in Mexico and Bolivia most Mennonites, could not participate although these monolingual Mennonites might represent the "purest" form of MLG. Be this as it may, the non-use of a related standard variety easily outweighs such problems. Both BUCHELI and GLASER (2002: 44 and 60) and FLEISCHER et al. (2015: 264) mention the problem of SG influence on the informants' performance. Such an influence does not come as a surprise in Germany, but the fact that it even happens in Switzerland – a country, which FERGUSON (1959) used as a prototypical example for diglossia – is somewhat unexpected. Granted, influence from the non-German stimulus sentences on the MLG translations does exist every now and then (cf. the discussions of Tables 2-6 through 2-8, KAUFMANN 2005, and several comments in the following analyses), but its magnitude is much smaller since English, Spanish, and Portuguese exhibit a much bigger linguistic distance to MLG than SG. In any case, the huge majority of MLG translations turned out to be of an astonishingly high quality. We do thus not share the critical stance of BUCHELI and GLASER (2002: 61):

> However, translation carries the danger that too many unintended variants appear. Even if these unintended variants inspire the linguist to conduct further research, all these useless answers, which come up to 10-15% of the whole, clearly show the disadvantage of translation: the control over the elicitation is minimal because the informant has too much freedom in answering.

Not only were we greatly inspired by unintended variants, no, it is precisely these variants that illustrate highly interesting grammatical interdependencies in MLG, something BUCHELI and GLASER (2002: 51) also mention:

> A comparative study of related dialects provides us with a perspective similar to that offered by diachronic studies. The important advantages, however, are that the variants to be compared can be investigated directly, and can be studied with respect to their interdependency with other phenomena in the same geographical area.

Before discussing further general questions with regard to translations as a tool of data elicitation, we will present the 46 stimulus sentences in their English guise. The respective Spanish and Portuguese versions can be reviewed in Appendix (a). It should not come as a surprise that these stimulus sentences would look different, if they were created today. On the one hand, a certain lack of expertise led to some rather basic errors. Aside from this, we did not yet have the knowledge about MLG that we have now. If we had had this knowledge, some foci of attention would have been set differently. The first batch of sentences represents ten complement sentence compounds. Table 2-6 offers the exact wording of the stimulus sentences in the column on the left-hand side and the information on where the reader can consult actual translations of these sentences (column *Translations presented*). The first number indicates the chapter in which the translations can be found, the second number points out the relative position of the translation within the chapter. Frequently, the reader will find several translations in one position.

Table 2-6: Stimulus sentences <1> through <10> (complement sentence compounds) →

Complement sentence compounds	Translations presented
<1> It is not good that he is buying the car	5-14 7-23
<2> John doesn't think that you know your friends well	1-1 / 1-7 4-36 / 4-39 / 4-47 / 4-48 5-84 7-5 / 7-26 8-8
<3> Don't you see that I am turning on the light?	1-4 5-20 / 5-92 7-1 / 7-14 / 7-25 / 7-33 8-2
<4> Can't you see that I am wearing a new dress?	5-77 7-9
<5> Henry doesn't know that he can leave the country	1-13 3-35 4-27 / 4-28 / 4-29 / 4-30 / 4-31 5-78 / 5-81 7-7 / 7-22 / 7-27 / 7-29
<6> Don't you know that he should learn English?	7-4 / 7-8
<7> Peter is convinced that he has understood the book	1-5 4-5 7-20 / 7-34 8-19
<8> Are you sure that he has repaired the chair?	1-8 4-6 / 4-17 6-19 7-2 / 7-10 / 7-19 / 7-24 / 7-28 / 7-32

Complement sentence compounds	Translations presented
<9> Elisabeth insists that you must have seen the truck	3-5 / 3-34 7-12
<10> He didn’t know that he should have fed the dogs this morning	2-4 3-17 5-23 / 5-41 7-3 / 7-21 / 7-30 / 7-31

The basic arrangement of the stimulus sentences in all clause types is the same. The first two stimuli, here sentences <1> and <2>, aim to elicit dependent clauses with one verbal element without a particle. The next two stimuli also contain single verbal elements, this time however, we hoped to obtain particle verbs. In <3>, this would be MLG *anmeaken* (‘to switch on’); in <4>, *anha* (‘wear’). This approach did not always meet with success. In stimulus sentence <4>, for example, many informants used the morphologically simple verb *brucken* (‘use’). Aside from this, Spanish and Portuguese do not possess this verb class and, therefore, the respective stimulus versions did not contain them. This had a slight effect on the translations. In the nine stimulus sentences aiming for particle verbs (sentences <3>, <4>, <13>, <14>, <23>, <24>, <33>, <34>, and <42>), the share of particle verbs among all English-based translations with one verbal element was 64.1% (205 of 320 tokens; excluding tokens with inserted *dune* (‘do’) or *woare* (‘will’)). In the Spanish- and Portuguese-based translations, the figures were somewhat lower with 53.2% (546 of 1026 translations) and 54.3% (159 of 293 tokens), respectively. This difference is significant, but the strength of association is very weak.[15] The reason for including sentences with one verbal element in a study on verb clusters is to ascertain whether the basic rules of the position of finite verbs in MLG dependent clauses can be compared to the rules prevalent in other German dialects. In Section 5.5, we will see that this is not always the case. The dependent clauses in sentences <5> through <8> target translations with two verbal elements, either a modal verb plus a bare infinitive (sentences <5> and <6>) or the temporal auxiliary *han* (‘have’) plus the past participle (sentences <7> and <8>). The last two stimuli, sentences <9> and <10>, contain three verbal elements. In nine of the ten relevant cases, these stimuli aimed for verbal complexes expressing counterfactual propositions. In these complexes, the modal verb surfaces in its participial form (no IPP and no prefix {ge-} in MLG), because it is governed by a finite form of *han* (‘have’). The modal verb itself governs a bare infinitive. Only sentence <9> focusses on an epistemic modal verb that governs an infinitive perfect.

As the reader can infer from the high number of translations presented for sentences <1> through <10>, complement sentence compounds play a central role in our analyses. Some problems with these sentences do, however, exist. The complement clause of sentence <1>,

[15] χ^2 (2, n=1639) = 41.6, p=0.003** / Cramer’s V: 0.09 / 0 cells with less than 5 expected tokens. For *nominal scale variables*, Pearson’s Chi-Square is used. As this test is sensitive to the number of tokens, tests for the strength of association are also carried out (here Cramer’s V). The number of cells with less than five expected tokens in the distribution is also provided (in vulnerable distributions with one degree of freedom and less than 5 expected tokens in a cell, the result of Fisher’s Exact is also provided).

for example, was frequently translated with the introductory element *wann* (‘if’) instead of expected *daut* (‘that’; cf. ZIFONUN et al. (1997: 2261–2262) for comparable cases in SG). This complement clause is also the only subject clause in the ten stimulus sentences, all other dependent clauses are object clauses. Sentence <6> is problematic since the apparent ObjNP *English* may have incorporated into the verb *learn*. This is a problem since the lack of a true ObjNP precludes the clear identification of raised cluster variants as either a case of the VR-variant or the VPR-variant in the sequence *V1-“ObjNP”-V2*. Aside from this, the verbal constructs *leave the country* in sentence <5> and *fed the dogs* in sentence <10> do not possess a comparable Spanish and Portuguese counterpart. This led to more complex stimulus versions either containing an ObjPP instead of an ObjNP as in sentence <5> (Spanish *salir* ***del país***; Portuguese *sair* ***do país***) or including additional verbal or nominal elements as in sentence <10> (Spanish *dado* ***de comer*** *a los perros*; Portuguese *dado* ***comida*** *para os cachorros*). For sentence <10>, Spanish and Portuguese *alimentado* would have been closer to *fed* with regard to verb valence, but *alimentado* would have sounded far too technical.

Before we turn to conditional sentence compounds, five characteristics of the complement sentence compounds must still be mentioned: First, they all feature extraposed complement clauses following the matrix clause. These extraposed clauses are normally supposed to occupy the topological postfield and this serialization pattern constitutes the unmarked case in SG (cf. AXEL-TOBER 2012: 61). Second, the object clauses in sentences <7> and <8> are selected by the predicative constructions *to be convinced* and *to be sure* and not by a main verb.[16] Third, all dependent clauses feature direct ObjNPs which would be marked by the accusative case in SG. Forth, sentences <2> and <10> contain an additional adverb(ial). Fifth, with the exception of sentences <7>, <8>, and <9>, all matrix clauses are negated. In addition to this, sentences <3>, <4>, <6>, and <8> feature interrogative matrix clauses. The reasoning behind these negated and/or interrogative matrix clauses is the attempt to preclude translations with complementizer deletion. Fortunately, this attempt failed frequently (cf. Section 7.1). Table 2-7 introduces the ten conditional sentence compounds:

Table 2-7: Stimulus sentences <11> through <20> (conditional sentence compounds) →

Conditional sentence compounds	**Translations presented**
<11> If he signs this contract, he will lose a lot of money	3-32 5-8 / 5-75 7-51
<12> If he does his homework, he can have some ice-cream	1-2 5-13 / 5-36 / 5-79
<13> If he quits his job, I won’t help his family anymore	3-16 4-42 5-15 7-44

[16] ZIFONUN et al. (1997: 2253), for example, distinguish between [+V]-complement clauses that are governed by the verb of the matrix clause and [-V]-complement clauses that are governed by a nominal or adjectival predicative of the matrix clause.

Conditional sentence compounds	**Translations presented**
<14> If he opens the door, he will be very surprised	2-12 7-54
<15> If he has to sell the house now, he will be very sorry	4-7 / 4-14 / 4-16 / 4-19 / 4-37 5-34 7-41 / 7-53 / 7-55 8-3
<16> If he can solve this problem, he is very smart	4-8 / 4-18 / 4-19 7-50 8-5
<17> If he really killed the man, nobody can help him	1-9 3-33 4-9 / 4-15 / 4-19 / 4-23 / 4-34 / 4-38 / 4-40 / 4-49 / 4-50 / 4-51 / 4-52 / 4-53 / 4-60 7-42 / 7-45 / 7-52
<18> If he stole the book, I won't trust him anymore	4-10 / 4-54 / 4-61 / 4-64 5-35 7-46 / 7-56
<19> If he really had wanted to write this letter, he would have found the time	4-24 7-57
<20> If he could have repaired the car, he would have done it	5-52 / 5-53 / 5-54 / 5-55 / 5-56 / 5-57 / 5-67 / 5-68 / 5-70 / 5-71

The high number of translations of conditional sentence compounds exhibited in the present study (cf. the 2nd column in Table 2-7) shows that aside from complement clauses, conditional clauses constitute the second focus of investigation. The basic arrangement is the same as above. Sentences <11> through <14> aim for translations with one verbal element, sentences <15> through <18> for translations with two verbal elements, and sentences <19> and <20> for translations with three verbal elements. The dependent clauses in the English stimuli <17> and <18> (and in sentence <38>) feature the simple past tense in contrast to stimulus sentences <7>, <8>, <27>, <28>, <37>, and <44>, which feature the present perfect tense. The different tenses in the stimulus sentences seem to have a slight influence on the translations, but this influence is harder to describe than in the case of particle verbs since the choice of tense also depends on other factors, for example on the type of verb (strong or weak verb). In any case, all Spanish and Portuguese stimulus versions with past time reference use non-analytic simple tense forms. The use of the present perfect tense or simple past tense in the English stimulus sentences depended solely on the decision of the native speakers who reviewed the stimulus sentences. For all sentences in all three languages, we preferred slightly different stimulus versions as a result of the suggestions of the native speakers consulted than unnatural sounding stimuli.

In contrast to stimulus sentences <1> through <10>, which all exhibit extraposed dependent clauses following the matrix clause, all conditional clauses in sentences <11> through <20> are preposed, i.e. they surface before the matrix clause. This is the most frequent position of SG *wenn*-clauses, which may be conditional or temporal (cf. AUER

2000a: 179 – Figure 1). As we aimed for natural sounding stimuli, this different position was accepted. Fortunately, there are no obvious short-comings in the conditional sentence compounds. It is nevertheless a truly conspicuous fact that all third person singular pronouns are masculine. For full-fledged NPs, it makes sense to choose masculine or neuter nouns since case distinctions are clearest in these cases; for pronouns, one must admit that the concentration on male persons in most stimulus sentences is somewhat strange. All ten conditional clauses feature direct ObjNPs and are either factual or counterfactual. Some of them may, however, allow a temporal co-reading. No epistemic conditionals were included (cf. EISENBERG (2013b: 339–340) for this type; BREINDL (2009: 287) calls them factual (*faktische Konditionalsätze*)), nor does any conditional clause in the stimulus sentences refer to the speech act-level (cf. ZIFONUN et al. (1997: 2290) for this type). Adverbs are present in sentences <15>, <17>, and <19>. Table 2-8 presents the ten causal sentence compounds:

Table 2-8: Stimulus sentences <21> through <30> (causal sentence compounds)

Causal sentence compounds	**Translations presented**
<21> He is not coming, because he doesn't have any time	6-29
<22> He doesn't have a car, because he has no money	
<23> He can't listen to you, because he is unpacking his luggage	2-1 4-32 5-94
<24> He is not here, because he is helping your father out	5-93
<25> He is crying, because he has to eat salad every day	4-41 5-21 / 5-32 6-34
<26> He needs glasses, because he can't see the blackboard	1-12 2-6 5-31 / 5-76 6-22 7-13
<27> I will give him a good grade, because he has read the book	5-30 6-23
<28> I am very hungry, because I haven't had lunch yet	
<29> He is angry, because he could have bought the house for much cheaper	4-25 5-37
<30> He is so sad, because he should have warned his friend	2-3 / 2-5

All causal clauses are extraposed, i.e. they follow the matrix clause, and describe cases of factual causality; no epistemic reading is possible (cf. ZIFONUN et al. (1997: 2296–2297) for this type). With the exception of sentence <24>, all ObjNPs in the dependent clauses are direct; sentence <24> features an indirect ObjNP that would be marked by dative case in SG. Aside from this, sentence <25> contains the adverbial *every day* and sentence <29> the adverbial *for much cheaper*. Two of the causal clauses are problematic. Just like the complement clause of sentence <6>, incorporation of the noun into the verb is possible in *eat salad* in sentence <25> and in *have lunch* in sentence <28>. The infelicitous decision to include NPs without determiners could obviously have been avoided by the researcher. Outside of the researcher's responsibility, the question arises whether the translation task itself may have led to priming or – in a less cognitive manner of speaking – may have induced informants to produce word-by-word-translations. Looking at the dependent clauses in examples (2-1) through (2-3), this problem indeed seems to exist:

stimulus <23> English: **He can't listen to you, because he is unpacking his luggage**

(2-1) *dei kann nich no di horchen wegen der dät [0.7] unpacken [0.4] die bag* (USA-77; f/42/MLG)
he can not to you listen because he ~~does~~-VERB1 […] un-pack-VERB2 […] the bag

stimulus <35> Spanish: **¿Esta es la película que quieres mostrar a todos tus amigos?**
English: Is this the film you want to show to all your friends?

(2-2) *det's de Film waut ik will wiesen [0.3] an all mine Frend* (Mex-45; m/59/MLG)
this-is the film that I want-VERB1 show-VERB2 […] to all my friends

stimulus <30> Spanish: **Está muy**[17] **triste porque debería haber advertido a su amigo**
English: He is very sad, because he should have warned his friend

(2-3) *her is: sehr trürig weil her mut: [0.5] warnen sin Frend* (Mex-32; m/38/MLG)
he is very sad because he Ø must-VERB1 […] warn-VERB2 his friend

The dependent clauses in the three translations follow the same sequence as the stimulus sentences, i.e. *V1-V2-ObjNP/PP*. With regard to this characteristic, English, Spanish, and Portuguese do not differ, i.e. they are SVO and governing verbs in complex verbal arrays surface to the left of governed verbs. If this coincidence really constituted a case of priming by the stimuli, this would seriously undermine the investigation of MLG verb clusters. Yet, the equally conspicuous translations in (2-4) and (2-5) shed a different light on this crucial question:

stimulus <10> Portuguese: **Ele não sabia que ele teria que ter dado comida para os cachorros esta manhã**
English: He didn't know that he should have fed the dogs this morning

(2-4) *hei wisst daut nich daut hei mußt Ete gewe de Hung [0.4] vondaag zu Morjens*
(Bra-5; f/22/MLG+P)
he knew ~~that~~ not that he Ø must-VERB1 food give-VERB2 the dogs […] today at morning

stimulus <30> Spanish: **Está muy triste porque debería haber advertido a su amigo**
English: He is very sad, because he should have warned his friend

(2-5) *her is sehr trürig wegens hei soll e:n Vergnügen gewen sinen Frend* (Mex-26; m/34/MLG)
he is very sad because he Ø should-VERB1 ~~an amusement~~ give-VERB2 his friend

[17] In some cases the stimulus versions were slightly changed. This was either due to different lexical items in some countries (e.g., Spanish *coche*, *carro*, or *movilidad* for *car*), or to the fact that some informants had problems understanding the original version of the stimuli, or to an occasional lack of attention on the side of the researcher. In the present case, the matrix clause is changed from *he is so sad* to *he is very sad*, a rather unobtrusive change. In all translations presented, the actual read stimulus versions are given. This is the reason why every now and then, the given version slightly differs from the shape presented in Tables 2-6 through 2-10.

Although both translations feature the sequence *V1-V2-ObjNP*, the two verbs are separated by non-verbal material. In the complement clause of (2-4), this may be an incorporated noun, but the somewhat erroneous translation of (2-5) leaves no doubt that the added direct object *e:n Vergnügen* (‘an amusement’) surfaces in a position that is impossible in English, Spanish, or Portuguese. As we will see that causal clauses are frequently structural V2-clauses in the US-American and Mexican colonies (cf. Section 6.3), translation (2-5) may exhibit the typical verbal frame of German varieties in spite of the extraposition of the ObjNP *sinen Frend* (‘his friend’). This means that the translations of (2-1) through (2-5) are not necessarily the consequence of priming by the stimuli, but may just as well be the consequence of the extraposition of ObjNPs/PPs. With this in mind, it is important to realize that four of the five complements in these clauses are animate and three of them are indirect objects. As indirect objects are marked by prepositions in many languages (cf. SCHMIDT (1995: 220–221), who assumes that all indirect objects are marked by possibly phonetically empty prepositions) and as ObjPPs extrapose more easily than ObjNPs, we may indeed be dealing with cases of extraposition. Further support for this assumption comes from examples (2-6) through (2-8):

stimulus <26> Spanish: **Necesita lentes porque no puede ver el pizarrón**
English: He needs glasses, because he can’t see the blackboard

(2-6) *dü bruuks: [0.7] Brill wiels dü nich sehne kanns die Tofel* (Bol-4; m/44/MLG)
you need […] glass because you not see-VERB2 can-VERB1 the blackboard

stimulus <42> English: **Before leaving the house I always turn off the lights**

(2-7) *ehe ik verloten du min Hüs dann du ik mine Lichter ütswitchen* (USA-76; m/47/MLG)
before I leave-VERB2 ~~do~~-VERB1 my house ~~then~~ ~~do~~ I Ø my lights off-switch

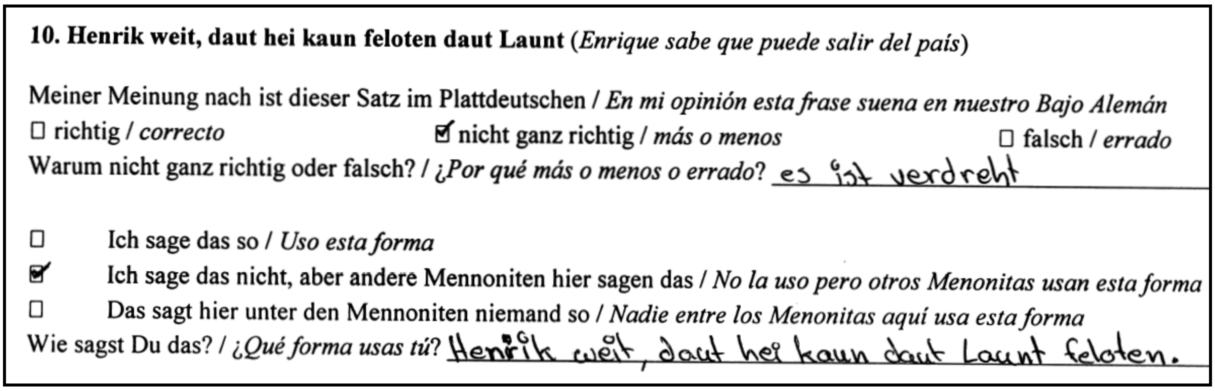
stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: This is the journey I am inviting my mother on

(2-8) *det is die Reis waut ik anbieten dät mine Mame* (Mex-26; m/34/MLG)
this is the journey that I offer-VERB2 ~~do~~-VERB1 my mum

In the dependent clauses of these translations, the complement again surfaces to the right of the two verbal elements. These elements, however, appear in the typical left-branching order of German varieties, an impossible serialization in the three stimulus languages. Priming can, therefore, not be the (sole) explanation for these unexpected translations. Again, the complement in the directional (ablative) construction *verloten […] min Hüs* (‘leaving […] my house’) in the temporal clause of (2-7) and the indirect object in *anbieten […] mine Mame* (‘offer […] my mother’) in the relative clause in (2-8) are preposition-prone; a fact which may have induced extraposition. Be that as it may, there are only ten dependent clauses with ObjNPs/PPs surfacing clause-finally after two verbal elements. These tokens are produced by eight informants and contrast with 5,877 comparable translations where the ObjNP/PP appears in entirely unsurprising positions, either before the two verbal elements or between them in a right-branching sequence. The strongly deviant nature of the translations in (2-1) through (2-8) is also supported by the results of the judgment test (cf. the discussion following

Figure 2-7 for a detailed introduction to this test). Figure 2-2 presents a typical reaction to the complement clause of sentence {10}, which parallels the sequence of examples (2-1) through (2-3). All sentences of the judgment test are marked with curly brackets.

Figure 2-2: Judgment test: Mex-‘11’ (f/16/MLG)[18] changing the verbal word order in sentence {10}



10. Henrik weit, daut hei kaun feloten daut Launt (*Enrique sabe que puede salir del país*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☑ nicht ganz richtig / *más o menos* ☐ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* es ist verdreht

☐ Ich sage das so / *Uso esta forma*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*
☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Henrik weit, daut hei kaun daut Launt feloten.

Although informant Mex-‘11’ claims that sentence {10} is not entirely wrong (*nicht ganz richtig*) and that some Mexican Mennonites speak in this way (*ich sage das nicht, aber andere Mennoniten hier sagen das*), her comment is quite telling. She says that the sentence is twisted (*es ist verdreht*). Her own version *Henrik weit, daut hei* ***kaun*** *daut Launt* ***feloten*** (Henry knows that he can-VERB1 the country leave-VERB2) features the V2-VPR-variant, the typical variant for complement clauses (cf. Section 6.2). In general, sentence {10} received by far the worst ratings in the judgment test. Only two of the 150 informants (1.3%) who responded to this sentence claimed that it is correct and that they would actually use it in this way. On the other hand, 68 informants (45.3%) were convinced that the sentence was entirely wrong and that nobody in their colony would speak this way.

Including the results from the judgment test, we can be sure that the ten unexpected translations represented by (2-1) through (2-8) definitely do not invalidate the results of the present study. Their share lies within the normal range of test errors. Language attrition does not offer an explanation either, since the informants’ average competence level in MLG is very high with 13.4 points (7 values). The ten translations also have to be separated from the translations represented by token (1-1) although in these cases the ObjNP/PP also surfaces clause-finally in a dependent clause (cf. Section 5.5).[19] Table 2-9 presents the ten relative sentence compounds:

[18] The informants of the judgment test will be identified in the same way as in the translation task, i.e. their origin and their coding number will be given. In order to make it clear whether we are dealing with an informant of the translation task or of the judgment test, the number of the latter will be put in single quotation marks. The gender, age, and dominant language(s) are also given. For Brazilian informants, the information about language is missing in the judgment test.

[19] The share of the ten unexpected translations with two verbal elements is 0.2% of 5,877 tokens, while the share of unexpected translations in Section 5.5 is 2.4% (56 of 2,375 tokens; cf. Table 5-31). It must be mentioned though that nine of the 56 unexpected translations come from the eight informants responsible for the ten unexpected clauses here. However, these informants also produce forty inconspicuous translations in Section 5.5.

Table 2-9: Stimulus sentences <31> through <40> (relative sentence compounds)

Relative sentence compounds	**Translations presented**
<31> I don’t like people who make a lot of noise	1-3 5-19 8-6 / 8-11 / 8-17
<32> The stories that he is telling the men are very sad	5-18 / 5-80 / 5-90 8-7
<33> This is the journey I am inviting my mother on	1-11 2-8 5-22 / 5-25 / 5-39 / 5-88
<34> This is the man who is always staring at my house	5-33
<35> Is this the film you want to show to all your friends?	1-10 2-2 4-11 / 4-33 5-38
<36> The doctor who wants to see my foot is very worried	1-6 4-12 6-21 7-15 / 7-18 8-18
<37> I have found the book that I have given to the children	5-1 / 5-3 / 5-89 7-35
<38> The man who caused the accident has disappeared	4-13 5-2 / 5-91 7-36
<39> The truth which you should have told the judge is horrible	3-3 / 3-8 5-69
<40> Who is the guy who could have saved my brother’s life?	3-22 / 3-25 / 3-28 / 3-31

At first glance, the dependent clauses in sentences <31> through <40> seem to be prototypical restrictive relative clauses. However, things are somewhat different in sentences <33>, <34>, and <35>. In these cases, the restriction of the head noun’s extension is already achieved by the deictic pronoun *this*. *This* suggests a context in which *a journey for one’s mother*, *a staring man* or *a particular film* has already been talked about. There is, therefore, no new (restrictive) information provided by these utterances; the only novelty is the (plea for a) definite identification of the entity involved. This does not make the three dependent clauses prototypical non-restrictive relative clauses, but they are definitely not prototypical restrictive relative clauses either. Context is also important in sentences <36>, <37>, <38>, and <40>. In these cases, in order to achieve correct categorization, it is decisive to know whether the informants imagine a situation in which *the doctor*, *the book*, *the accident-causing man*, and *the possible rescuer* have already been talked about; a rather probable assumption. If so, the relative clauses are again not strictly restrictive; they rather serve the function of identifying a previously known entity. The new information is then contained in the matrix clauses, in the fact that *the doctor is very worried*, *the book has been found*, *the man has disappeared*, and *the plea for identification of the possible rescuer*. Thus, the only clear cases of restrictive relative clauses seem to be sentences <31> (indefinite head noun), <32> (the relative clause expresses an ongoing action at the point of speech), and <39> (non-concrete head noun and counterfactuality).

Be this as it may, relative clauses constitute an exception among the four types of dependent clauses since they are not directly selected by the (event variable of the) main verb. Instead, they refer to head nouns in the matrix clause. Another important difference to the other dependent clause types is that the introductory elements of the ten relative clauses are arguments. In sentences <31>, <34>, <36>, <38>, and <40>, the relative marker functions as the subject and refers to a (group of) human being(s), while it functions as an inanimate object in all other clauses, four times as a direct object, in sentence <33> as a prepositional object. Due to the need for an additional complement in order to distinguish different types of verb clusters, the main verbs in the relative clauses of sentences <32>, <33>, <35>, <37>, and <39> are bi-transitive. Four times, the second complement is an indirect object; in sentence <33>, *my mother* would be a direct object in SG. In the stimulus versions, all relative clauses surface adjacent to their head nouns. However, this does not necessarily mean that they are not extraposed in the translations (cf. In-Depth Analysis 5.1.1). Aside from this, the complements in the relative clauses of sentences <35> and <40> are complex. In sentence <35>, it features the quantifier *all* (cf. point (b2) in In-Depth Analysis 5.1.4); in sentence <40>, it contains a possessive attribute. Table 2-10 presents the last stimulus sentences, the six main clauses:

Table 2-10: Stimulus sentences <41> through <46> (main clauses)

Main clauses	**Translations presented**
<41> Every Sunday I bake a cake	2-9 5-16
<42> Before leaving the house I always turn off the lights	2-7 / 2-11 5-17 / 5-82
<43> I always want to help everybody	
<44> I have found the keys this morning	
<45> Yesterday I could have sold the ring	2-10 4-59 5-42
<46> I should have shown the little dog to the kids	3-4 4-20 / 4-22 / 4-26 5-24

The basic arrangement for main clauses differs from the arrangement in dependent clause types. As the finite verb in German main clauses has to move to the head-initial CP, clause-final cluster formation is only possible with three or more verbal elements. Therefore, we maintained two stimulus sentences with three verbal elements (sentences <45> and <46>), but reduced all other constellations to just one stimulus. Sentence <41> features a single verb without a particle, while sentence <42> features a single particle verb. Sentences <43> and <44> feature two verbal elements, one modal verb plus a bare infinitive (sentence <43>), one temporal auxiliary plus a past participle (sentence <44>). Other noteworthy features of these stimuli are the facts that sentence <46> is the only clause in the MLG data set that features two non-pronominal complements and that the prefield of sentence <42> is occupied by a temporal clause. In four of the six stimuli, additional adverb(ial)s are present. Especially interesting in this respect are sentences <41> and <45> because they lend themselves to checking whether MLG is a true V2-language. Looking at the translations in (2-9a-c) and (2-10a-b), one may seriously doubt this.

stimulus <41> English: **Every Sunday I bake a cake**
Spanish: **Todos los domingos cocino un pastel**

(2-9) a. *jeder Sunntag ik du en [0.3] cake meaken* (USA-17; f/14/E>MLG-Ø)
Every.NOM Sunday-ADVERBIAL I-SUBJECT ~~do~~-VERB1 a […] cake make-VERB2

b. *jeder Sunntag ik du en cake backen* (USA-42; f/47/MLG+E)
every.NOM Sunday-ADVERBIAL I-SUBJECT ~~do~~-VERB1 a cake bake-VERB2

c. *jeden Sunntag: [1.0] ik back en Plots* (Fern-23; m/41/MLG)
every Sunday-ADVERBIAL […] I-SUBJECT bake-VERB a cake

d. *jeden Sunntag meak ik eine Tort* (Men-37; f/18/MLG+SG)
every Sunday-ADVERBIAL make-VERB I-SUBJECT a cake

stimulus <45> English: **Yesterday I could have sold the ring**

(2-10) a. *jes:teren er kann the- the ring verkö- verköpen* (USA-17; f/14/E>MLG-Ø)
yesterday-ADVERB he-SUBJECT Ø can-VERB1 ~~the-~~ the ring ~~se-~~ sell-VERB2

b. *jesteren ik hat könnt den Ring verköpen* (USA-42; f/47/MLG+E)
yesterday-ADVERB I-SUBJECT had-VERB1 could-VERB2 the ring sell-VERB3

c. *jestere [0.3] hat ik den Ring könnt verköpe* (USA-15; f/35/MLG)
yesterday-ADVERB […] had-VERB1 I-SUBJECT the ring could-VERB2 sell-VERB3

In eleven of 614 translations of these two sentences (1.8%), the finite verb surfaces in third position, i.e. after the initial adverb(ial) and after the subject pronoun. All other translations are represented by (2-9d) and (2-10c). Obviously, a share of 1.8% is not very impressive; however, once one realizes that ten of the eleven tokens are produced in the United States (7.5% of 134 tokens there) and that informants USA-17 and USA-42 produce V3-clauses in both translations (cf. (2-9a+b) and (2-10a+b)), one may not entirely foreclose a possible change of basic syntactic rules. Outside the United States, MLG is firmly V2. The translation from Fernheim in (2-9c) may actually be a translation error (cf. the prolonged final segment in *Sunntag:* (‘Sunday’) and the rather longish pause). A further indication for a major syntactic change in the USA could be seen in the fact that nine matrix clauses in temporal sentence compounds like in (2-11a+b) seem to be V3 too (7 from the USA; 2 from Mexico):

stimulus <42> English: **Before leaving the house I always turn off the lights**
Spanish: **Antes de irme de casa siempre apago las luces**

(2-11) a. *wann ik wegfohr ik du immer daut Lich- die Lichter ütmeaken* (USA-42; f/47/MLG+E)
[when I Ø away-drive]-TEMPORAL CLAUSE I-SUBJECT ~~do~~-VERB1 always-ADVERB ~~the light~~- the lights out-switch

b. *ehe ik weggo immer schalt ik d'Licht üt* (Men-17; m/20/MLG)
[before I Ø away-go]-TEMPORAL CLAUSE always-ADVERB switch-VERB I-SUBJECT the-light out

Informant USA-42, who produced (2-9b) and (2-10b), is also responsible for (2-11a), a sentence compound which features a preposed disintegrated temporal clause. One may thus actually consider the possibility of a general loosening of V2 in the grammar of some US-American informants. There are, however, eight more Mennonites who produce translations such as (2-11a) and none of them produces tokens such as (2-9a-c) and (2-10a+b). The disintegration of these temporal clauses may, therefore, be caused by neither priming nor by the loss of the typical German V2-feature. The unique token in (2-11b) also suggests a reasoning along this line.[20] Informant Men-17 does produce a disintegrated temporal clause, but he starts the matrix clause with the adverb *immer* ('always') followed by the finite verb in second position. The subject pronoun surfaces in its expected position in the midfield. In spite of these reassuring facts, a glance at the conditional sentence compound in (2-12) may revive the possibility of a more generalized loss of V2:

stimulus <14> English: **If he opens the door, he will be very surprised**

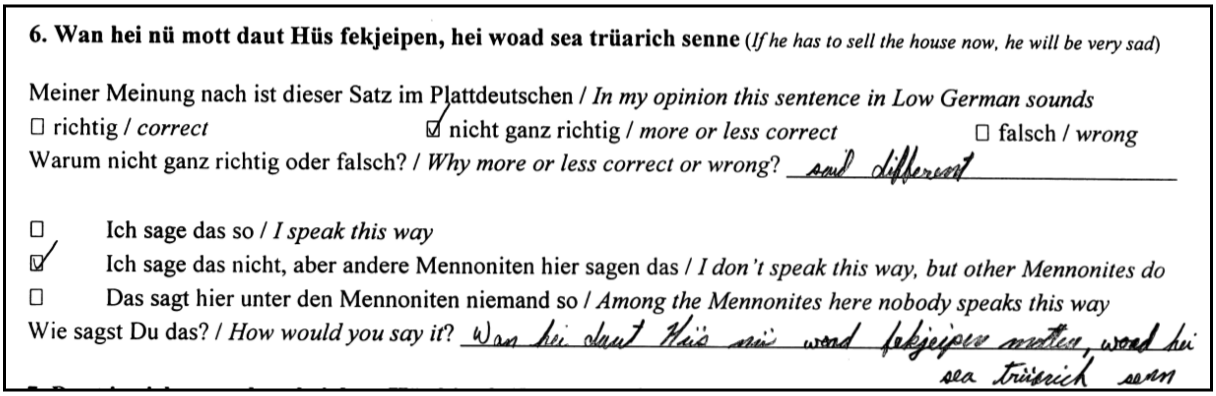
(2-12) *if sie dät die Tür üpmeaken der wird seh:r [2.3] surprised sein* (USA-17; f/14/E>MLG-Ø)
[if she ~~does~~ the door open-make]-CONDITIONAL CLAUSE he-SUBJECT will-VERB1 very […] surprised be

It is again one of the two informants responsible for (2-9a+b) and (2-10a+b), who produces (2-12), a sentence compound with a preposed disintegrated clause. Actually, the eight US-American informants involved in the V3-examples in (2-9a-c) and (2-10a+b) produce 28% of their conditional sentence compounds with disintegrated conditional clauses (21 of 75 tokens). For informants USA-17 and USA-42, this share even rises to 38.9% (7 of 18 tokens). However, all relevant tokens come from USA-17, a very young girl who experienced some problems in the translation task (cf., e.g., the very long pause before *surprised* in (2-12) and the English loan *the ring* in (2-10a)), but may also be qualified as highly innovative (cf. token (1-2)). Leaving out this exceptional informant, the share for the seven remaining US-American informants in question drops from 28% to 20.9% (14 of 67 tokens), not much higher than the general US-American average of 14.2% (cf. Table 7-40). Aside from this, some reactions to the judgment test are again enlightening and show that priming cannot

[20] The fact that both translations in (2-11a+b) do not feature an equivalent for the NP/PP *the house* and *de casa* ('from the house'), respectively, is coincidental; all other translations of sentence <42> with disintegrated temporal clauses feature this constituent.

possibly explain the existence of disintegrated dependent clauses. The informants of Figures 2-3 and 2-4 respond to a disintegrated conditional clause:

Figure 2-3: Judgment test: USA-'8' (m/14/E>MLG) integrating the conditional clause of sentence {6}

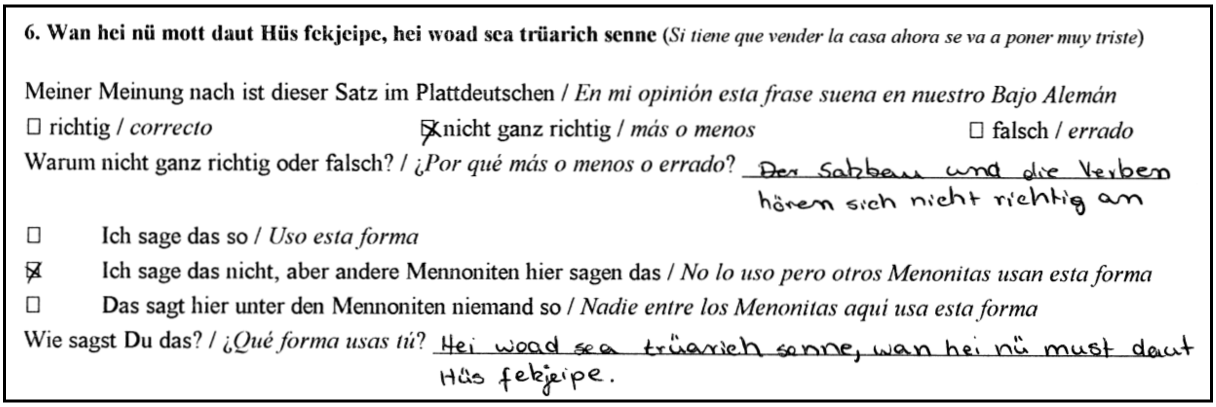


6. Wan hei nü mott daut Hüs fekjeipen, hei woad sea trüarich senne (*If he has to sell the house now, he will be very sad*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong?* said different

☐ Ich sage das so / *I speak this way*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it?* Wan hei daut Hüs nü woad fekjeipen motten, woad hei sea trüarich senn

Figure 2-4: Judgment test: Fern-'6' (f/18/MLG+SG) changing the clausal sequence in sentence {6}



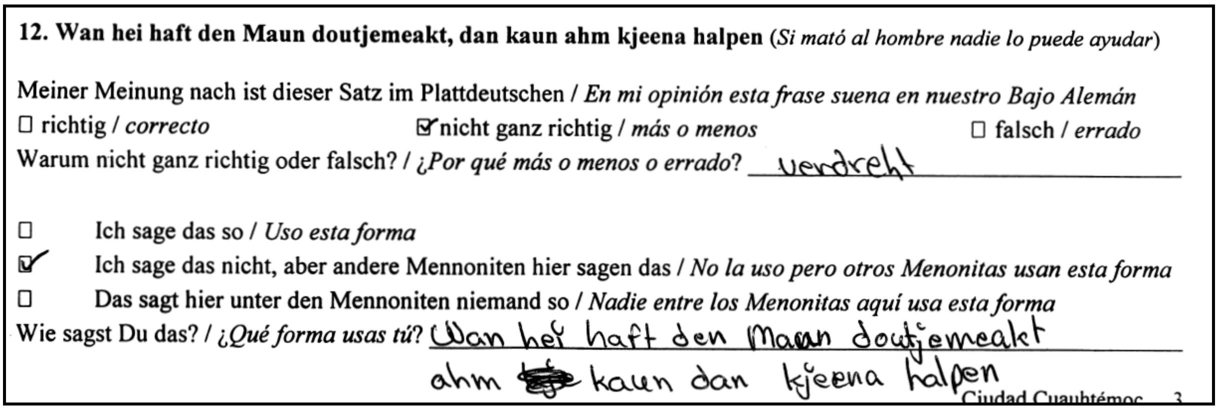
6. Wan hei nü mott daut Hüs fekjeipe, hei woad sea trüarich senne (*Si tiene que vender la casa ahora se va a poner muy triste*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☒ nicht ganz richtig / *más o menos* ☐ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* Der Satzbau und die Verben hören sich nicht richtig an

☐ Ich sage das so / *Uso esta forma*
☒ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No lo uso pero otros Menonitas usan esta forma*
☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Hei woad sea trüarich senne, wan hei nü must daut Hüs fekjeipe.

Informant USA-'8' in Figure 2-3 does not only add the verbal element *woad* ('will') in the conditional clause and places its ObjNP *daut Hüs* ('the house') in front of both the verb cluster and the adverb *nü* ('now'), he also reverts the sequence of *hei* and *woad* ('he' and 'will') in the matrix clause. In this way, he integrates the conditional clause into the matrix clause. Informant Fern-'6' in Figure 2-4 may be called even more ingenious since she does not change anything within the clauses. Instead, she simply reverses the order of the two clauses also achieving an inconspicuous MLG sentence compound. There are 25 informants who apply these or comparable measures. They do this in order to avoid preposed disintegrated conditional clauses. Are these clauses then impossible? Not at all! A total of 35 of 150 informants (23.3%; 24 of 30 informants in the United States) consider sentence {6} entirely correct and claim to use it themselves. Remember, with regard to judgment sentence {10} in Figure 2-2, only two informants did not detect any problem. That priming is indeed not a possible explanation for clausal disintegration becomes clear when we look at Figures 2-5 and 2-6:

Figure 2-5: Judgment test: Mex-'11' (f/16/MLG) disintegrating the conditional clause of sentence {12}


12. Wan hei haft den Maun doutjemeakt, dan kaun ahm kjeena halpen (*Si mató al hombre nadie lo puede ayudar*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*

☐ richtig / *correcto* ☑ nicht ganz richtig / *más o menos* ☐ falsch / *errado*

Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* verdreht

☐ Ich sage das so / *Uso esta forma*

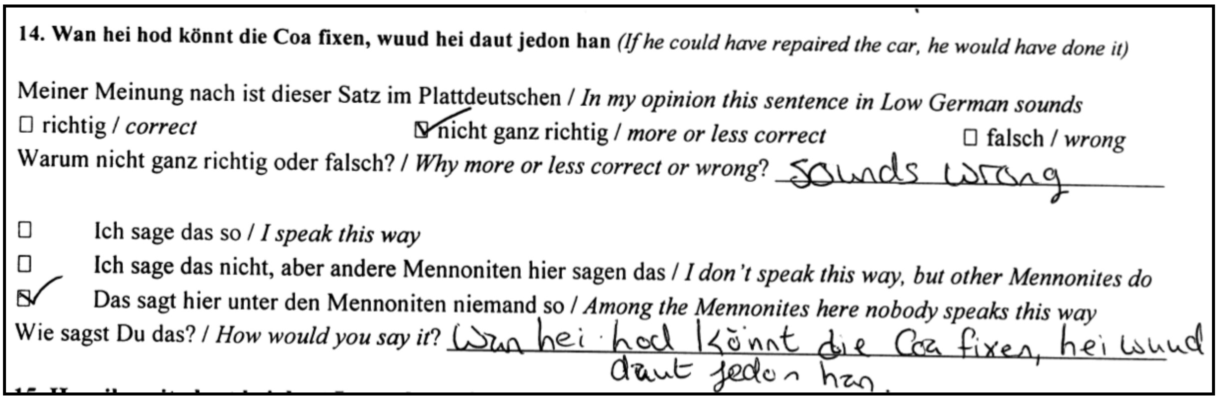
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*

☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*

Wie sagst Du das? / *¿Qué forma usas tú?* Wan hei haft den Maun doutjemeakt ahm kaun dan kjeena halpen

Ciudad Cuauhtémoc 3

Figure 2-6: Judgment test: USA-'31' (f/18/E>MLG) disintegrating the conditional clause of sentence {14}


14. Wan hei hod könnt die Coa fixen, wuud hei daut jedon han *(If he could have repaired the car, he would have done it)*

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*

☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*

Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong?* sounds wrong

☐ Ich sage das so / *I speak this way*

☐ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*

☑ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*

Wie sagst Du das? / *How would you say it?* Wan hei hod könnt die Coa fixen, hei wuud daut jedon han.

Not only do 35 informants consider the disintegrated conditional clause in judgment sentence {6} unproblematic, four informants actually turn integrated or resumptive conditional sentence compounds into disintegrated ones. Three of them come from the United States and change sentence {14}, the other informant comes from Mexico and changes sentence {12}. Informant Mex-'11' in Figure 2-5 reverses the order of *dan* and *ahm* ('then' and 'him'), while informant USA-'31' in Figure 2-6 does the same with *wuud* and *hei* ('will' and 'he'). We, therefore, assume that disintegrated dependent clauses in the pre-prefield are part of the grammar of many Mennonite informants. Tokens (2-9a-c) and (2-10a+b), however, may indeed constitute cases of priming or of word-by-word-translations due to the sequence *adverb(ial)-pronoun-finite verb* in the stimulus sentences. Language attrition does not offer an explanation for these tokens. Four of the nine involved informants indicate MLG as their strongest language; one allots this status to both MLG and English. The other four informants are dominant in English (average competence in MLG from 5 available values: 12.8 points).[21]

With complement, conditional, causal, and relative clauses, all basic types of dependent clauses are covered, i.e. complement clauses, adverbial clauses, and attribute clauses. These

[21] Only one of the nine informants responsible for tokens (2-9a-c) and (2-10a+b) produces an unexpected translation of the kind represented by (2-1) through (2-8). Likewise, the nine informants are not conspicuous with regard to the 56 unexpected translations in Section 5.5. They only furnish three unexpected translations, but 37 inconspicuous ones.

clause types occur frequently in both spoken and written language. In order to not unduly augment the number of stimuli, no other dependent clause types and no filler items were included. The fact that there are no filler items should not be too big of a problem since the 46 stimulus sentences are not at all homogenous. They do not only differ in clause type and clause mode (cf. Footnotes 6 in Chapter 1 and 115 in Chapter 5 for the use of these terms), but also in the number of verbal elements and in the type of finite verb. Above all, their clausal propositions are rather varied.

The translation task was executed in the following way. The stimulus sentences were read to the informant one by one and the informant translated these sentences immediately and without the help of a written version. In cases where the translation differed greatly from the stimulus, the stimulus was read and translated once again. Then, the next stimulus sentence was read. The translation task took between eight and fifteen minutes, i.e. the informants did not need much time. In this respect, one must not forget that a precondition for participating was a sufficient competence in one of the stimulus languages. In the Spanish-speaking countries, some informants could be included using English instead of Spanish. This happened ten times in Menno, Paraguay, five times in Fernheim, Paraguay, and four times in Mexico. The stimulus sentences were always presented in the same order, i.e. the order was not randomized for each interview. However, the sequence was carefully chosen in order to put less complex stimuli first and to guarantee that sentences that are similar in one or more of the above-mentioned characteristics did not occur too close to each other.[22]

With regard to informants, the goal of the project was to interview at least five informants per colony in each of the six age-gender-subgroups. This goal was achieved in all colonies, but the Bolivian one. In that colony, we had too little time and data elicitation turned out to be rather difficult due to the colony's very conservative nature. It is because of this that no female informants could be interviewed. Table 2-11 groups the 313 informants according to their age and sex:

Table 2-11: Distribution of 313 informants in six age-gender-subgroups

	age	USA	Mexico	Bolivia	Brazil	Menno	Fernheim
n (informants)	14-75	67	103	8	56	42	37
younger men	14-25	13	19	1	9	9	7
younger women	14-25	14	18	0	9	8	7
middle-aged men	26-40	11	21	4	9	8	5
middle-aged women	26-40	10	17	0	9	7	5
older men	41-75	9	18	3	9	5	6
older women	41-75	10	10	0	11	5	7

[22] The sequence of the stimulus sentences follows (bold print indicates adjacency of shared characteristics): <44> - **<16> - <11>** - <22> - <1> - <29> - <8> - <43> - <39> - <5> - <23> - **<31> - <34>** - <26> - <32> - <42> - <36> - <6> - <17> - <21> - <15> - <27> - <40> - <45> - <24> - <3> - <12> - <37> - <28> - <4> - <10> - <14> - <33> - <41> - <19> - <9> - **<18> - <20>** - <35> - <46> - <38> - <13> - **<2> - <7> - <25> - <30>**.

As migrating from one place to another or from one colony to another is not only a fact of Mennonite history (cf. Figure 2-1), but also a fact of current Mennonite life, it is necessary to say something about the length the informants lived in the colonies (this information is not available for 14 Brazilian informants). Most importantly, Mennonites who had lived less than five years in the research location were not interviewed. The shortest actual length of stay is eight years. On average, the 299 informants, for which this information is available, spent 84% of their life in the respective colony. Due to the rather recent migration from Chihuahua, Mexico to Seminole, Texas, the share there is lower at 55.5%. A total of 146 informants (48.8% of 299 informants) have never lived anywhere else. The other extreme is represented by 55 informants (18.4%; 36 from the USA) who spent more than 30% of their life in a different place. For eight informants (3.3%; 7 from the USA), this share is higher than 70%. The highest share is 88% and comes from a 68-year old US-American informant, who had lived in Seminole for the last eight years before data elicitation. In almost all cases, the time not spent in the research location was spent in other Mennonite colonies. The US-American informant who was just mentioned spent 59 years in Chihuahua, Mexico and one year in Paraguay.

With regard to the informants, one more piece of information is important. In KAUFMANN (1997), the US-American and Mexican informants were grouped into three types of church affiliations (progressive, semi-progressive, conservative). Such a distinction was not applied here for three reasons: First, church affiliation does not play a comparable role in the South American colonies (especially in Fernheim, Paraguay and in Brazil). Second, the different church affiliations are nicely represented in the competences of the contact languages (cf. KAUFMANN 1997: 142 – Table 6.3.1.1c) and these competences will be frequently used as independent variables. Third, the central grouping category in this project is the informants' behavior in two-verb-clusters in dependent clauses (cf. Chapter 4). Therefore, age, sex, length of residence in the research location, and church affiliation are only secondary variables. It is important to be aware of these differences, but they are not central to the goals of this project.

Having described the stimulus sentences and the informants, some final comments with regard to the elicited data set are in order. WOOLHISER (2005: 247) justifies the use of non-conversational data saying that "[t]he linguistic questionnaire was particularly important for the study of a number of morphological and syntactic variables for which the number of tokens in the individual interviews may be insufficient for statistical analyses." Studying the variation in MLG verb clusters, we were faced with the same problem. It would have been impossible to obtain the necessary amount of comparable data in naturally occurring conversations. However, this is not a real problem once one realizes that there is no one perfect type of data. The crucial questions with regard to data elicitation are: (i) What type of data do we want to elicit for what purpose? and (b) Will this type of data lead to a valid data set? Instead of answering these questions directly, we can once again compare our situation with that of historical linguists. ELLEGÅRD (1953: 156) describes his research situation in the following way:

> I do not of course mean to imply that prose texts give an exact reflection of «natural speech», or to use statistical jargon, form a fair sample of the universe of speech events in a community. But they are the best sample that we can get.

The MLG data set, which comprises roughly 14,000 oral translations from non-related languages into MLG, is the best sample we could get. In any case, it is better than written translations from a standard variety into a related dialect and it is probably also better than judgment data, especially the type of judgment data that results from one's own introspection. The difference between production data and judgment data is mentioned by many researchers, among them LEPAGE and TABOURET-KELLER (1985: 207) and SIEBS (1898: 13), who described the central problem as early as 1898:

> Throughout the chapter, as elsewhere in this book, we must try consistently to distinguish in the evidence between how people think they ought to behave, how they say they behave, and how they are observed to behave.

> Will man den Lautstand einer Mundart wissenschaftlich feststellen, so darf man die Leute nicht fragen, wie sie dieses oder jenes Wort aussprechen, sondern muss die unbefangene Rede beobachten.[23]

Granted, not all judgement tests ask informants how they behave (here: how they speak). Instead, they ask whether informants consider a given stimulus grammatical or not. But it is at best unclear whether and how informants distinguish between these two things. Aside from this theoretical conundrum, the methodological information one obtains from many studies, especially in the generative frame, is rather problematic. FREY (2011: 64), for example, states that his "informants judge the binding in (39a) as impossible, but that in (39b) as possible." This comment refers to two sentences which I consider completely ungrammatical unless very specific intonational conditions are met. Yet, if these conditions are met, both sentences sound OK to me. Obviously, I may be wrong, but naturally, I would not base a hypothesis on my personal judgment. FREY (2011: 68 – Footnote 24) also writes that "I was told that there are native speakers who accept (46b); however, according to my own survey the example is not well formed. Reis (1997: 133), too, considers this construction ungrammatical." As we do not know how FREY conducted his survey and as linguists are definitely not the best judges of sentences they use in support of their own hypotheses, we cannot really decide what to make of this statement.

Evidently, these problems do not undermine the generally high (theoretical) quality of generative papers and this is especially true for papers such as the ones by FREY (2011) and by GREWENDORF and POLETTO (2011). It is nevertheless a worrisome fact that their empirical approaches represent the standard procedure within generative syntax. GREWENDORF and POLETTO (2011) analyze the possible existence of hidden verb second in Cimbrian. Although they (2011: 302 – Footnote 1 and 337 – Footnote 25) – unlike most generativists – actually carry out fieldwork in a Cimbrian-speaking community in Italy, we do not learn much about

[23] Translation by G.K.: If one wants to scientifically ascertain the pronunciation of a dialect, one must not ask people how they pronounce this or that word. One must rather observe uninhibited speech.

this fieldwork and the type of data that were elicited. For example, one would like to know more precisely what the current state of the Cimbrian community under investigation is, who the informants are,[24] and what the methods applied during fieldwork were. Were the informants asked to rate the grammaticality/acceptability of test sentences? Did they produce spontaneous speech or did they translate sentences from Italian into Cimbrian? The problematic attitude behind this data type is condensed in quotes by GREWENDORF (2007: 376) and DEN DIKKEN et al. (2007: 343 – Footnote 4):

> Nevertheless, it may eventually turn out that differences in grammaticality judgments between a group and an individual linguist cannot be attributed to ‘‘inadequate research practice’’ of the latter but clearly exhibit differences between I-languages. In this respect, the grammatical intuitions of the individual cannot be falsified by the results of acceptability experiments carried out with a group.

> As a side point, we do not see how the mean value of the judgments of a group of speakers can confirm or disconfirm an individual’s judgments: one’s judgments are one’s judgments, no matter what other speakers of ‘the same language’ might think.

If “grammatical intuitions of the individual cannot be falsified by the results of acceptability experiments carried out with a group,” we would like to be told how they can possibly be falsified? This point is especially troublesome when one reads the almost defiant comment “one’s judgments are one’s judgments, no matter what other speakers of ‘the same language’ might think.” If linguists argue in this manner, they leave the realm of modern science.

In spite of the problems with regard to judgment tests, we also carried out this type of test. However as previously mentioned, we will use the results of this test almost exclusively for illustrative purposes. A total of 155 informants in five of the six colonies took part in this test (62 men and 93 women). The oldest participant was 58 years old; the youngest thirteen. Most tests were carried out in school settings and, therefore, 139 of the 155 informants are younger informants.[25] The test comprises sixteen sentence compounds with complement, conditional, and causal clauses (cf. Appendix (b) for all stimuli). These clauses contain different numbers of verbal elements. Just like in the translation task, necessary background information of the informants was elicited. Figure 2-7 exhibits the first part of the questionnaire:

---

[24] Are the consulted speakers of Cimbrian monolinguals, bilinguals, trilinguals? Does the stated risk of language loss of Cimbrian in most regions where it is spoken (GREWENDORF & POLETTO 2011: 301) not influence the variety of Luserna, “the only one where Cimbrian is still actively spoken by the majority of the population,” i.e. are all informants fully competent speakers of Cimbrian or are there some semi-speakers among them? And what do the expressions *majority* and *actively* mean? Aside from this, one would like to know what the informants’ age, sex, and degree of formal education are – and most importantly, how many informants were consulted.

[25] Thirty-three informants come from Seminole, Texas, USA, 37 from Ciudad Cuauhtémoc, Chihuahua, Mexico (1 non-young informant), and 28 from Colônia Nova, Rio Grande do Sul, Brazil (7 non-young informants). In Paraguay, thirty informants are from Menno (8 non-young informants) and 27 from Fernheim. Only few informants in the judgment test also took part in the translation task. Those who did carried out the translation task first. As there was always a time lap of at least several days between the two activities, if not of months or years, there were probably no or at least no strong carry-over-effects between the translation task and the judgment test.

Figure 2-7: Judgment test: Personal information of USA-‘17’ (f/15/E>MLG)

1) **Alter** / *age*: 15
2) **Geschlecht** / *sex*: Female
3) **Wohnort** (Stadt/Land) / *place of residence (city/country)*: Seminole, TX
4) **Geburtsort** (Stadt/Land) / *birthplace (city/country)*: Wrinkler, Manitoba
5) **Wieviele Jahre hast Du hier gelebt**? / *How many years have you lived here*? 8 yrs
6) **Wo hast Du sonst gelebt**? (wo? / wieviele Jahre?) / *Have you lived somewhere else?* (*where? / how many years?*)
Mexico 1yr, Paraguay 5months, Manitoba, Canada 6yrs
7) **Geburtsort der Eltern**: Vater / *father*: [redacted]
Your parents' birthplace? Mutter / *mother*: [redacted]
Mexico
8) **Geburtsort der Großeltern**: väterlicherseits / *on your father's side*: ~~Canada~~ Winkler, ~~Manitoba~~ ~~Manitoba~~ Manitoba
Your grandparents' birthplace? mütterlicherseits / *on your mother's side*: Paraguay
Don't know
8) **Beruf** / *occupation*: Student
9) **Zu welcher Kirche gehörst Du**? / *To which church do you go?* Gospel Mennonite Church
10) **Für wieviele Jahre gingst Du zur Schule**? / *How many years have you gone to school?* 9 yrs
11) **Welche Sprache sprichst Du am besten/ zweitbesten / dritt?** / *Which language do you speak best / second best / third best?*
English, low-german

The fifteen-year old informant USA-‘17’ lives in Seminole, Texas. Her family is a perfect example for a wandering people. She herself was born in Wrinkler, Manitoba, Canada, her parents were born in Mexico, her father’s parents were also born in Wrinkler. Her mother’s parents, however, were born in Paraguay (cf. the arrows in Figure 2-7). Although this informant is just fifteen years old, she has lived roughly eight years in Seminole, Texas, six years in Canada, one year in Mexico, and five months in Paraguay (cf. the rectangle in Figure 2-7). In view of such an astonishing life history, it is important to not forget that all informants of the judgment test lived in the respective colony at the time of data elicitation and that they had on average lived in the respective colony 87% of their lives (16.9 out of 19.4 years). Just like the informants of the translation task, not all of the informants of the judgment test consider MLG their dominant language. Informant USA-‘17’, for example, writes that she speaks English best and Low German only second best (cf. the ellipse in Figure 2-7). In general, 71 of the 127 informants (55.9%), for which the relevant information is available, indicate MLG as their dominant language, seven informants in Paraguay say that they speak MLG and SG on the same level, and two informants in Menno say that they are co-dominant in MLG and Spanish. In two colonies, a substantial number of informants does not indicate MLG as (one of) their dominant language(s). In the US-American colony, 25 of the 33 informants (75.8%) rate their English competence higher than their MLG competence. As the US-American data come exclusively from younger informants, this is one more indication for the gloomy future of MLG in Texas. In Fernheim, nine of the 27 informants (33.3%) claim to be dominant in SG.

The sentences to be judged were spoken and recorded by five female speakers, one for each colony. In this way, not only the sex of the speaker was controlled for, but possible distracting effects caused by an unfamiliar non-local accent were also avoided. The fact that five different speakers were used led to five different voices and to slightly differing intonational patterns, but such differences can obviously not be avoided. During recording, great care was taken that even the probably least acceptable sentences were spoken in a natural way and without conspicuous pauses. Each sentence was played to the informants three times in a row and they were then asked to evaluate the sentence. Figure 2-8 shows the US-American questionnaire format for sentence {2}.

Figure 2-8: Judgment test: USA-'22' (f/17/E>MLG) changing the negative determiner in sentence {2}

2. Hei haft nich en Hüs, wejens hei haft kjein Jelt (*He doesn't have a house because he has no money*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong*? kjein, nicht

☑ Ich sage das so / *I speak this way*
☐ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it*? __________

The causal sentence compound {2} is characterized by the use of *wegens* ('because') as a causal marker, by the rather peculiar way of expressing the negative indefinite article in the matrix clause by means of ***nich en** Hüs* (not a house; 'no house'), and by the finite verb of the causal clause appearing in second position. The stimulus sentences are always given in MLG and in the majority language of the colony, i.e. English, Spanish, or Portuguese. The spelling of the MLG version is more phonetic than the spelling used in the tokens of the translation task. This is due to the fact that these sentences were intended for the eyes of native speakers and not for the eyes of readers who may appreciate spelling conventions closer to SG (cf. Section IV). There are also some slight spelling differences between the colonies because of differences in pronunciation. The questions in the judgment test were presented in SG and in the respective majority language. The first decision the informants had to make is connected to the degree of acceptability.[26] The three categories of answers are presented in (2-13).

(2-13) In my opinion, this sentence in Low German sounds correct / more or less correct / wrong

Informant USA-'22' judges sentence {2} as more or less correct, but as nevertheless representing her way of speaking (cf. (2-15)). In the following question, the informants had the chance to pinpoint the part(s) of the sentence they did not consider correct.

(2-14) Why more or less correct or wrong?

[26] Using the term *acceptability* and not *grammaticality*, I follow LEPAGE and TABOURET-KELLER's (1985: 194) reasoning: "The grammar of the closed system, and its predictions of 'grammaticality', become confused with the empirical judgments of people whose concept of 'grammaticality' – if they have one at all, which is in fact comparatively rare among the world's population at large – is subsumed within a much wider concept of 'acceptability', a concept which takes account of creative, innovative, analogical, inventive and tolerant capacities of the human mind ignored by the closed systems of many grammarians."

Informant USA-‘22’ prefers to negate *Jelt* (‘money’) in the causal clause by means of *nicht* instead of *kjein* (cf. her small arrow in Figure 2-8 and Footnote 150 in Chapter 5). Interestingly, she spells *nicht* in the SG way, i.e. with a final <t>. Aside from this, she does not take offense to the position of the finite verb in the causal clause (cf. Section 6.3 for the reanalysis of causal clauses in the North American colonies). The aim of the second decision the informants had to make is to learn something about their conviction about the colony’s linguistic reality.

(2-15) I speak this way
I don’t speak this way, but other Mennonites do
Among the Mennonites here nobody speaks this way

CORNIPS and JONGENBURGER (2001: 56) call this type of task an indirect task. For them, (2-13) represents a more problematic direct task since “the answers to direct questioning methods may reflect the (syntactic) variant which the informants believe has prestige or is “correct” rather than the form they actually use […].” In any case, the information gathered from (2-15) is as subjective as the information gathered from (2-13) and need not correspond with observable facts. However, the convictions about who speaks how should not be neglected, since they form part of each colony’s linguistic setting. The last point in the answering battery for each judgment sentence gives the informants the opportunity to re-write the whole sentence in the way they (think they) would say it. In order to be able to do so, it was important that a written MLG version of the sentence was available on the answer sheet, since Mennonites are normally not used to writing MLG.

(2-16) How would you say it?

Informant USA-‘22’ leaves this space blank since she has already commented on the one feature she does not like. As the judgment sentences will mostly be used for illustrative purposes only, we will not give an exhaustive account of questions of test validity and of the way point values were allotted to the answers. Information which the reader will need in order to understand the judgement test will be given whenever its results are presented.

3. Studying Continental West Germanic Verb Clusters

3.1 Different approaches to the phenomenon *verb cluster*

Continental West Germanic verb clusters have been a central issue in syntactic research for more than four decades, but in spite of these long-standing efforts, many questions still remain unsolved. KROCH and SANTORINI (1991: 269) comment that "[t]he analysis of the verb-raising phenomenon in West Germanic poses an interesting and difficult problem for syntactic theory." Ten years later, KOOPMAN and SZABOLCSI (2000: 1) write: "The syntax of complex verb formation (also known as verb raising, verb projection raising, or the "third" construction) constitutes one [of; G.K.] the most difficult areas of syntax." In view of these comments, it should not come as a surprise that the syntactic complexity of verb clusters is matched by the number of methodological and theoretical decisions one has to make when studying this phenomenon. The most important methodological decisions concern the type of data on which one wants to base the analyses and the type of constructions one intends to work with. The former point is illustrated in (3-1):

Type of data

(3-1) a. Spontaneous speech
b. (Historical) written data
c. Elicited data (e.g., translation tasks)
d. Judgment data (e.g., grammaticality/acceptability tests)

We do not know of any comprehensive study that uses spontaneous speech as a base for the study of verb clusters.[27] We opted for the translations of 46 stimulus sentences by 313 informants in order to make the data as comparable as possible (cf. Section 2.2). In addition, sixteen sentences were subjected to the judgment of 155 speakers. Historical German texts are analyzed by EBERT (1981), TAKADA (1994), and SAPP (2011). They meticulously count the number of tokens of different cluster variants, but especially EBERT and TAKADA fail to provide a satisfactory theoretical frame for their findings. COX (2011) analyzes a small corpus of MLG from literary texts by two Canadian writers (REUBEN EPP, JACOB M. FEHR), but his seven-page-article can't possibly do the phenomenon's complexity justice. The three atlas projects portrayed in Section 2.2 are mainly based on translations and on native speaker judgments. In contrast to this, most generative linguists trust their own introspective capacity. In these cases, we deal with clearly formulated and elaborate theoretical assumptions, but with a highly problematic empirical base. The next decision researchers have to make is on the

[27] With regard to MLG, NIEUWEBOER (1999) carried out interviews with speakers from the Altai region in order to obtain spontaneous speech, but he did not analyze these data syntactically. Transcriptions of six of the interviews are included in his book. We also recorded free conversations in the Mennonite colonies, but again no syntactic analysis has been carried out so far. The advantage of these conversations is that only in-group members of the respective colonies were present.

type of verbal construction they want to work with. Some central parameters of these constructions are presented in (3-2) through (3-9):

Type of construction I

(3-2) a. Constructions with two verbal elements
b. Constructions with three verbal elements
c. Constructions with four (or more) verbal elements

Examples (3-3a-c) exhibit translations of the same stimulus sentence featuring clause-final clusters with two, three, and four verbal elements, respectively:

stimulus <39> Spanish: **La verdad que le deberías haber dicho al juez es horrible**
English: The truth which you should have told the judge is horrible

(3-3) a. *die Wohrheit waut dü den: Richter gesagt has is: schlimm* (Bol-7; m/37/MLG)
the truth that you the.ACC judge Ø said-VERB2 have-VERB1 is horrible

b. *die Wohrheit waut dü den [äh] [1.1] Richter hats sollt sagen is [0.3] schrecklich* (Mex-19; m/39/MLG)
the truth that you the.ACC [eh] […] judge had-VERB1 should-VERB2 say-VERB3 is […] horrible

c. *die Wohrheit waut dü den: Richter würsch han sollt sagen is schlech* (Mex-23; m/15/MLG)
the truth that you the.ACC judge ~~would~~-VERB1 have-Verb2 should-VERB3 say-VERB4 is bad

In spite of the derivation from the expected number of verbal elements in translations (3-3a+c), the three tokens share one conspicuous characteristic. The informants seem to experience problems with the translation of the words *juez* ('judge') and *horrible* ('horrible'). Although they all eventually come up with MLG translations, the (filled) pauses before these words and the prolonged preceding segments attest to word finding problems (cf. also (3-8a-c)). With regard to (3-2), it is rather surprising that direct comparisons of two-verb- and three-verb-clusters are hard to find in the literature. SEILER (2004), BARBIERS et al. (2005: 21–23), and BARBIERS and BENNIS (2010) offer some insight into the geographical coincidence of certain two- and three-verb-clusters. In spite of this, KAUFMANN (2007) constitutes the only attempt to correlate these cluster types for a large number of speakers on a strictly individual basis. Sections 5.2 through 5.4 will refine this attempt and provide thorough analyses of the interrelationship between clusters with two, three, and four verbal elements. A comparison with clusters with five verbal elements is impossible since there is only one suitable translation in the MLG data set. Due to its uniqueness, we will present this token. Aside from the main clause in (3-4), we add one more token with five verbal elements in a dependent clause from the Hunsrückisch data set (cf. Footnote 9 in Chapter 2):

stimulus <46> Spanish: **Yo les debería haber mostrado el perrito a los niños**
English: I should have shown the little dog to the kids

(3-4) *dü würsch han sollt- [1.6] sollt daut [äh] Hundje di- alle dine Frend gewiesen han*
(Mex-69; f/36/MLG)
you ~~would~~-VERB1 ~~have~~-VERB2- ~~should~~ […] should-VERB3 the [eh] doggie ~~yo~~- all your friends shown-VERB5 have-VERB4

stimulus <9> Portuguese: **Elisabete diz que tu deves ter visto o caminhão**
English: Elisabeth says that you must have seen the truck

(3-5) *die Lisbeth sagt daß: [0.4] daß i de Karre hätt müsse gesihn gehot han*
(Brochier-6; m/44/P>Huns-71%)
~~the~~ Lisbeth says ~~that~~- […] that I the car ~~had~~-VERB1 must-VERB2 seen-VERB5 had-VERB4 ~~have~~-VERB3

The translation in (3-5) must be qualified as spectacular. A five-verb-cluster without any intervening non-verbal material is very rare in written texts, let alone in spoken language. With regard to (3-4), it is important to realize that the second occurrence of *sollt* (‘should’) is a mere repetition after a rather longish pause. It does not constitute a re-start of the verbal complex. We are thus actually dealing with five verbal elements and a non-finite four-verb-cluster – *würsch* (‘would’) as the finite verb occupies the head position of CP – rather than with three verbal elements with an epistemic modal verb (*sollt* has the typical shape of the participle of MLG modal verbs, i.e. no IPP and no prefix {ge-}). We will learn in Chapter 4 that informant Mex-69 prefers the VPR-variant in two-verb-clusters (sequence *V1-ObjNP-V2*). The listing in (5-73), which compares the behavior of this type of informant in two-, three-, and four-verb clusters, will demonstrate that these informants like to leave the ObjNP unscrambled and deeply embedded in the verb cluster. This is exactly what happens in (3-4). *Alle dine Frend* (‘all your friends’) could not possibly surface any further to the right, i.e. in between *gewiesen* (‘shown’) and *han* (‘have’), since these verbs appear in the compact left-branching order *verb5-verb4* (but cf. the unique counterexample in (5-39j)). The next necessary decision is connected to the translations in (3-4) and (3-5); it concerns the morphological status of the verbal elements.

Type of construction II

(3-6) a. Constructions containing finite and non-finite verbal elements
b. Constructions only containing non-finite elements

Most studies on verb clusters deal with verbal complexes in dependent clauses as in (3-3a-c) and in (3-5). The reason for this is the higher number of clause-final verbal elements. In main clauses, the finite verb has to move to the head position of CP as in (3-4) thus reducing the number of clause-final verbal elements by one. In Section 5.2, we will analyze two-verb-clusters in a main clause with three verbal elements. With this, it becomes possible to directly compare the behavior of mixed finite and non-finite clusters in dependent clauses with entirely non-finite clusters in main clauses. LÖTSCHER (1978) also exemplifies the different types of cluster variants with the help of both main and dependent clauses. Probably the most important methodological decision researchers have to make is how they will tackle cluster-intervening non-verbal material.

Type of construction III

(3-7) a. Constructions only consisting of verbal elements

b. Constructions containing verbal and non-verbal elements

The translations in (3-8a-c) illustrate three positions of indirect ObjNPs. (3-8a) has already been presented as (3-3b):

stimulus <39> Spanish: **La verdad que le deberías haber dicho al juez es horrible**
English: The truth which you should have told the judge is horrible

(3-8) a. *die Wohrheit waut dü den [äh] [1.1] Richter hats sollt sagen is [0.3] schrecklich*
(Mex-19; m/39/MLG)
the truth that you the.ACC [eh] […] judge had-VERB1 should-VERB2 say-VERB3 is […] horrible

b. *die Wohrheit waut dü hats den: [0.3] judge sollt sagen is: [ähm] [0.7] schlech:*
(Mex-9; f/16/E>MLG-86%)
the truth that you had-VERB1 the.ACC […] judge should-VERB2 say-VERB3 is [ehm] […] <u>bad</u>

c. *die Wohrheit waut dü hats sollt dem: Richter sagen [0.5] is [äh] schrecklich*
(Mex-14; f/44/MLG+SG)
the truth that you had-VERB1 should-VERB2 the judge say-VERB3 […] is [eh] horrible

The verbal elements in all three translations exhibit the sequence *verb1-verb2-verb3*; the crucial difference is the position of the ObjNPs. It surfaces in front of all verbal elements in (3-8a), it is nested in between the finite and the first non-finite verb in (3-8b) and between the two non-finite verbs in (3-8c). SEILER (2004), who deals with Swiss German, and EBERT (1981), who describes a corpus of letters written by citizens from the city of Nuremberg between 1300 and 1600, only analyze clauses with clause-final contiguous verbal elements. They thus exclude the two-verb-variant we call VPR-variant and the three-verb-variants illustrated in (3-8b+c). This is no problem for analyses of Standard Dutch since this variety does not allow the intrusion of non-verbal material. In SEILER's (2004) and EBERT's (1981) cases, however, such cluster types exist and their exclusion may make it impossible to reach a comprehensive understanding of the phenomenon. Many researchers, however, analyze both cluster types together and try to find a common explanation (cf., e.g., LÖTSCHER 1978; HAEGEMAN & RIEMSDIJK 1986; DEN BESTEN & BROEKHUIS 1989). We will also carry out a united approach and the results of our analyses will show that this is indeed a fruitful endeavor (cf., however, the discussion of HAIDER's (2010) approach after (3-18)). The last methodological point to discuss regards the selection relations within the cluster:

Type of construction IV

(3-9) a. Modal verbs selecting bare infinitives

b. Other verbs selecting bare infinitives (e.g., causal verbs; perception verbs; *do*-support)

c. Temporal auxiliaries selecting past participles

d. Passive auxiliaries selecting past participles

e. Verbs selecting infinitives featuring infinitival markers like SG *zu* ('to')

Obviously, there are more construction types than exemplified in (3-9a-e) (cf., e.g., HAIDER 2010: 275). In Section 2.2, we showed that we restricted our ambitions to constructions (3-9a+c). Aside from this, the informants' translations furnished additional clusters with *woare* ('will') and *dune* ('do') both governing bare infinitives, i.e. constructions subsumed in (3-9b). By restricting our focus to (3-9a+c), we follow BARBIERS (2005: 262 – Endnote 18) and VON STECHOW (1990: 150–154), who assume that modal verbs selecting bare infinitives and temporal auxiliaries selecting a past participle embed a VP and are constructed identically. HAIDER (2010) and many others combine the analysis of a larger array of selectional constructions. We do not deem such an approach felicitous since the existing differences are huge and can be easily demonstrated. In SG, for example, bare infinitives and infinitives with *zu* ('to') behave quite differently.

(3-10) a. *Du weißt, daß sie ihrer Mutter helfen muß*
you know that she her mother help-VERB2 must-VERB1
'You know that she must help her mother'

b. **Du weißt, daß sie muß ihrer Mutter helfen*
you know that she must-VERB1 her mother help-VERB2

c. **Du weißt, daß sie ihrer Mutter muß helfen*
you know that she her mother must-VERB1 help-VERB2

(3-11) a. *Du weißt, daß sie ihrer Mutter zu helfen scheint*
you know that she her mother to help-VERB2 seems-VERB1
'You know that she seems to help her mother'

b. **Du weißt, daß sie scheint ihrer Mutter zu helfen*
you know that she seems-VERB1 her mother to help-VERB2

c. **Du weißt, daß sie ihrer Mutter scheint zu helfen*
you know that she her mother seems-VERB1 to help-VERB2

(3-12) a. *Du weißt, daß sie ihrer Mutter zu helfen anfängt*
you know that she her mother to help-VERB2 begins-VERB1
'You know that she seems to help her mother'

b. *Du weißt, daß sie anfängt, ihrer Mutter zu helfen*
you know that she begins-VERB1 her mother to help-VERB2

c. *Du weißt, daß sie ihrer Mutter anfängt zu helfen*
you know that she her mother begins-VERB1 to help-VERB2

Müssen ('must') in (3-10a-c) governs a bare infinitive and only allows the left-branching NR-variant (non-raising variant). The VPR-variant in (3-10b) and the VR-variant in (3-10c) are ungrammatical in SG. The same is true for the raising verb *scheinen* (‘seem’) in (3-11a-c) although this verb selects – contrary to *müssen* – a *zu*-infinitive. *Anfangen* (‘begin’) in (3-12a-c) shares the selection of a *zu*-infinitive with *scheinen*, but does not share its syntactic behavior. This control verb allows all three serializations, with (3-12c) being an example of the so-called third construction. The reason for this differing behavior (cf. also VON STECHOW 1990) is the fact that the superficial similarity of (3-10a-c), (3-11a-c), and (3-12a-c) is misleading. The serialization in (3-10b), for example, is an instance of the VPR-variant possible in Flemish or MLG but not in SG, while (3-12b) is – in our opinion – a case of clausal extraposition.

This difference becomes clear when we consider LÖTSCHER (1978). LÖTSCHER combines the analysis of prototypical modal verbs and verbs like Swiss German *aafange* (‘begin’), which he (1978: 4) calls a modal verb with a separable verbal prefix. On the surface, this combination is justified since *aafange* – contrary to SG *anfangen* – does not seem to select a *zu*-infinitive, but a bare infinitive (cf. LÖTSCHER 1978: 4 – examples (9a+b)). It is, however, unclear at best whether the infinitival marker is not present structurally. The behavior of *aafange* in three-verb-clusters indicates the presence of a phonetically not realized infinitival marker. Example (23a) and Table 2 in LÖTSCHER (1978: 9–10) show that *aafange* is the only verb that can appear as the first verb in the sequence *verb2-verb1-verb3*, one of the two completely unattested sequences for prototypical cluster variants (cf. BARBIERS et al. 2005: 17). We present LÖTSCHER’s example (23a) as (3-13) adding a gloss and a translation:

(3-13) *Wo s aagfange hät rägne, simer i d beiz*
when it begun-VERB2 has-VERB1 rain-VERB3 are-we in the-pub
‘When it started raining, we entered the pub’

In our opinion, (3-13) shows the expected sequence *verb2-verb1* typical for clusters with a temporal auxiliary. Aside from this, there is an extraposed infinitival clause containing *rägne* (‘rain’) and a phonetically unrealized infinitival marker. This sequence would also be possible in SG (with *zu*; ‘to’) and resembles the SG examples (3-12b+c). Adding such an example to the topic of verb clusters is bound to hamper the discovery of syntactic restrictions in more prototypical verb clusters.

Having listed some of the methodological decisions researchers have to make, we will now deal with more theoretical issues. However, we will not provide a traditional overview of the current state of research. For readers interested in such an overview, HAIDER’s (2010: 327–338; cf. also SALZMANN 2011: 455–460) insightful, albeit somewhat biased summary may be consulted. We will frequently access this summary for the following discussion. By far the most important theoretical issue is (3-14):

Nature of verb clusters

(3-14) a. Verb clusters as constructions *sui generis*
b. Verb clusters as epiphenomenon of other syntactic mechanisms

The consensus in the literature seems to be that verb clusters constitute a construction *sui generis*. In contrast to this, we believe that the different cluster variants in MLG are – at least for most informants – a superficial epiphenomenon of two unrelated movements, verb projection raising and scrambling. Verb projection raising constitutes a parsing-facilitating mechanism, while scrambling is connected to the speakers' syntactic and information-related calculations. Assuming this state of affairs for MLG does not mean that verb clusters in, for example, Standard Dutch cannot be considered constructions in their own right. It just means that one should not discard the possibility of misleading superficial appearances. Verbal sequences that do not contain non-verbal material may have led speakers of Standard Dutch to reanalyze these sequences as a fixed construction (cf. KAUFMANN 2007: 201–202). In this way, non-verbal material may have been banned from verb clusters. This type of reanalysis is but one possibility though. In Section 6.3, we will see that most North American Mennonites went in the opposite direction. They dissolved a possibly existing cognitive unit, the V2-VPR-variant in causal clauses into a finite verb in the head position of CP and a clause-final verb phrase. Despite our conviction that verb clusters in varieties that allow both the VPR-variant and the VR-variant are but a superficial epiphenomenon, we will continue to use the term *verb cluster*. A second crucial theoretical issue is the head parameter of VPs:

Head parameter

(3-15) a. Verb phrases are head-final
b. Verb phrases are head-initial

For Continental West Germanic varieties, KAYNE's (1994) assumption that all phrases are head-initial led to the necessity of questioning many convictions which up to then had been taken for granted. Even today, the linguistic community is still divided over this fundamental issue. The consequence of one's decision with regard to the head parameter is nicely illustrated by the translations in (3-16) and (3-17):

stimulus <13> Portuguese: **Se ele largar o emprego dele, eu não vou ajudar mais à familia dele**
English: If he quits his job, I won't help his family anymore

(3-16) *wann hei sine Arbeitsstet [0.9] sene lote wird wer ik nich mehr sine Familie halpe* (Bra-7; f/47/MLG+P)
if he his workplace […] be-VERB3 ~~let~~-VERB2 ~~will~~-VERB1 will I not anymore his family help

stimulus <10> Spanish: **Él no sabía que debería haberles dado de comer a los perros esta mañana**
English: He didn't know that he should have fed the dogs this morning

(3-17) *hei wisst nich daut hei die Hung [0.8] dies: Morjens hat sollt fodere* (Mex-1; m/27/MLG)
he knew not that he the dogs […] this morning had-VERB1 should-VERB2 feed-VERB3

In the conditional clause of (3-16), the clause-final sequence *verb3-verb2-verb1* appears, a very rare pattern in the MLG data set. In contrast to this, the complement clause in (3-17) presents the opposite sequence *verb1-verb2-verb3*, a very frequent pattern. Assuming a head-final approach, (3-16) represents the base order quite well. The translation in (3-17), however, would – in a derivational setting – be the consequence of either the finite verb *hat* ('had') moving to the left or of the two infinitival elements *sollt fodere* ('should feed') moving to the right. Starting out with a head-initial approach would change everything (cf., e.g., ZWART 1996 and KOOPMAN & SZABOLCSI 2000). The sequence in (3-17) would then be rather close to the base order (obviously with the exception of the pre-verbal ObjNP *die Hung*; 'the dogs'), while (3-16) could only follow from several leftward movements. In KAYNE's (1994) approach, movement to the right is impossible. It is important to realize that the actual rate of occurrence of the two patterns is not crucial for the decision. In three-verb-clusters, the head-initial analysis seems to fit the empirical situation of MLG better because the sequence *verb1-verb2-verb3* is paramount. In two-verb-clusters, however, the sequence *verb2-verb1* is very frequent and this sequence would superficially favor a head-final approach. The next issue we have to discuss is whether to assume a more traditional derivational approach that implies movement operations or a more representational approach that relies on different base generations.

Derivation or base generation

(3-18) a. Derivational approach: Different serializations are the consequence of movement
b. Representational approach: Different serializations are base-generated

HAIDER (2010: 324) is correct in stating that "[t]he predominant strategy of modelling the grammar of clustering has been a derivational one from the beginning." Among the exceptions he mentions are WURMBRAND (2001) and HAIDER (2003). SALZMANN (2011) also favors a base-generation approach. Two of the problems HAIDER (2010: 309) detects in derivational approaches appear in the following quote:

> For the current generative grammar theory, both properties are embarrassing. Optionality means untriggered derivational steps. From a meta-theoretical point of view, these steps are unnecessary since the clausal construction is perfectly well-formed and the clause union construction does not add anything. […] Radical clause union, on the other hand, cannot be achieved derivationally since derivations do not destroy or eliminate structures.

Before we discuss HAIDER's critique in more detail, let us see what kind of reasons have been given for the apparent optionality of the movements that are implied in a derivational approach. HAIDER discards any syntactic necessities of such movements outright. We will, therefore, focus on other possible motives:

In a movement approach: Reasons for movement

(3-19) a. Syntactic necessities
b. Information structure
c. Rhythmic-intonational characteristics
d. Parsing-related considerations

Information structure is mentioned prominently by LÖTSCHER (1978), who distinguishes raised cluster variants either containing or not containing direct and/or indirect objects according to the rhematic value of the non-verbal and verbal elements. Unfortunately, LÖTSCHER does not provide a corpus analysis for the different cluster variants. In PENNER's (1990: 170) quote presented after (3-30), information structure is also mentioned as a factor. These ideas coincide with our assumption that the VR-variant is the consequence of scrambling and verb projection raising. Contrary to LÖTSCHER, we will, however, amply demonstrate that MLG complements in raised cluster variants are highly sensitive to information-related features like definiteness (cf., e.g., Tables 3-1 and 4-9). Rhythmic-intonational characteristics are partly related to information structure (stressed sentence focus) and partly related to preferred sequences of stressed and unstressed syllables. These facts are mentioned among others by LÖTSCHER (1978), EBERT (1981: 206–207), SCHMID and VOGEL (2004), AXEL (2007: 85), and ROTHMAYR (2013). We will not dwell on this topic since we have not yet analyzed these characteristics in the MLG data set. In any case, the fact that we can account for a large part of the variation with the help of two syntactic mechanisms leaves no doubt that the factors we coded are important. Rhythmic-intonational patterns may nevertheless play a certain role.

The fact that left-branching center-embedded structures such as the verbal sequence *verb3-verb2-verb1* are not parsing-friendly is mentioned by many researchers. LÖTSCHER (1978: 27) is again among them. BACH et al. (1987) offer important experimental support and even HAIDER (2010: 338–339) admits that parser friendliness plays a role. He nevertheless insists that "[p]arser friendliness is not sufficient for establishing a grammar driven condition." This is indeed a problem for generative approaches, but does not affect our analysis. After all, for us, MLG verb clusters are not constructions *sui generis*. Therefore, parsing friendliness not only can be a decisive factor, but must be a decisive factor. Chapter 5 will show that every additional verbal element, i.e. every increase in structural complexity, leads to a higher frequency of right-branching sequences. Like many others, we derive right-branching verbal sequences from left-branching verbal sequences with the help of syntactic movements. This brings us to the last theoretical issue:

In a movement approach: Types of moved category

(3-20) a. Heads move
b. Phrases move

EVERS (1975) groundbreaking work uses head movement. We will apply head movement only for the sequence *verb3-verb1-verb2* in three-verb-clusters (cf. Footnote 136 in Chapter 5). With this exception, we follow the idea of raised verb phrases which may or may not be stripped of non-verbal material. This is an approach frequently encountered in the literature (cf., e.g., VANDEN WYNGAERD 1989: 436; DEN BESTEN & BROEKHUIS 1989; PENNER 1990; KOOPMAN & SZABOLCSI 2000). HAIDER (2010: 323) criticizes both approaches on theoretical grounds:

> The derivational formation of a syntactic cluster, however, would require moving the verbal head out of a clausal constituent in order to form a minimal syntactic unit – namely the cluster – together with the matrix verb(s). This is a kind of head movement for which there is no independent evidence available. Another frequently suggested scenario is VP-evacuation followed by roll-up of the emptied VP(s). But in this scenario, there is no other way of guaranteeing compactness. Since there are full VP constituents involved, these constituents are each a possible target of extraposition. But extraposition destroys compactness. Most derivational accounts therefore fail to capture compactness and thereby fail to capture the essence of this construction.

HAIDER uses the term compactness to refer to his conviction that verb clusters are unique to OV-languages and that they constitute one constructional unit. They do thus not represent stacked VPs as present in VO-languages (cf. HAIDER 2010: 338 – (1)). Such VPs would, however, be a pre-condition for moving phrases. HAIDER draws this conclusion from the fact that left-branching sequences such as (3-16) or (3-22a) never allow intervening non-verbal material.[28] In his view, stacked VPs would constitute ideal sites for extraposed phrases and should therefore allow – contrary to the facts – non-verbal material, especially if one assumes that the least embedded verb moves to a head-final functional phrase (cf. HAIDER 2010: 273–274 and 305–306). This line of argumentation sounds convincing, but we see at least two problems: First, there may be independent reasons for the fact that topicalized non-finite verbs can occur with extraposed material as in the main clause in (3-21a), while extraposition is impossible in the base position of the complement clause in (3-21b). We give HAIDER's (2010: 305) examples (7c+e) as (3-21a+b) using his glosses and for (3-21b) his translation, but indicating different structural facts:

(3-21) a. *Überrascht mit dieser Frage hat er mich nicht*
Surprised-VERB2 with this question has-VERB1 he me not
'It is not true that he has surprised me with this question'

b. **dass er mich nicht überrascht mit dieser Frage hat*
that he me not surprised-VERB2 with this question has-VERB1
'that he has not surprised me with this question'

Second and more crucially, our data and data from other relevant varieties are problematic for HAIDER's account. As previously mentioned, HAIDER (2010: 306) assumes that it is not the verbal elements in the cluster that project individually, but the cluster itself. He states that "stacked VPs are obligatorily replaced by a single VP with a cluster." This means that the cluster constitutes one structural unit, a fact which explains its compactness. As Standard Dutch only allows the VR-variant in many verbal arrays and mostly exhibits compact right-branching three-verb-clusters, we have to assume a right-branching "single VP with a cluster". HAIDER (2010: 290–291) explains the intervening non-verbal material in the VPR-variant in Flemish or MLG, or in three-verb-clusters in SG (*V1-ObjNP-V3-V2*) by means of inversion:

---

[28] Confer BAYER and KORNFILT (1994: 43) and KOOPMAN and SZABOLCSI (2000: 81) for other possible explanations of the compactness of left-branching verbal sequences.

> Full inversion […] lifts compactness in German (but not in Dutch). […] What this indicates is that full inversion targets a position outside the verbal cluster since non-verbal elements may intervene between the inverted auxiliary and the verbal cluster. This is a sharp contrast between German and Dutch.

For Dutch, HAIDER (2010: 330) assumes "local *rightward* movement of the verb in the cluster […]." Be this as it may, the problem with HAIDER's inversion approach is that the finite inverted auxiliary has to occupy a position in front of the cluster which is not the head-position of CP, i.e. there must be another position which is compatible with finite verbs. Aside from this, translations (3-22a-e) reveal that there are also empirical problems:

stimulus <40> Portuguese: **Quem é o pessoa que poderia ter salvado a vida do meu irmão?**
Spanish: **¿Quién es el hombre que podría haber salvado la vida de mi hermano?**
English: Who is the guy who could have saved my brother's life?

(3-22) a. *wer is der Mensch waut [0.3] daut Lewe von mim Bruder gerat habe könnt* (Bra-23; m/18/MLG+P)
who is the person that […] the life of my brother saved-VERB3 have-VERB2 <u>could</u>-VERB1

b. *wer is de Mensch waut minen Bruder sin Lewe könnt gerett habe* (Bra-64; m/23/MLG+P)
who is the person that my brother his life <u>could</u>-VERB1 saved-VERB3 have-VERB2

c. *wer is der Mann wer minen Bruder moch han daut Lewen gerat* (Mex-101; m/48/MLG)
who is the man who my brother <u>might</u>-VERB1 have-VERB2 <u>the</u> <u>life</u> saved-VERB3

d. *wer is der Mensch waut min Bruder würd han könnt daut Lewen raten* (Mex-70; /41/MLG)
who is the person that my brother ~~would~~-VERB1 have-VERB2 could-VERB3 <u>the</u> <u>life</u> save-VERB4

e. *wer is de Mann dei: daut Lewe von minem Bruder rate hat könnt* (Bra-18; m/51/MLG)
who is the man who the life of my brother save-VERB3 had-VERB1 could-VERB2

Token (3-22e) is the only translation that does not deviate from the stimulus sentence. Three of the remaining translations feature an epistemic modal verb instead of the expected deontic modal verb. Translation (3-22d) features an analytical solution for the deontic modal verb. It thus features four verbal elements. These deviations, however, do not impair the translations' general quality. With the exception of (3-22a), all tokens represent frequently occurring sequences in MLG three- and four-verb-clusters. The verbal sequence *verb3-verb2-verb1* in (3-22a), however, is indeed a rare phenomenon and only occurs in specific verbal constellations. Analyzing (3-22b) in HAIDER's (2010) spirit means that we have to assume a movement to the left of the finite verb or rather an inversion of finite and non-finite verbal elements. Although there is no intervening non-verbal material in this case, the finite verb is no longer supposed to form part of the verb cluster since MLG and SG in general allow intervening non-verbal material in a right-branching sequence. HAIDER (2010: 291) states that "in German, the inverted auxiliary […] cannot be part of the cluster. This is reflected by the fact that non-verbal material may intervene between the fronted auxiliaries and the left edge of the original cluster."

Problematic for HAIDER's (2010) account are the tokens in (3-22c-e) or in (3-4). In the first two tokens, informants Mex-101 and Mex-70 split the complex direct ObjNP *la vida de mi hermano* ('my brother's life') into a direct ObjNP *daut Lewen* ('the life') and an indirect

ObjNP *min(en) Bruder* ('my brother'). The fact that the indirect ObjNP *minen Bruder* occurs in front of all verbal elements leaves no doubt that (3-22c+d) are not instances of structural V2-clauses. The crucial point, however, is that the direct ObjNP *daut Lewen* interrupts the two/three non-finite verbal elements. Should we now assume that the non-finite verb *han* ('have') in (3-22c) and the non-finite verbs *han könnt* ('have could') in (3-22d), respectively, invert with the last non-finite verbal element. It is also difficult to say what the motive for such a non-finite inversion would be and where the inverted non-finite verbal element(s) would land. Importantly, two more translations of sentence <40> show the exact ordering of (3-22c) and one more translation that of (3-22d). Aside from this, HAIDER (p.c.) does not yet have an explanation for the sequence *ObjNP-V3-V1-V2* as in (3-22e), frequent both in MLG and in many varieties of European German. In this sequence, the finite verb surfaces in between the two non-finite verbs. Section 5.3 will analyze this variant and will also show that the order *V1-V2-ObjNP-V3* as in (3-22c) constitutes the most frequent variant in three-verb-clusters in dependent clauses (cf. Table 5-24). We will end this discussion at this point since our approach is not really affected by HAIDER's (2010) thought-provoking considerations.

3.2 Theoretical assumptions underlying this project

Having portrayed a variety of methodological decisions and theoretical approaches to verb clusters, we will now present the assumptions underlying our own analyses. As these assumptions have not changed in the last years, Section 3.2 is to a certain extent comparable to KAUFMANN (2007: 155–157). Listing these assumptions explicitly is necessary since they will guide the formation of the central analytical tool of this study in Section 4, the raising index and the scrambling index. The first assumption concerns the position of the head in MLG verb phrases. Possible verbal complements in (3-23) are given as (CP/VP/PP/NP). The ordering is not to be read as actually possible sequences when more than one complement is present. The question of whether CPs, i.e. object clauses, are obligatorily extraposed (our assumption) or base generated in the postfield does not concern our analyses:

(3-23) a. The VP in MLG is head-final

b. [$_{VP}$ (CP/VP/PP/NP) **V**]

Contrary to many authors, among them KAYNE 1994, ZWART 1996, HAEGEMAN 1998, HINTERHÖLZL 1999, and KOOPMAN and SZABOLCSI 2000, we assume that the complement in MLG precedes its verbal head. This assumption is shared by various researchers, for example by BARBIERS (2000: 181–182) and AXEL (2007: 109):

> Syntactic structure is generated from bottom to top by uniform leftward application of merge and move, starting out with the verb. This hypothesis entails that rightward movement and right-adjunction are not available, as in Kayne 1994 and Haider 1997, and that languages are SOV underlyingly. I assume that the different surface position of V in English and Dutch is the result of short V-movement applying overtly in English […].

> In German [in contrast to the history of English; G.K.] such a change of the head parameter within VP did not take place. If anything, the OV-character of German has been subject to diachronic consolidation at least at the surface.

BARBIERS' description, which he (2000: 181) himself calls "a modified anti-symmetric perspective", is thought-provoking since it opposes KAYNE's (1994) influential axiom that all languages are VO or – more generally – that all phrases exhibit the fundamental sequence *specifier-head-complement*. AXEL (2007) cautiously restricts the diachronic consolidation of the OV-characteristic in German to the surface. On this level, there can indeed be no doubt that modern SG and modern German dialects are OV and not VO. The share of clauses without a verb-related element in the right-hand clause bracket is very low. Such elements are finite and non-finite verbal elements in introduced main and dependent clauses. In structural V2-clauses, the finite verb, but not the non-finite elements, has left this position. Prototypical non-finite elements in the right-hand clause bracket are then infinitives, past participles, and verb particles. To this list, one may add the nominal parts of functional verb constructions and possibly negation particles and predicatives. Climbing up the tree structure, the headedness of verb-related functional phrases has to be addressed.[29] Structural parts that are of no interest in (3-24b) are not represented; they are marked with "…".

(3-24) a. IP (or inflection-related functional phrases) in MLG are head-final

b. $[_{IP} \ldots [_{VP}$ (CP/VP/PP/NP) V] **I**]

The idea that the least embedded verb in a finite clause moves to a functional head in order to pick up tense and agreement morphology (or to check the corresponding morphological features) is probably not controversial within the GB-frame (cf., e.g., MÜLLER 1995: 31 or HAEGEMAN 1998). What is definitely controversial is the question of whether these functional head(s) occur to the left or to the right of VP. AXEL (2007: 79 – Footnote 59) argues:

> In the present study, the possibility of a right-headed I-projection, as proposed for modern German by e.g. Grewendorf (1988) and Sabel (2000), is not taken into account. There are not only conceptual counterarguments to this assumption, e.g. the problem that verb movement to a final I^0 would always be string-vacuous, but also empirical counterevidence of various types [.; G.K.] See Sternefeld (2006: 507-538) for a critical evaluation of the arguments that have been raised against verb movement to a right-headed I-projection.

HAIDER's (2010: 54–67) conviction with regard to I-projections goes even further. He does not only dismiss verb movement from VP to a head-final functional phrase, but to any such phrase. For him, IP does not exist in an OV-language such as German. In spite of these assumptions, we will see in Section 5.5 that there are MLG dependent clauses that strongly suggest movement of the least embedded verb into a head-final functional position. The movement itself is indeed string-vacuous, its consequences, however, are not. Aside from this,

[29] We are not concerned with the internal structure of the inflectional phrase. The Split-INFL-hypothesis (cf. POLLOCK 1989), i.e. the discussion about a unique IP or a whole array of inflection-related functional phrases (TP, AgrsP, AgroP, etc.), is not central to our discussion.

Weber (2015: 242), who analyzes the insertion of *done* (‘do’) in Low German varieties in Germany, also finds empirical evidence for a head-final inflectional phrase.

> Eine zunehmende Beschränkung der V-letzt-Position auf funktionale Elemente wie Hilfs- und Modalverben kann als Evidenz für eine kopffinale *Inflectional Phrase* (IP) in einer westgermanischen OV-Sprache gedeutet werden, eine Annahme, die innerhalb der generativen Grammatik umstritten ist (vgl. z.B. Haider 2010, Kap. 2).[30]

Weber’s conclusion can be related to earlier assumptions of Haegeman (1991: 525):

> We assume that when VP is head-final, IP is also head-final so that I occurs to the right of the VP. This assumption is based on the fact that in the majority of languages that have OV-order, auxiliaries tend to follow the non-finite verb, an observation due to Greenberg (1963). We shall assume that the position of the auxiliary correlates with that of I.

With the assumptions in (3-23) and (3-24), the derivational history of the lower part of the relative clause in token (3-25a) can be described as (3-25b-c). Moved elements are indicated in bold print.

stimulus <40> Spanish: **¿Quién es el hombre que podría haber salvado la vida de mi hermano?**
English: Who is the guy who could have saved my brother’s life?

(3-25) a. *wer is dei Mann waut daut Lewen von minen Bruder raten könnt* (Mex-17; f/42/MLG)
who is the man that [the life of my brother]-ObjNP Ø save-VERB2 could-VERB1

b. [$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ [$_{NP}$ daut Lewen von minen Bruder] raten] könn] {t}]]

c. [$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ [$_{NP}$ daut Lewen von minen Bruder] raten] **t$_{\mathbf{finite}}$**] **könn$_{\mathbf{finite}}$-{t}**]]

We chose dependent clauses with two verbal elements in order to avoid structural representations that are too complex. The {t} at the end of (3-25b+c) is the phonetic equivalence of a bundle of morphological features, in this case 3rd person singular second subjunctive (*Konjunktiv II*). The basic structure is represented by (3-25b); the movement of the non-finite verb to IP and its head-adjunction to {t} results in the NR-variant in (3-25c).

The next point to discuss is the direction of movement in MLG. Although we have quoted Barbiers (2000: 181–182) in support of our assumption that MLG is OV, we do not concur with his ban on rightward movement. The first reason for this is the assumed head movement in (3-25c), the second reason is the necessity of right-adjunction for our derivation of raised cluster variants. We assume (3-26):

(3-26) Movement to the right in MLG is possible

As we assume in (3-23) and (3-24) that MLG verb phrases and inflection-related functional phrases are head-final and as we assume in (3-25c) and (3-26) that movement to the right is possible, the MLG sequence *V1-ObjNP/PP-V2* is best explained as the result of a rightward movement as defined in (3-27):

[30] Translation by G.K.: An increasingly strong restriction of the verb-last-position to functional elements such as auxiliary and modal verbs can be interpreted as evidence for a head-final *Inflectional Phrase* (IP) in a West Germanic OV-language. This assumption is controversial within generative grammar (cf., e.g. Haider 2010, chapter 2).

(3-27) In the MLG VPR-variant an embedded VP right-adjoins to a head-final inflection-related functional phrase

Point (3-27) means that we do not consider the VPR-variant with modal verbs, temporal auxiliaries, or comparable verbal elements a case of extraposition (cf. KROCH & SANTORINI 1991 for a different opinion). Extraposition that includes verbal elements normally adjoins an IP- or CP-structure to a maximal projection (cf. VANDEN WYNGAERD 1989: 435). The translation in (3-28a), which features the VPR-variant, is therefore supposed to be the consequence of the derivation in (3-28b-d).

stimulus <40> Spanish: **¿Quién es el hombre que podría haber salvado la vida de mi hermano?**
English: Who is the guy who could have saved my brother's life?

(3-28) a. *wer is dei Ohmtje*[31] *waut könnt min Bruder sin Lewen raten* (Mex-6; m/16/MLG)
who is the man that Ø could-VERB1 [my brother his life]-ObjNP save-VERB2

b. [$_{\text{CP}}$ … [$_{\text{IP}}$ … [$_{\text{VP1}}$ [$_{\text{VP2}}$ [$_{\text{NP}}$ min Bruder sin Lewen] raten] könn] {t}]]

c. [$_{\text{CP}}$ … [$_{\text{IP}}$ … [$_{\text{VP1}}$ [$_{\text{VP2}}$ [$_{\text{NP}}$ min Bruder sin Lewen] raten] **t**$_{\textbf{finite}}$] **könn**$_{\textbf{finite}}$**-{t}**]]

d. [$_{\text{CP}}$ … [$_{\text{IP}}$ [$_{\text{IP}}$ … [$_{\text{VP1}}$ **t**$_{\textbf{vpr}}$ t$_{\text{finite}}$] könn$_{\text{finite}}$-{t}] **[**$_{\textbf{VP2}}$ **[**$_{\textbf{NP}}$ **min Bruder sin Lewen] raten]**$_{\textbf{vpr}}$]]

The derivation of the VPR-variant in (3-28b-d) may meet with some reservation due to the assumptions of head-final phrases and rightward movement. However, this derivation is probably less controversial than that with which we will describe the cluster variant with the sequence *ObjNP/PP-V1-V2*. This variant is traditionally called verb raising since it used to be considered the consequence of head movement from V2 to the right of V1. Contrary to this, we assume that the VR-variant is the consequence of the raising of the entire verb phrase after all non-verbal material has been scrambled out. We, therefore, introduce (3-29) as a further assumption for MLG:

(3-29) Scrambling of NPs/PPs in MLG is leftward movement by adjoining to either VP or IP

In spite of the fact that German "does not have the hallmark case of scrambling, long-distance scrambling out of finite clauses" (cf. BOŠKOVIĆ 2004a: 630 – Footnote 21), the relatively free order of NPs and to a lesser degree of PPs in the topological midfield is one of its defining characteristics. There are basically two approaches to the different surface sequences, either base generation of NPs/PPs in different positions or movement of NPs/PPs to different positions. We adopt MÜLLER's (1995: 98 and 120) assumption with regard to SG for MLG. Scrambling is taken to be a case of left-adjunction of an NP/PP to VP or IP. With this, the scrambled phrase does not end up in a specifier position as *wh*-phrases or topicalized phrases do. With (3-29), we can thus describe the VR-variant in MLG in the following way:

(3-30) The VR-variant in MLG results from verb projection raising with prior scrambling of non-verbal material

[31] *Ohmtje* literally means 'little uncle' (cf. Table 8-2 for a closer analysis of this word). It is the diminutive of *Oheim* (short form *Ohm*; 'uncle (brother of the mother)'), which in German has given way to the French loanword *Onkel*. The same is true for *Muhmtje*, the diminutive of *Muhme* ('aunt (sister of the mother)'). Many conservative Mennonites still use these words for *man* and *woman*.

This assumption is the most far-reaching. We adopt it as it provides the best theoretical explanation for the manifold variation in the MLG data set. Aside from this inductive empirical reason, scrambling is proposed as part of cluster formation in several older publications. Vanden Wyngaerd (1989: 436), for example, writes about LNS (Light NP Shift) and remnant VP-movement and Den Besten and Broekhuis (1989; quoted and translated in Haegeman 1994: 512) argue that "[…] VR is interpreted as the limiting case of VPR, an instantiation of VPR where all nonverbal material has been scrambled out of the adjoined VP." Penner (1990: 170) finally offers a description that covers the whole derivational process starting from step (3-25c), i.e. from the head movement of the least embedded verb to a head-final functional phrase:

> Returning now to VPR, the analysis states that the upper verb (e.g. modal) moves to AGR$_2^0$ and then to TNS^0 to pick up inflectional features. In order for the RV [raising verbs; G.K.] to be properly proclizicized, the whole VP$_2$ is raised to the right side of TNSP via successive adjunction to each maximal projection. Simultaneously, NP$_1$, NP$_2$ and, in principle, any non-verbal constituent in VP$_2$ may be scrambled out, i.e., adjoined to the left of the higher A'-position, if the result is compatible with what the information structure requires.

In more modern approaches, the idea that scrambling forms part of the derivation of the VR-variant has been given up, even by most of its earlier supporters. One reason for this is that it is hard to find a way in which the raised trace of the scrambled phrase could be properly bound (cf. Section 5.5.3 for a humble attempt to tackle this problem). In spite of this problem, we still assume that the raising domain of the VPR-variant and the VR-variant in MLG is structurally identical, i.e. it is not possible to explain differences in the amount of phonetic material raised by assuming that different layers of the VP have been raised (cf. Den Besten & Edmondson (1983: 207) for this view). With (3-29) and (3-30), the translation with the VR-variant in (3-31a) is derived as in (3-31b-e):

stimulus <40> English: **Who is the guy who could have saved my brother's life?**

(3-31) a. *wer i:s de Mensch waut minen Bruder sin Lewen könnt saven* (USA-76; m/47/MLG)
who is the man that [my brother his life]-ObjNP Ø could-VERB1 save-VERB2

b. [$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ [$_{NP}$ minen Bruder sin Lewen] saven] könn] {t}]]

c. [$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ [$_{NP}$ minen Bruder sin Lewen] saven] t$_{finite}$] **könn$_{finite}$-{t}**]]

d. [$_{CP}$ … [$_{IP}$ **[$_{NP}$ minen Bruder sin Lewen]$_{scr}$** [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ **t$_{scr}$** saven] t$_{finite}$] könn$_{finite}$-{t}]]]

e. [$_{CP}$ … [$_{IP}$ [$_{IP}$ [$_{NP}$ minen Bruder sin Lewen]$_{scr}$ [$_{IP}$ … [$_{VP1}$ **t$_{vpr}$** t$_{finite}$] könn$_{finite}$-{t}]] **[$_{VP2}$ t$_{scr}$ saven]$_{vpr}$**]]

We will present a lot of data that support this assumption (cf., e.g., Section 4.3.2 and the second part of In-Depth Analysis 5.1.4), but due to its central position in this project and due to its almost unanimous abandonment in the current research literature, we will offer a first piece of evidence at this point. Tokens (3-32a-d) feature different kinds of complements in the conditional clause of sentence <11>:

stimulus <11> Spanish: **Si él firma ese contrato, va a perder mucho dinero**
English: If he signs this contract, he will lose a lot of money

(3-32) a. *wann hei dit Papier unterschriewen wird dann wird her viel Geld verspielen* (Mex-74; m/27/MLG)
if he this paper sign-VERB2 ~~will~~-VERB1 ~~then~~ will he much money gamble-away

b. *wann her wird daut: unterschriewen dann wird her viel Geld verspielen* (Mex-76; m/24/MLG+S)
if he ~~will~~-VERB1 this Ø sign-VERB2 ~~then~~ will he much money gamble-away

c. *wann der wird [0.3] waut unterschriewen dann wird dei [0.4] viel Geld verspielen* (Mex-3; m/21/MLG)
if he ~~will~~-VERB1 […] something Ø sign-VERB2 ~~then~~ will he […] much money gamble-away

d. *wann hei diesen: [1.3] [äh] contract [äh] wird [äh] unterschriewen wird her viel Geld verlieren* (Mex-16; f/39/MLG)
if he this […] [eh] contract [eh] ~~will~~-VERB1 (eh) sign-VERB2 will he much money lose

In tokens (3-32a+d), we can see the ObjNPs *dit Papier* (‘this paper’) and *diesen: […] contract* (‘this […] contract’). In (3-32a), the full-fledged ObjNP occurs together with the NR-variant, in (3-32d) with the VR-variant. In the other two tokens, (3-32b+c), the informants did not entirely adhere to the specifications of the stimulus sentence. The tokens feature the demonstrative pronoun *daut:* (‘this’) and the indefinite pronoun *waut* (‘something’). Both pronouns appear within the verb cluster, i.e. in the VPR-variant. Although the translation with indefinite *waut* in (3-32c) is unique, it offers anecdotic support for the scrambling hypothesis. With regard to the two raised variants in translations with full-fledged ObjNPs and the auxiliary *woare* (‘will’), the scrambled VR-variant appears 62 times in sentence <11>, while the unscrambled VPR-variant only appears ten times. Conditional clauses thus seem to offer a perfect context for the VR-variant (cf. Section 6.2). As the VPR-variant precludes scrambling and as HAIDER (2010: 170–172) has shown that SG *was* (‘something’) cannot scramble, the MLG cognate *waut* should and does appear in the unscrambled VPR-variant even though this variant constitutes the minority option in conditional clauses (cf. point (b4) in the second part of In-Depth Analysis 5.1.4 for intriguing exceptions).

Looking at the behavior of demonstrative pronouns as in (3-32b), one recalls AXEL (2007: 105), who argues that “[i]n the current Germanic dialects with verb projection raising (e.g. Swiss German, West Flemish) the raised verb projection cannot contain an (unaccented) pronoun.” Should this not preclude the appearance of demonstrative pronouns in the VPR-variant? The answer is definitely negative, since demonstrative pronouns feature – contrary to most (unaccented) pronouns – the definiteness marker {d-} and are, therefore, morphologically complex and phonetically heavy. Aside from this, LENERZ (1993: 139–144) claims (i) that pronouns in German varieties are phrases and not just heads, (ii) that pronouns move, and (iii) that this movement is a case of scrambling. In view of this, one would expect *daut:* in (3-32b) to scramble more easily than definite full-fledged ObjNPs. After all, *daut:* is not only definite, but also deictic, a fact which should increase its tendency to appear early in the clause. Table 3-1 shows that this is exactly the case, i.e. we have somewhat misled the reader with (3-32b), since this token represents a rather rare option. Table 3-1 includes the translations of three stimulus sentences in which demonstrative pronouns appeared frequently. The tokens exclusively feature *woare* (‘will’) as finite verb in sentence <11>, modal verbs in sentence <16>, and the auxiliary *han* (‘have’) in sentence <17>.

Table 3-1: Distribution of the basic cluster variants in the conditional clauses of sentences <11>, <16>, and <17> with two verbal elements separated by the type of ObjNP

	full-fledged ObjNP	**pronominal ObjNP**	**Total**
n (tokens)	623	75	698
NR-variant	338	22	360
ObjNP-V2-V1	54.3%	29.3%	51.6%
χ^2 (2, n=698) = 30.9, p=0.003** / Cramer-V: +0.21 / 0 cells with less than 5 expected tokens			
VPR-variant	88	5	93
V1-ObjNP-V2	14.1%	6.7%	13.3%
VR-variant	197	48	245
ObjNP-V1-V2	31.6%	64%	35.1%

That most translations with demonstrative pronouns are found in sentences <11>, <16>, and <17> may be related to the fact that preposed conditional clauses normally provide background information, i.e. the informants may have been guided by the conviction that propositional details of the conditional clause are known to an imagined listener. Full-fledged ObjNPs are 2.2 times more frequent in the VR-variant than in the VPR-variant (197:88); for demonstrative pronouns, the ratio is 9.6 (48:5). This means that deictic and definite demonstrative pronouns leave the verb phrase significantly more frequently than full-fledged definite ObjNPs.[32] In spite of this, the fact that five demonstrative pronouns appear in the VPR-variant shows that this position is a possible position for such elements. We can thus conclude that LENERZ (1993: 144) is right when he states that “[w]ith this, a fundamental difference between scrambling and pronominal movement cannot be demonstrated, at least not for German.”[33] Section 4.6 will provide further information about the syntactic behavior of MLG pronouns.

The translations of sentence <17> in (3-33a-d) present another type of variation. The decisive point here is not the cluster variant – all tokens feature the compact verbal sequence *verb2-verb1* –, but the question of whether the complement appears in front of the sentence adverb *wirklich* (‘really’) or after it. Translations (3-33a+b) exhibit full-fledged ObjNPs,

[32] For nominal scale variables such as the token frequency of the cluster variants, Pearson’s Chi-Square is used. As this test is sensitive to the number of tokens, tests for strength of association are always carried out (Cramer’s V and Phi, respectively). The number of cells with less than five expected tokens in the distribution is always given (in vulnerable distributions with one degree of freedom and less than 5 expected tokens in a cell, we also provide the result of Fisher’s Exact). Aside from this, Binary Logistic Regression Analyses will be applied for dependent variables with two levels. The level of statistical significance is presented with its precise value. One asterisk * means that SPSS calculates the probability for a Type I-error between 1% and 5% (0.01≤p<0.05), two asterisks ** that the probability is smaller than 1% (0<p<0.01), and three asterisks *** that it is virtually 0% (p=0). We are aware of the fact that this value can never be reached, but follow the indication provided by SPSS. One asterisk in brackets (*) indicates a statistical tendency with an error margin of 5% to 10% (0.05≤p<0.1).

[33] Translation by G.K.; the original reads: *Damit ist insgesamt, zumindest für das Deutsche, eine grundsätzliche Unterscheidung zwischen Scrambling und Pronomenbewegung nicht nachgewiesen*.

translations (3-33c+d) demonstrative ponouns. In each case both sequences are presented, i.e. *adverb-ObjNP* and *ObjNP-adverb*.

stimulus <17> Portuguese: **Se ele realmente matou o homem, ninguém pode ajudar ele**
Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: If he really killed the man, nobody can help him

(3-33) a. *wann dei wirklich den Mensch todgemoakt haft [he (breath)] dann kann wirklich keiner ihm helpe* (Br-53; m/33/P>MLG-64%)
if he really-ADVERB the man-ObjNP killed-VERB2 has-VERB1 [he (breath)] ~~then~~ can ~~really~~ nobody him help

b. *wann hei den Mann wirklich todgemoakt haft kann her- kann keinem*[34] *ihm helpe* (Br-30; f/20/MLG+P)
if he the man-ObjNP really-ADVERB killed-VERB2 has-VERB1 ~~can he~~ can nobody.DAT him help

c. *wann hei wirklich den [äh] [1.7] todgemeak haf dann kann ihm keiner helpen* (Mex-74; m/27/MLG)
if he really-ADVERB him-ObjNP Ø [eh] […] killed-VERB2 has-VERB1 ~~then~~ can him nobody help

d. *wann dei den wirklich umgebracht haft [1.5] dann kann dem keiner helpe* (Br-59; f/56/MLG)
if he him-ObjNP Ø really-ADVERB killed-VERB2 has-VERB1 […] ~~then~~ can him nobody help

Table 3-2 presents the distribution of the two types of complements and the two types of sequences. In spite of the low number of demonstrative pronouns, the distribution is highly significant and makes it clear that pronominal ObjNPs are found much more frequently in front of sentence adverbs like *wirklich* ('really') than full-fledged ObjNPs. In our opinion, this behavior constitutes another case of scrambling (cf. Section 4.3.3).

Table 3-2: Position of the ObjNP in the NR-variants in the conditional clause of sentence <17> with two verbal elements separated by the type of ObjNP

	full-fledged ObjNP	**pronominal ObjNP**	**Total**
n (tokens)	135	6	141
NR I-variant	119	2	121
adverb-ObjNP-V2-V1	88.1%	33.3%	85.8%
χ^2 (1, n=141) = 14.2, p=0*** / Phi: -0.32 / 1 cell (25%) with less than 5 expected tokens Fisher's Exact: p=0.004**			
NR II-variant	16	4	20
ObjNP-adverb-V2-V1	11.9%	66.7%	14.2%

Our data thus do not only agree with LENERZ' (1993: 144) assumption that pronominal ObjNPs and full-fledged ObjNPs behave in comparable ways, but also demonstrate that their positional behavior in verb clusters can be compared to their positional behavior with regard to adverbs.[35] This conclusion will be fundamental for the construction of the scrambling

[34] The erroneous dative form *keinem* ('nobody') may be caused by a carry-over-effect of the unfinished and repaired start of the main clause *kann her* ('can he'). In this sequence, the object, probably the next element, would appear in the dative case.

[35] This comparable behavior could be taken as an indication that the scopal characteristics of *wirklich* ('really') do not depend on its relative superficial position to the ObjNP (cf. also examples (4-38a+b)). This state of affairs

index. In order to wrap up the topic of cluster-internal elements, we will present some exceptional cases. In (3-34a), the modal particle *doch* appears in between two verbal elements, while in (3-34b) and (3-35) the same is true for the sentence adverb *wirklich* (‘really’) and the negation particle *nich* (‘not’).

stimulus <9> Spanish: **Marta insiste en que debes haber visto el camión**
Portuguese: **Elisabete insiste que tu deves ter visto o caminhão**
English: Elisabeth insists that you must have seen the truck

(3-34) a. [äh] *Marta sagt daut der haf doch den: [äh] [ähm] Truck gesehen* (Mex-97; m/22/MLG)
[eh] Marta says that he Ø has-VERB1 ~~PARTICLE~~ the [eh] [ehm] truck seen-VERB2

b. *Elisabeth [0.6] sagt [0.4] daut du hast wirklich den Caminhao gesehen- en Lagostwoage*[36] *gesehen* (Bra-5; f/22/MLG+P)
Elisabeth […] says […] that you Ø have-VERB1 ~~really~~-ADVERB the truck seen-VERB2 ~~a truck seen~~

stimulus <5> English: **Henry doesn’t know that he can leave the country**

(3-35) *Henry gleuft nich [0.8] hei weit daut hei kann nich die country verlote* (USA-38; f/60/MLG)
Henry ~~believes~~ ~~not~~ […] ~~he~~ knows ∅ that he can-VERB1 ~~not~~-NEGATION the country leave-VERB2

The position of *doch* in (3-34a) is unexpected since modal particles are supposed to appear at the beginning of the topological midfield, i.e. in a position not contained in the embedded verb phrase. If this positioning is correct, we have to conclude that elements outside this verb phrase can participate in raising, at least in the grammar of some informants. If we, however, stick to the assumption that (3-34a) is the consequence of exclusively raising the phrase headed by *gesehen* (‘seen’), *doch* would necessarily form part of this phrase. The case of *wirklich* in (3-34b) and *nich* in (3-35) (cf. In-Depth Analysis 7.1.3.3 for the infiltration of *nich* in this dependent clause) needs to be explained in an analogous way. These elements are high up in the structural tree, most probably outside the embedded verb phrase.

We are thus faced with two unsatisfactory solutions: Either we locate elements such as modal particles and sentence adverbs in the embedded verb phrase or we allow elements outside this phrase to participate in verb projection raising, contradicting the assumption in (3-27). In any case, one must not forget that these translations represent very rare cases (cf. also Footnote 263 in Chapter 7) and that at least tokens (3-34a+b), which both feature *sagen* (‘say’) as the matrix verb, allow a third explanation. *Sagen* induces complementizer deletion very frequently (cf. Tables 7-10 and 7-11), a behavior which will be interpreted as a sign of syntactic disintegration in Section 7.1. As In-Depth Analysis 7.1.4.3 shows that syntactic disintegration does not only lead to a lot of complementizer deletion, but also to many

---

is exactly what we expect if the structural position of *wirklich* in (3-33a-d) is identical. In any case, if scope were at play, we would not expect such a clear difference with regard to the type of ObjNP in Table 3-2 and we would not expect a comparable behavior to that of verb clusters in Table 3-1.

[36] Informant Bra-5 does indeed pronounce the SG loan *Lastwagen* as *Lagostwoage*.

sentence compounds with introduced V2-complement clauses, one may claim that syntactic disintegration can lead to an enlarged raising domain.[37]

For the formation of the indexes in Chapter 4, two more assumptions – both of them related to tokens (3-33a-d) – have to be made. The first one deals with the generation and the positioning of adverbs in MLG:

(3-36) Adverbs in MLG do not move; they are base generated in different structural positions

GREWENDORF and STERNEFELD (1990: 21) write that adverbials – and this probably includes adverbs like *wirklich* ('really') – can scramble to IP. Most researchers, however, agree that adverbs are base generated in their surface position (cf. POLLOCK 1989 and CINQUE 1999). However, a debate about the precise position of adverbs does exist. VANDEN WYNGAERD (1989: 425) adjoins adverbs to VP; BAYER and KORNFILT (1994: 40) assume that they can be adjoined to any projection of V; and CINQUE (1999) puts them into the specifier position of different semantic-functional projections. We will analyze adverbs as adjoining to (non-argumental) maximal projections, i.e. to VPs and IPs. CINQUE (1999: 44) calls this the common assumption in the literature. This assumption is important for cases like (3-33a-d) and will be fundamental for the second approach to the formation of the scrambling index (cf. Section 4.3.3). The second assumption is also crucial for this approach:

(3-37) Complements in MLG are base generated left-adjacent to their governing verb

This assumption presupposes that the surface sequence *ObjNP/PP-adverb-verb* in MLG is the consequence of leftward movement of the complement over the adjoined position of the adverb to another adjoined position (cf. DEN BESTEN & WEBELHUTH 1990 and POLLOCK 1989: 379 – Footnote 14). In Section 4.3, we will interpret this movement as an instance of scrambling. We therefore suppose that the non-argumental categories VP and IP have the structure represented in (3-38a+b):

(3-38) a. [$_{VP}$ possible scrambling-position of ObjNPs/PPs [$_{VP}$ AdvP [$_{VP}$ (NP/PP) V]]]
b. [$_{IP}$ possible scrambling-position of ObjNPs/PPs [$_{IP}$ AdvP [$_{IP}$ [$_{VP}$ … (NP/PP) V] I]]]

Many of the assumptions presented in Section 3.2 may be regarded as *ad hoc*-stipulations. The following analyses will, however, demonstrate that they provide neat explanations for many empirical facts in the MLG data set. These facts constitute the measuring stick for any theoretical approach. Approaches that are not compatible with them must be considered inadequate.

[37] Aside from this, comparable data from Germany exists, at least with regard to *nich*. The atlas of Swabian as spoken in Bavaria (cf. KÖNIG 2003: 470–475) shows cluster-internal *nicht* ('not') quite frequently in main clauses that exhibit verb projection raising. The examples are *ich habe dürfen nicht kommen* (I have-VERB1 may.IPP-VERB2 not-NEGATION come-VERB3; 'I was not allowed to come') and *er hat ihn wollen nicht gehen lassen* (he has-VERB1 him want.IPP-VERB2 not-NEGATION go-VERB4 let-VERB3; 'He did not want to let him go').

4. The Indexes for Verb Projection Raising and Scrambling

In Section 3.1, we provided an overview of some theoretical approaches to the (derivational) structure of verb clusters. After that, we presented our own assumptions in Section 3.2. These assumptions will now be used for the development of two indexes, one for verb projection raising and one for scrambling. With these indexes, we will characterize the informants' general syntactic behavior. As the indexes constitute the fundamental tool for most analyses, we will explain their formation in great detail. Section 4.1 will show which clauses were considered adequate for the formation of the indexes and which criteria the selected translations had to fulfill. Section 4.2 will illustrate the formation of the index for verb projection raising, while Section 4.3 demonstrates the somewhat more complex formation of the scrambling index. The formation of this index is more complex because two different approaches had to be applied. The first approach, which uses the position of the ObjNP/PP with regard to its governing verb, is introduced in Section 4.3.2. Section 4.3.3 introduces the second approach, which uses the position of the ObjNP/PP with regard to adverbs. The preceding Section 4.3.1 presents an overview about scrambling-related theoretical issues and basic facts about scrambling in MLG. In Section 4.4, the informants will be grouped into four CLUSTERS according to their index values. Section 4.4.1 details the clustering process itself, while Section 4.4.2 analyzes the social characteristics of the CLUSTER members. With the help of these CLUSTERS, we will then evaluate the validity of the scrambling index in Section 4.5. Finally, Section 4.6 demonstrates that the scrambling index is also a good predictor for the informants' positional preferences with regard to pronouns, a rather unexpected result.

4.1 Preliminary considerations

The easiest way to describe the informants' syntactic preferences would be to count how many times each informant uses each cluster variant. This grouping method was used in KAUFMANN (2007). There are, however, many methodological problems involved in such a coarse procedure. KAUFMANN (2007: 186 – Footnote 29) described the necessary improvements in the following way:

> This method will be refined in future work by calculating an average probability for each variant in each of the clauses in each colony. Using probabilities instead of absolute frequencies will improve the grouping criterion because the informants will be judged according to the actual clauses they translated.

The major setback in describing the informants' syntactic behavior by using frequencies is that this method is bound to lead to skewed results if the informants did not translate all dependent clauses with two verbal elements. Missing or unusable translations pose a serious problem, because linguistic characteristics like the type of finite verb and the type of dependent clause play a decisive role in the preference for particular cluster variants (cf.

Tables 6-2 through 6-4 and KAUFMANN 2003a: 184 – Table 2 and 187 – Table 3). For example, a raising-friendly informant who translated all complement clauses with the temporal auxiliary *han* (‘have’), but failed to translate the conditional clauses with modal verbs would probably show a high number of the V2-VPR-variant (being induced by complement clauses and *han*) and a rather low number of the VR-variant (being induced by conditional clauses and modal verbs) (cf. Table 4-7). In this case, an above-average frequency of the raised and unscrambled V2-VPR-variant would not necessarily mean that this informant shows a strong tendency towards raising and a lack thereof with regard to scrambling. In other words, while using a VR-variant in a complement clause with *han* may be considered a strong indication for a general raising and scrambling preference, since it is rarely found in such a context, the use of the V2-VPR-variant cannot be considered a strong indication for a general dislike of scrambling.

To avoid this problem, it is necessary to calculate a normalized basic propensity for verb projection raising and scrambling for every clause. With such a measure, it is possible to compare the observable raising and scrambling behavior of every informant in every clause with the clause-specific expected probability for raising and scrambling. Unfortunately, such a basic measure does not exist in the relevant literature and, therefore, will have to be distilled from the elicited data itself. This is by no means an ideal method, since we will use part of the data set to be described as the instrument of description, but it nonetheless proved to be the only feasible way.

As shown in Section 2.2, there are sixteen dependent clauses in the MLG data set aiming for two verbal elements. These clauses belong to four different types (complement, conditional, causal, and relative clauses) and are constructed in a way to elicit either a finite modal verb governing a bare infinitive or the finite temporal auxiliary *han* (‘have’) governing a past participle. The English versions of these stimulus sentences are presented once again:

Complement clauses (modal verb in <5> and <6>; temporal auxiliary in <7> and <8>)

(4-1) a. **stimulus <5>** Henry doesn’t know *that* he **can leave** the country
b. **stimulus <6>** Don’t you know *that* he **should learn** English?
c. **stimulus <7>** Peter is convinced *that* he **has understood** the book
d. **stimulus <8>** Are you sure *that* he **has repaired** the chair?

Conditional clauses (modal verb in <15> and <16>; temporal auxiliary in <17> and <18>)

(4-2) a. **stimulus <15>** *If* he **has to sell** the house now, he will be very sorry
b. **stimulus <16>** *If* he **can solve** this problem, he is very smart
c. **stimulus <17>** *If* he really **killed** the man, nobody can help him
d. **stimulus <18>** *If* he **stole** the book, I won’t trust him anymore

Causal clauses (modal verb in <25> and <26>; temporal auxiliary in <27> and <28>)

(4-3) a. **stimulus <25>** He is crying, *because* he **has to eat** salad every day

b. **stimulus <26>** He needs glasses, *because* he **ca**n't **see** the blackboard

c. **stimulus <27>** I will give him a good grade, *because* he **has read** the book

d. **stimulus <28>** I am very hungry, *because* I **have**n't **had** lunch yet

Relative clauses (modal verb in <35> and <36>; temporal auxiliary in <37> and <38>)

(4-4) a. **stimulus <35>** Is this the film you **want to show** to all your friends?

b. **stimulus <36>** The doctor *who* **wants to see** my foot is very worried

c. **stimulus <37>** I have found the book *that* I **have given** to the children

d. **stimulus <38>** The man *who* **caused** the accident has disappeared

All sixteen clauses could, in principle, be used for the characterization of the informants' raising and scrambling behavior. Unfortunately, however, seven clauses had to be taken out. The four causal clauses (sentences <25> through <28>) had to be excluded, because there are strong indications that the informants in the USA and in Mexico reanalyzed the superficial second position of finite verbs in the "V2-VPR-variant" as a structural V2-position, i.e. as a dependent main clause (cf. Section 6.3 and KAUFMANN 2003a: 188–189). The inclusion of these clauses would, therefore, erroneously augment the proportion of the V2-VPR-variant.

Aside from this, one complement clause could not be used because it may have allowed for the incorporation of the bare noun into the main verb (*learn English* in sentence <6>) leaving no way to distinguish reliably between the scrambled VR-variant and the unscrambled VPR-variant. Moreover, the negative particle *nich* ('not') in the matrix clause of sentence <5> frequently contaminated the dependent complement clause leading to a higher overall complexity of this clause (cf. point (b) below and In-Depth Analysis 7.1.3.3 for a thorough analysis of this phenomenon). The last clause that had to be excluded was the relative clause of sentence <37>, which shows a high number of mono-verbal synthetic preterite forms instead of the expected temporal auxiliary *han* plus a past participle (cf. the analysis in In-Depth Analysis 5.1.1). After the exclusion of these clauses, nine stimulus sentences could be used to characterize the informants' raising and scrambling behavior. These sentences and one exemplary translation for each of them are given below:[38]

Two complement clauses (both with the temporal auxiliary *han*)

stimulus <7> Portuguese: **O Pedro está convencido que ele entendeu o livro**
English: Peter is convinced that he has understood the book

(4-5) *Peter is [0.3] iwerzeugt daut hei det Buk verstone haft* (Bra-25; m/21/P>MLG-∅)
Peter is […] convinced that he the book understood-VERB2 has-VERB1

[38] For the scrambling index, one more complement clause was used. Stimulus sentence <2> *John doesn't think that you know your friends well* is not included here, because in contrast to the nine stimulus sentences presented, it contains only one verbal element (cf. Section 4.3.3).

stimulus <8> English: **Are you sure that he has repaired the chair?**

(4-6) *weits dü nev daut hei haft den Stuhl abgefixt* (USA-2; m/15/E>MLG-∅)
know you sure that he has-VERB1 the chair fixed-VERB2

Four conditional clauses (two with a modal verb; two with the temporal auxiliary *han*)

stimulus <15> English: **If he has to sell the house now, he will be very sorry**

(4-7) *wann hei daut Hüs nü mut verköpen wird ihm daut loter leid dun* (USA-1; f/29/MLG)
if he the house now-ADVERB must-VERB1 sell-VERB2 will him that ~~later~~ sorry do

stimulus <16> Spanish: **Si él puede resolver este problema, es muy inteligente**
English: If he can solve this problem, he is very smart

(4-8) *wann hei dit Problem kann lösen dann is her sehr klüg* (Mex-9; f/16/E>MLG-86%)
if he this problem can-VERB1 solve-VERB2 ~~then~~ is he very intelligent

stimulus <17> Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: If he really killed the man, nobody can help him

(4-9) *wann hei wirklich den- [1.1] den Mann umgebracht haft [0.5] kann ihm keiner helpe* (Fern-14; f/17/SG>MLG-71%)
if he really ~~the-~~ […] the man killed-VERB2 has-VERB1 […] can him nobody help

stimulus <18> Portuguese: **Se ele roubou o livro, eu não vou mais confiar nele**
English: If he stole the book, I won't trust him anymore

(4-10) *wann hei daut Buuk gestohle oder geklaut*[39] *haft dann wer ik nie- ihm nich mehr vertrüe* (Bra-58; m/57/P>MLG-71%)
if he the book ~~stolen or~~ thieved-VERB2 has-VERB1 ~~then~~ will I ~~never-~~ him not anymore trust

Three relative clauses (two with a modal verb; one with the temporal auxiliary *han*)

stimulus <35> Spanish: **¿Esta es la película que quieres mostrar a todos tus amigos?**
English: Is this the film you want to show to all your friends?

(4-11) *is det die Film waut dü all dine Frend wiesen willst* (Mex-2; f/52/MLG)
is this the film that you all your friends show-VERB2 want-VERB1

stimulus <36> English: **The doctor who wants to see my foot is very worried**

(4-12) *dei Doktor waut min Fuut will sehen [0.6] her is sehr besorgt* (USA-68; m/65/MLG)
the doctor that my foot wants-VERB1 see-VERB2 […] ~~he~~ is very worried

stimulus <38> Spanish: **El hombre que provocó el accidente desapareció**
English: The man who caused the accident has disappeared

(4-13) *dei Mensch [0.7] waut den- [1.5] den Unfall- den accidente*[40] *verursacht haft der is op e Flucht* (Men-27; m/43/MLG+SG)
the person […] that ~~the-~~ […] ~~the crash~~ the accident caused-VERB2 has-VERB1 ~~he~~ is on the flight

[39] There are few tokens with doubled constituents like (4-10). Such tokens were accepted when the positional facts were unambiguous. This is the case in (4-10).

[40] Longer pauses occur frequently when the informant searches for a MLG word trying to avoid the use of a loan word from the majority language. In this case, it is interesting that the MLG word *Unfall* is produced first and then replaced by the probably often-used Spanish loanword *accidente* (cf. also the discussions after (3-3a-c) and (5-31a-e)).

Five of the nine clauses feature the temporal auxiliary *han* as the finite verb, four a modal verb. With regard to clause type, there are four preposed conditional clauses, three relative clauses adjacent to their respective head noun (in sentence <35>, the relative marker serves as direct object, in <36> and <38> as subject), and two extraposed complement clauses. With the exception of the English version of sentence <35>, all dependent clauses in the stimulus sentences feature an introducing element, a subject,[41] one finite temporal auxiliary or modal verb, one non-finite main verb and a definite direct object (in sentence <35> a definite indirect object). Furthermore, the conditional clauses of sentences <15> and <17> contain an adverb.

In order to reduce as many unwanted influences on the informants' choice of cluster variants as possible, the selected translations had to stick as closely as possible to the linguistic characteristics of the stimulus versions. Possible deviations concern, among other things, the position of the clause in question (preposed conditional clauses, extraposed (postposed) complement clauses, and relative clauses adjacent to their head noun), its introductory element, and its finite verb. These guidelines were already applied in KAUFMANN (2007). In other respects, however, the present analysis follows stricter requirements than KAUFMANN (2007). These restrictions will be discussed in the following paragraphs. A total of 1,905 translations of the nine stimulus sentences complied with all restrictions.

(a) ObjNPs in the dependent clause: For the formation of the two indexes, only dependent clauses with ObjNPs (and some few ObjPPs) containing a noun and a definite article (69.2% of the 1,905 selected clauses),[42] a possessive determiner (27.4%), or a demonstrative determiner (3.5%) were allowed. Translations containing an ObjNP/PP with an indefinite article or bare personal pronouns were not included. The reason for this exclusion lies in the different scrambling behavior of pronouns, definite ObjNPs, and indefinite ObjNPs. Indefinite ObjNPs would doubtlessly further the occurrence of the VPR-variant because they scramble less than definite ObjNPs. The main reason for this is that indefinite ObjNPs normally represent new, unknown information (cf. EISENBERG 2013b: 382 – tendency (1e) and HAEGEMAN 1991: 545). Therefore, these tokens will be decisive in correctly interpreting the difference between the two raised V(P)R-variants (cf. Table 4-9, but also Tables 5-36 and 5-37). Bare personal pronouns have already been shown to further the occurrence of the VR-variant because they are almost always scrambled (cf. Table 3-1, but also Section 4.6, EISENBERG 2013b: 382 – tendency (1d), and HAEGEMAN 1991: 546).

---

[41] The subject is normally the personal pronoun of the third person singular masculine. Aside from this, the second person singular appears in the relative clause of sentence <35>. The subjects of the relative clauses are either dropped or relative pronouns (English version) or relative particles (Spanish and Portuguese version).

[42] It is important to mention that a certain variation in the "gender" of the definite article in the ObjNPs/PPs of some dependent clauses exists (in sentence <15>, for example, between ***daut*** *Hus*, ***den*** *Hus*, ***de*** *Hus*; cf. Excursus 4.6.1). This variation is especially frequent in the US-American colony and shows a statistical correlation with the cluster variants found in these clauses. This phenomenon was nevertheless not controlled for because the cluster variant is assumed to influence the form of the definite article (possibly functioning as an indicator of the distance between the scrambled ObjNP/PP and its governing verb; cf. KAUFMANN 2008) and not vice versa.

(b) Adverbs in the dependent clause: Translations lacking the adverbs in the conditional clauses of sentences <15> *If he has to sell the house* ***now****, he will be very sorry* and <17> *If he* ***really*** *killed the man, nobody can help him* were excluded. Likewise, clauses with an adverb or a negation particle where the stimulus sentence did not feature such an element were disregarded (cf. the problem with sentence <5> above). These measures were adopted due to considerations about complexity. Lacking/Additional structural elements decrease/increase the complexity of a clause (cf. Hawkins 2004: 65) and may thus reduce/further parsing-facilitating devices like verb projection raising. This would probably further/reduce the number of the NR-variants (cf. Kaufmann 2007: 173–174).

(c) Linear sequences in the dependent clause: All clauses where the final element was not either the finite verb (NR-variants) or the non-finite verb (V(P)R-variants) were disallowed, i.e. extraposed elements such as adverbs or adverbial phrases were not permitted because of possible interactions of this movement type with verb projection raising and scrambling. Aside from this, verb clusters with the raised sequence *verb1-verb2* only interrupted by an adverb and not by an ObjNP/PP as in (4-14a) (*ObjNP-V1-adverb-V2*) and the VPR-variant with an adverb in front of the finite verb as in (4-14b) (*adverb-V1-ObjNP-V2*) were not considered either. These variants occurred in the conditional clauses of sentences <15> and <17>.

stimulus <15> Portuguese: **Se ele tiver que vender a casa agora, ele vai ficar muito triste**
English: **If he has to sell the house now, he will be very sorry**

(4-14) a. *wenn hei daut Hus mut nu verköpe dann wird her sehr trürig* (Bra-6; f/23/MLG)
if he the house must-VERB1 now-ADVERB sell-VERB2 ~~then~~ turns he very sad

b. *wann hei nü mut daut Hüs verköpe wird her- ihm daut sehr leid sene* (Men-43; m/27/MLG)
if he now-ADVERB must-VERB1 the house sell-VERB2 will ~~he-~~ him that very sorry be

The exclusion of these tokens is not unproblematic since it skews the distribution in the two affected clauses. The decision was nevertheless taken because cluster internal variation was to be kept at a minimum and because the variants' superficial shape is somewhat ambiguous. Clusters with just one adverb between the two verbal elements only occurred in the conditional clause of sentence <15> (12 tokens). The second part of In-Depth Analysis 5.1.4 will show that they are correctly analyzed as cases of the VR-variant with the ObjNP, but not the adverb scrambled out. This structural analysis, however, is counterbalanced by the linearization fact that the verbal elements are superficially separated possibly "reminding" the speakers of the VPR-variant. The rather frequent sequence in which the adverb precedes the two verbal elements and the cluster is interrupted by the ObjNP (53 tokens in both clauses; cf. the first part of In-Depth Analysis 5.1.4) was excluded in order to analyze whether the fact that the VPR-variant can superficially equal main clause syntax (with the finite verb in second position) has an effect on the linguistic behavior of the informants (cf. Chapters 6 and 7). This separation of the VPR-variant into cases where the finite verb occupies the second position, labeled V2-VPR-variant, and cases where an adverb precedes the finite verb, labeled non-V2-

VPR-variant from now on, will be important when we analyze clause linkage in Chapter 7. The non-V2-VPR-variant is also important because its existence constitutes clear evidence that the dependent clauses with the V2-VPR-variant are not structural V2-clauses. If they were, the sequence *adverb-V1-ObjNP-V2*, which also appears frequently in the complement clause of sentence <5> *Henry doesn't know that he can leave the country* (due to the infiltration of *nich* in the dependent clause; cf., e.g., (4-29a+b)) and the relative clause of sentence <34> *This is the man who is always staring at my house* (due to the adverb *always*), would not be possible. Summarizing point (c), the only sequences included in the set of clauses used for index formation are presented in (4-15) through (4-18). All tokens but (4-16) have already been presented:

NR-VARIANT I	introductory element – SubjNP – adverb – ObjNP – V2 – V1
stimulus <17>	Spanish: **Si realmente mató al hombre, nadie lo puede ayudar** English: If he really killed the man, nobody can help him
(4-15)	*wann hei wirklich den- [1.1] den Mann umgebracht haft [0.5] kann ihm keiner helpe* (Fern-14; f/17/SG>MLG-71%) if he really-ADVERB ~~the-~~ […] the man killed-VERB2 has-VERB1 […] can him nobody help
NR-VARIANT II	introductory element – SubjNP – ObjNP – adverb – V2 – V1[43]
stimulus <15>	Spanish: **Si tiene que vender la casa ahora, se va a poner muy triste** English: If he has to sell the house now, he will be very sorry
(4-16)	*wenn hei daut Hüs nü verköpe mut dann wird her trürig sene* (Men-12; m/18/SG>MLG-71%) if he the house now-ADVERB sell-VERB2 must-VERB1 ~~then~~ will he Ø sad be
V2-VPR-VARIANT	introductory element – SubjNP – V1 [– adverb] – ObjNP [– adverb] – V2
stimulus <8>	English: **Are you sure that he has repaired the chair?**
(4-17)	*weits dü nev daut hei haft den Stuhl abgefixt* (USA-2; m/15/E>MLG-∅) know you sure that he has-VERB1 the chair repaired-VERB2

[43] We cannot be sure whether the ObjNP in the sequence *ObjNP-adverb* in (4-16) has really scrambled out of VP2 or whether the supposedly unscrambled ObjNP in the sequence *adverb-ObjNP* in (4-15) is still in VP2. Token (4-15) features a sentence adverb and could be an example of what BROEKHUIS (2007: 134) calls "short" object shift. His example (51) *dat Jan <dat boek> waarschijnlijk* ***<dat boek>*** *snel/morgen <dat boek> wegbrengt* (original gloss and translation: that Jan <that book> probably <that book> quickly/tomorrow <that book> away-brings; 'that Jan will probably bring that book away quickly/tomorrow) shows three possible positions for *dat boek*. The position in bold print between the sentence adverb *waarschijnlijk* and the temporal adverb *snel* or *morgen* results from "short" object shift. Interestingly, a slightly erroneous translation of sentence <15> *If he has to sell the house now, he will be very sorry* by Bra-29 (m/25/P>MLG-43%) shows that this position also exists in MLG: *wenn hei wirklich daut Hus nu verköpe mut wird hei sehr trürig were* (gloss: if he ~~really-~~ADVERB the house.DIROBJ now-ADVERB sell must will he very sad turn). In spite of this uncertainty in terms of the precise position of the ObjNP, we are confident that the normalizing technique used with regard to scrambling guarantees validity (cf. Sections 4.3 and 4.5).

VR-VARIANT	introductory element – SubjNP [– adverb] – ObjNP [– adverb] – V1– V2[44]
stimulus <16>	Spanish: **Si él puede resolver este problema, es muy inteligente** English: If he can solve this problem, he is very smart
(4-18)	*wann hei dit Problem kann lösen dann is her sehr klüg* (Mex-9; f/16/E>MLG-86%) if he this problem can-VERB1 solve-VERB2 ~~then~~ is he very smart

With the exclusion of the variants in (4-14a+b), we can distinguish the two NR-variants and the VR-variant (cf. (4-15), (4-16), and (4-18)) – they all represent non-V2-clauses – from the V2-VPR-variant (cf. (4-17)), whose finite verb superficially appears in the same position as the finite verb of an independent main clause. The two NR-variants can only be distinguished if there is an adverb present. Without such an element, we will not be able to distinguish them. In these cases, we will refer to the NR-variants in the plural. Aside from restrictions (a), (b), and (c), there are some more points which have to be considered. These points, however, cannot be called restrictions, because most of them did not lead to the exclusion of the translations in question. Mentioning them is nevertheless important to give the reader a precise idea of the selected translations.

(d) The structural make-up of the indirect object in sentence <35>: The ObjNP *all your friends* in sentence <35> *Is this the film you want to show to all your friends?* contains the floating quantifier *all*, which does not necessarily appear before its reference-NP. In the selected tokens, *all* was required to surface contiguously to *your friends* but could appear either before or after it (cf. the intriguing exception (5-38g) in In-Depth Analysis 5.1.4). This variation was accepted because no effect on the distribution of the cluster variants could be detected. Twenty-three of these indirect objects (10.2% of 226 selected translations) were marked by a prepositional marker, especially *tu* (‘to’) and *no* (SG *nach*; English ‘to’) in the United States and *für* (‘for’) in Brazil.[45] The US-American and Brazilian Mennonites were responsible for fifteen of these 23 tokens, i.e. 17% of the indirect objects in Texas were marked with a preposition and 17.9% in Brazil. In spite of the fact that in this case, there is an influence on the preferred cluster variant (cf. Tables 4-8 and 5-35), these tokens were not excluded. The reason for this is that they represent normal options in these colonies. Taking them out would have endangered the representativity of the results. However, all tokens

[44] As for the precise position of the ObjNP, we did not differentiate between the two possible sequences of the ObjNP and the possibly extant adverb in the V(P)R-variants in the conditional clauses in sentences <15> and <17> (cf., however, Table 5-19 for some interesting details in sentence <15>). With regard to the V2-VPR-variant, the possible sequence *V1-ObjNP-adverb-V2* would just be a case of short scrambling of the ObjNP not leaving VP2. In case of the VR-variant, the ObjNP is scrambled outside the VP2 in both cases regardless of its precise landing site.

[45] A lexical influence of *für* by Portuguese *para* is probable. ZIFONUN et al. (1997: 2131), however, also mention a case-marking function of SG *für*. In any case, many researchers claim that prepositions in indirect objects are not real prepositions, but rather a homophonous marking device for inherent case. HEWSON and BUBENIK (2006: 26) write: “This fixed ordering [of modern Indo-European languages; G.K.] allows for a fifth stage: the possibility of making the adposition the head of the total phrase, which creates prepositional and postpositional phrases, a new form of syntax in which the adposition plays the role of the grammatical element, and the noun the role of the lexical element, a sort of “syntactic case”, paralleling the ancient paradigmatic cases which were composed of stem (lexeme) + inflection (grammar)” (cf. also SEILER 2003; WELKE 2005: 21–22; BAYER et al. 2001: 475; and SCHMIDT 1995: 220–221, who assumes that all indirect objects are marked by possibly phonetically empty prepositions).

featuring a prepositional object instead of an expected direct object, for example ***no*** *min Fuut kieken* ('to look **at** my foot') instead of *min Fuut sehen* ('to see my foot') in sentence <36> *The doctor who wants to see my foot is very worried* were excluded. This was differentiated, because the preposition in this case is selected by the main verb, leading to a profounder change in the structure of the clause than in the case of an indirect object.

(e) Deviations in the structural make-up of the matrix clause: In sentences <7> *Peter is convinced that he has understood the book* and <8> *Are you sure that he has repaired the chair?*, most matrix clauses feature the predicative adjectives *sure* and *convinced* (329 of the 380 selected tokens; 86.6%). Some informants, however, produced matrix clauses like *weitst du nev daut [...]* as in (4-6) ('do you really know that […]') where the dependent clause is governed by a verb and not by a predicative construction (12.7%). Three informants (0.8%) used predicative nouns instead of predicative adjectives (*Peter is der Meinung daut [...]*; 'Peter is of the opinion that […]'). This variation was accepted, because no influence on the cluster variants can be attested for these clauses. Not accepted were eight otherwise impeccable tokens that feature subject instead of object clauses (*daut is sicher daut [...]*; 'that is sure that […]'). Furthermore, twenty informants (8.2% of the 245 tokens) translated the matrix clause in sentence <8> as an affirmative statement or an echo question instead of a syntactically marked question (*du bis sicher daut [...]*; 'you are sure that […]' instead of *bis du sicher daut [...]*; 'are you sure that […]'). This difference does not have an effect on the verb cluster variant either (cf. Section 7.1.3.5 for a detailed analysis). The switch from question syntax to declarative syntax is even more frequent in <35> *Is this the film you want to show to all your friends?* Here, 100 informants (44.2% of the 226 tokens) did not start the sentence with the copula *is* but with *daut* ('that').[46] As there is again no measurable effect on the verb serialization in the dependent clause, this variation was also accepted.

(f) Minor lexical deviations of central elements in the dependent clause: Not a single problem with regard to the five clauses featuring the finite temporal auxiliary *han* exists. There was, however, some variation in the use of finite modal verbs in three clauses. Some informants used *möge(n)* instead of expected *wolle(n)* (both 'want') in sentences <35> and <36> (3.3% of 491 selected tokens) or *solle(n)* ('shall') instead of expected *mute(n)* ('must') in sentence <15> (17.5% of 182 selected tokens). This variation was accepted, because again, it did not have any effect on the verb clusters.

With regard to the introducing element, the situation is somewhat more complex. In the complement clauses of sentences <7> and <8>, the unmarked element was *daut* ('that'; 99.7% of the 380 tokens). Only one other element was accepted, namely SG *daß*, which occurred once. The frequently occurring *as* was not allowed. MLG *as* is formally connected to English *as*, but it shares its semantics with English *if*. Fittingly, *as* was only found after negative or

[46] The high percentage in sentence <35> is definitely a priming effect, because all non-interrogative matrix clauses come from Spanish- and Portuguese-based translations. The stimulus versions are ***esta*** *es la película [...]* and ***esse*** *é o filme [...]*, respectively showing a demonstrative pronoun in the subject function in first position. English-based translations used the stimulus *is* ***this*** *the film [...]* showing the expected sequence of MLG.

interrogative matrix clauses (cf. Footnote 204 in Chapter 7). Likewise, the tokens with the linguistically interesting variants *waut* and *baut* (cf. Excursus 7.2.2.1 and Section 8.2.3) and *wann* in sentence <1> (cf. Sections 5.1.3.1 and 7.2.3.3) were excluded because of the homophonous relative particle *waut* and the introducing element *wann* in conditional clauses. In sentences <15>, <16>, <17>, and <18>, the accepted introducing elements were *wann*, its phonetic (SG) variant *wenn* (both 'if'; together 99.4% of the 872 selected tokens), and the English borrowing *if* (0.6%).

The biggest problem with regard to the introducing elements was posed by the relative clauses in sentences <35>, <36>, and <38>. There are two principal ways to mark relativity in MLG (cf. KAUFMANN 2011: 197–199), the relative particle *waut* (598 tokens, i.e. 91.7% of the 652 selected tokens;[47] 10 times *waut da*, i.e. 1.5%) and the relative pronoun *de(r)*/*die*/*daut* (38 tokens, i.e. 5.8%; 6 times *de(r)*/*die*/*daut waut*, i.e. 0.9%). We are aware of the fact that relative particles like *waut* occupy a different structural position (C^0) than relative pronouns (Spec/CP) (cf., e.g., STERNEFELD 2008: 364–365), but the relative pronoun *de(r)*/*die*/*daut* occurred too often in the two Paraguayan colonies (12.4% of the 89 selected tokens in Menno; 21.4% of the 89 tokens in Fernheim) to simply drop them. The data set would have lost its representativity. In any case, there were no significant differences detectable between these two relative markers. There is a significant correlation between the sixteen tokens of the variants *waut da* and *de(r)*/*die*/*daut waut* and the cluster variants though. In spite of this, these tokens were kept in order to maintain representativity because eleven of them originated in just one colony, the Mexican colony (5.4% of the 205 tokens in this colony). Unlike tokens with *waut da* and *de(r)*/*die*/*daut waut*, the relative marker *daut* was only accepted as a relative marker if it referred to a neuter noun. If *daut* appeared as a relative particle (cf. Excursus 7.2.2.1), the respective token was not included, because – as above – the relative clause was then considered a possible priming target for the characteristics of a complement clause.

(g) Lexical deviations of non-central elements in the dependent clause: The fact that the structural make-up of all selected translations is almost completely homogeneous does not mean that all translations are identical. The clearest case for such differences is the informants' lexical choice. For example, there is more than one possible translation for items like *repair* in sentence <8>, *now* in sentence <15>, *solve* in sentence <16>, or *cause* in sentence <38>. Obviously, in situations of intense language contact, this is no surprise because the speakers can choose words from more than one language. Because of this naturally occurring variation even some lexically erroneous translations were accepted, for example, when an informant used *Coa* ('car') for *Stuhl* ('chair') or *gekauft* ('bought') for *repariert* ('repaired') in sentence <8>.[48] Similarly, some translations where the informant

[47] Interestingly, SIEMENS (2012: 155) claims that *waut* as a relative marker is not as frequent in MLG as the Upper German relative particle *wo* (etymologically 'where'). This is definitely not the case with regard to the MLG varieties analyzed here. For the relative marker *woont* (10 tokens in the MLG data set), which was not included in the selected translations, we can confirm SIEMENS' claim of rarity.

[48] We hope that differences in the number of syllables used in the words or the sequence of stressed and unstressed syllables do not have (too strong) an influence on the informant's choice of a particular cluster

used a different subject pronoun than the one in the stimulus sentence (for example, second person singular instead of third person singular) were accepted in spite of AUER's (1998: 296) observation that the first and the second person further the appearance of dependent main clauses (cf. Sections 7.1.3.5 and 7.3 for the analysis of this question).

(h) Correlative/resumptive elements in the matrix clause: There is one more problematic phenomenon we have to discuss, namely the presence of correlative/resumptive elements in the matrix clause of relative, complement, and conditional clauses. As the appearance of such elements has an effect on the informants' choice of a particular cluster variant in the dependent clause (cf. Table 4-1 and especially Sections 7.2 and 7.3), we would have liked to exclude all tokens with such an element. This, however, would have reduced the number of usable tokens dramatically. Because of this, a way to neutralize this effect had to be found, not only in order to maintain a sufficient number of tokens, but also in order to pursue one of the central research questions, namely the precise gauging of this effect. At first glance, this may sound like a circular procedure – the effect of a correlative element in the matrix clause on the cluster variant in the dependent clause has to be neutralized in the calculation of the indexes in order to use these indexes for measuring this effect, but the method used should guarantee that no such circularity ensues.

The first correlative element *daut* ('that'; and its prepositional variant *davon* ('from that')) is found in the matrix clauses of sentences <7> and <8>. As this correlate was rather rare, tokens featuring it were simply excluded (cf. Section 7.2 for the reason for the scarce appearance in these 2 sentences). The second correlative element is the frequent anadeictic resumptive pronoun *de(r)* ('he') as in example (4-13) – in some few cases also non-anadeictic *her* ('he') as in example (4-12) – in stimulus sentences <36> and <38>. These elements serve as a resumptive device after relative clauses (the resulting construction is sometimes called prolepsis; cf. Table 8-4). They cannot appear in sentence <35> since the relative clause is sentence-final. Fortunately, the presence of these resumptive pronouns does not exhibit any influence on the verb cluster of the relative clause and does, therefore, not pose a problem.[49]

Unlike in this case, the third correlative element, resumptive *dann* ('then') in the matrix clause of conditional sentence compounds (cf. (4-19b)), shows a marked effect on verb cluster variants in the preposed conditional clause (cf. Table 4-1). The majority of the 873 conditional clauses entering the process of index formation follow this pattern (453 tokens, i.e. 51.9%; variants of *dann* are included here, namely 24 tokens with *da* and 2 tokens with *na*). Integrated conditional clauses with matrix clauses that begin with a finite verb occur in 40.2% of the cases (cf. (4-19a)). In these 351 translations, there are eleven tokens which

variant. We disregarded such differences due to practical (necessary number of selected translations) and theoretical considerations (hardly any clear evidence that such an influence exists; but cf., e.g., EBERT 1981: 206–207; SCHMID & VOGEL 2004; AXEL 2007: 85; and ROTHMAYR 2013).

[49] The fact that this additional element does not have an effect on the verb cluster does not come as a surprise because the resumptive element after relative clauses is not a correlate for the relative clause itself, but for the whole subject. This means that its "binding" characteristics are: [[*The doctor*]$_{1/2/\dots/n}$ [*who wants to see my foot*]$_{\text{restrictive}}$]$_1$ ***he***$_1$ *is very worried*. This is different in conditional clauses: [*If he can solve this problem*]$_1$ ***then***$_1$ *he is very smart* or complement clauses: *Do you know* ***it***$_1$ [*that he has repaired the chair*]$_1$.

additionally feature a resumptive element in the midfield of the matrix clause (*daut*; ‘that’; cf. (4-19e)). A third, less frequent variant is represented by matrix clauses starting with a nominal entity (disintegrated sentence compounds). There are 54 tokens which start with a subject or an object pronoun (cf. (4-19c+d+f+g)). The most frequent type of this variant is (4-19c). Tokens starting with an object pronoun always feature the resumptive element *daut* in the midfield of the matrix clause (cf. (4-19f)). Such a disintegrated type with a resumptive element also exists with subject pronouns in the first position of the matrix clause (cf. (4-19g); 4 tokens). *Daut* can also be at the beginning of the matrix clause as in (4-19d) (13 tokens). A final translation type is represented by (4-19h). These two tokens combine the characteristics of (4-19b) and (4-19c), i.e. the matrix clause starts with *dann* and is directly followed by the SubjNP. If we include resumptive elements in the midfield of the matrix clause, we can thus distinguish eight types of conditional sentence compounds.

stimulus <16> Spanish: **Si él puede resolver este problema, es muy inteligente**
English: If he can solve this problem, he is very smart

[conditional clause] V_{finit} SubjNP […]
(4-19) a. *wann hei kann dit Problem lösen is her sehr klüg* (Mex-60; f/42/MLG)
if he can this problem solve is he very smart

[conditional clause] dann$_{resumptive}$ V_{finit} SubjNP […]
b. *wann dei daut [0.7] Problem kann lösen dann is der sehr klüg* (Mex-61; m/31/S>MLG-64%)
if he the […] problem can solve ~~then~~ is he very smart

[conditional clause] SubjNP V_{finit} […]
c. *wann der dit trouble kann lösen der is sehr klüg* (Mex-41; m/37/MLG)
if he this trouble can solve he is very smart

[conditional clause] SubjNP=daut$_{resumptive}$ V_{finit} […]
d. *wann dü di:t Problem lösen kos daut’s: [0.5] sehr gut* (Mex-33; m/55/MLG)
if you this problem solve can that-is […] very good

stimulus <15> English: **If he has to sell the house now, he will be very sorry**

[conditional clause] V_{finit} […] SubjNP=daut$_{resumptive}$ […]
e. *wann her daut Hüs nü mut verköpen wird ihm daut sehr leid sein*
(USA-61; m/30/E>MLG-64%)
if he the house now must sell will him that very sorry be

[conditional clause] ObjNP V_{finit} SubjNP=daut$_{resumptive}$ […]
f. *wann hei daut Hüs nü betohlen soll [0.4] ihm würd daut trürig meaken*
(Mex-40; f/33/SG>MLG-86%)
if he the house now pay shall […] him would that sad make

[conditional clause] SubjNP V_{finit} ObjNP=daut$_{resumptive}$ […]
g. *wann hei sin Ha- Hüs nü verköpe mut her würd daut sehr [äh] bereue* (Men-47; f/60/MLG)
if he his ~~hou-~~ house now sell must he would it much [eh] repent

stimulus <17> English: **If he really killed the man, nobody can help him**

[conditional clause] $dann_{resumptive}$ SubjNP V_{finit} […]

(4-19) h. *wann der den Mann wirklich: todgemeakt haft dann: keiner kann den helpen* (USA-37; f/43/MLG)

if he the man really killed has ~~then~~ nobody can him.ACC help

This confusing array of variants poses serious problems for the calculation of the basic distribution and thus for index formation. Therefore, it was decided that the basic distribution would be calculated by means of the two most frequent variants, i.e. (4-19a+b). Table 4-1 shows the distribution of the selected variants and the verb clusters in the conditional clause of sentence <16>. A total of 237 of the 251 tokens (94.4%) follow the matrix clause patterns found in (4-19a+b).

Table 4-1: Distribution between three cluster variants in the conditional clause of sentence <16> separated by the presence or absence of the resumptive element *dann* in the matrix clause

	-dann (4-19a)	***+dann*** (4-19b)	**Total**
n (tokens)	92	145	237
NR-variants	70	69	139
Obj-V1-V2	76.1%	47.6%	58.6%
χ^2 (2, n=237) = 21.8, p=0*** / Cramer's V: 0.3 / 0 cells with less than 5 expected tokens			
V2-VPR-variant	10	18	28
V1-Obj-V2	10.9%	12.4%	11.8%
VR-variant	12	58	70
Obj-V1-V2	13%	40%	29.5%

The distribution, which is comparable to that of the other three conditional sentence compounds, is highly significant and shows a low-to-medium level of association. The presence of *dann* definitely promotes the occurrence of the VR-variant. However, this presence also depends on the role SG plays in the colonies (cf. Table 7-41), i.e. it is used more frequently in the colonies with little contact to SG. Therefore, the calculation in Table 4-1 is not balanced. If we exclude the SG-friendly and thus *dann*-unfriendly Paraguayan tokens, the distribution remains highly significant and shows the same characteristics (χ^2 (2, n=168) = 12, p=0.002** / Cramer's V: 0.27 / 0 cells with less than 5 expected tokens).

Due to this result, the conditional clauses have to be split up into two categories for index formation, one for conditional sentence compounds with *dann* in the matrix clause and one for conditional sentence compounds without *dann*. With this measure, we can control for the influence of the correlative element. The syntactic behavior of informants who use *dann* will be judged according to the basic distribution of sentences with *dann*; the syntactic behavior of informants who do not use *dann* will be judged according to the basic distribution of sentences without *dann*. By separating these types of conditional sentence compounds, we will be able to gauge the impact of the informants' general syntactic behavior on resumptive elements in Section 7.3 without creating an artificial relationship.

The question now arises whether the tokens of the six infrequent variants should be compared with the expected shares of conditional clauses with or without resumptive elements. As the impact of resumptive elements is so strong, the decision was made on the base of the presence or absence of such an element, regardless of its precise position. This means that tokens represented by (4-19c) will go with the basic distribution of the variant (4-19a), while tokens represented by (4-19d-h) will be grouped with the variant (4-19b). In light of some of the results found in Section 7.3, one may criticize this decision, but there are also arguments that support it. For example, it is possible to show that resumptive elements in the midfield of the matrix clause also influence the verb cluster of the conditional clause (cf. Table 7-49). In any case, certain statistical necessities made it necessary to implement a change in categorization in Section 7.3 (cf. Footnote 281 there). This change, however, affects only a few tokens. Nevertheless, one has to reckon with a slight skewing effect with regard to tokens with disintegrated conditional clauses.

So far, the only possibly real problems in the 1,905 selected clauses have been found in point (d), the prepositional marking of indirect objects in sentence <35> (23 tokens), in point (f), the minor deviations of some introducing elements (16 tokens; relative markers *waut da* and *der waut*), and in point (h), certain resumptive or disintegrated conditional sentence compounds (maximum 84 tokens). All other points discussed either deal with restrictions that were strictly adhered to (points (a), (b), and (c)) or with types of variation for which an influence of the variable phenomenon on the shape of the verb cluster could not be detected. This was the variation of definite articles in the United States (cf. Footnote 42 in this chapter), the position of *all(e)* in the relative clause of sentence <35> in point (d), the shape of the matrix clause in sentences <7> and <8> in point (e), the variation of modal verbs in point (f), and the variation of non-central elements in the dependent clauses in point (g). This means that a maximum of 123 tokens could qualify as risky (6.5% of the 1,905 clauses). In spite of this relatively low share, we did not exclude these tokens because they were responsible for a substantial number of tokens in one or several colonies (disintegrated conditional clauses in the USA; prepositionally marked indirect objects in the USA and Brazil; complex relative markers in Mexico). Regardless of whether these tokens are excluded or not, the basic data set will be slightly skewed either way; either with regard to the influence of the phenomena in question or with regard to representativity. In order to keep as many tokens as possible, we chose the first rather than the second risk.

The procedure used to form the indexes for verb projection raising and scrambling works in the following way: As each of the nine chosen clauses exhibits a robust number of usable translations, we picked out the translations of thirty informants in each colony (excluding the underrepresented Bolivian colony). We only had to reduce this number to twelve informants in each colony for the conditional clauses because of the necessary splitting of the conditional clauses into sentence compounds that feature matrix clauses with a resumptive element and those without such an element. In this way, a balanced basic distribution could be formed.[50] In order to further avoid possible sociolinguistic skewing, the thirty/twelve tokens were equally distributed between six age-gender-subgroups. In each cell the tokens of five/two informants were randomly chosen if more than five/two tokens were available. In this manner, the basic distribution for each clause approaches a stratified random sample and is ideally made up of 150/sixty tokens from 150/sixty informants (out of a possible total of 305 informants excluding the 8 Bolivian informants). The distribution of these tokens is assumed to reflect the basic syntactic characteristics of the clause in question.

Using 150 and sixty tokens, respectively, for the basic distribution of the nine clauses, we needed 1,230 of the 1,905 selected translations. Unfortunately, the special requirements set (30/12 informants per colony, 5/2 randomly chosen informants per age-gender-subgroup in each colony) led to a shortage of 168 of the 1,230 necessary tokens (13.7%). The missing data were the consequence of the uneven distribution of the informants between the colonies and between the age-gender-subgroups. Aside from this, the resumptive element *dann* is concentrated in the North American colonies, making it difficult to find enough translations without *dann* there or enough translations with *dann* in the Paraguayan colonies.

To fill these *lacunae*, it was decided to use the 843 translations so far not used. However, because of the uneven distribution of the hitherto unused tokens the only way to proceed was to combine the colonies in the USA and in Mexico on the one hand and the Paraguayan colonies of Menno and Fernheim on the other hand. This procedure should not be too problematic since the (linguistic) history of the colonies (cf. Section 2.1) and their actual syntactic behavior is comparable (cf. Table 4-18). Brazil, as a colony with an intermediate level of SG influence and a rather high number of informants, could be dealt with on its own. In this way, 122 of the missing 168 tokens (72.6%) could be added. Granted, filling the *lacunae* in this way, we did skew the data with regard to the age-gender-subgroups, because we now have different numbers of tokens for them. The extreme cases are older women in Menno, who contribute only 25 tokens to all clauses, and middle-aged men in Mexico, who contribute 53 tokens to all clauses (ideally, every age-gender-subgroup should contribute 41 tokens for the 9 clauses (5 non-conditional clauses x 5 informants + 4 conditional clauses x 2 variants (∅/*dann*) x 2 informants)). A possible justification for this procedure is that the differences between the colonies are in general bigger than the differences between the age-gender-subgroups within one colony, i.e. adding real data from the “wrong” informants is better than accepting different degrees of missing data in different colonies. Likewise, we had to skew the data with regard to colonies: Mexico, for example, furnishes a total of 280 tokens (225 balanced tokens; 55 additional tokens), while the USA only furnish 200 tokens (197 balanced tokens; 3 additional tokens). The justification for this procedure is that although the five colonies do not show a balanced contribution, the three colony types do (USA and Mexico / Brazil / Menno and Fernheim).

[50] In this respect, the present method does not heed one of the suggestions in KAUFMANN (2007: 186 – Footnote 29) mentioned above. The basic distribution is not colony-specific.

Even after adding these tokens, there are still 46 tokens missing. These tokens could not be filled with the hitherto unused tokens, because there were no more tokens in the relevant colony type and/or for the relevant clause. To fill these *lacunae*, we simply counted some tokens twice. These tokens – twelve for the North American colonies; 34 for the Paraguayan colonies – were randomly chosen among the 1,184 balanced and additional tokens (1,062+122). Table 4-2 summarizes the source of the tokens for the basic distribution:

Table 4-2: Source of the tokens for the sociolinguistically balanced basic distribution for nine dependent clauses with two verbal elements in five Mennonite colonies (the required number of tokens is 150 and 60 per clause, respectively; conditional clauses separated by the presence or absence of resumptive elements)

	randomly balanced	**randomly non-balanced**	**randomly doubled**
all clauses (n=1230)	1062 86.3%	122 9.9%	46 3.7%
<7> complement clause + *han* (no correlate)	106 (70.7%)	22 (14.7%)	22 (14.7%)
<8> complement clause + *han* (no correlate)	147 (98%)	3 (2%)	0
<15> conditional clause + modal verb	49 (81.7%)	11 (18.3%)	0
<16> conditional clause + modal verb	48 (80%)	12 (20%)	0
<17> conditional clause + *han*	40 (66.7%)	10 (16.7%)	10 (16.7%)
<18> conditional clause + *han*	55 (91.7%)	5 (8.3%)	0
<15> conditional clause + modal verb + *dann*	49 (81.7%)	6 (10%)	5 (8.3%)
<16> conditional clause + modal verb + *dann*	56 (93.3%)	4 (6.7%)	0
<17> conditional clause + *han* + *dann*	46 (76.7%)	12 (20%)	2 (3.3%)
<18> conditional clause + *han* + *dann*	54 (90%)	6 (10%)	0
<35> relative clause + modal verb	144 (96%)	6 (4%)	0
<36> relative clause + modal verb	144 (96%)	6 (4%)	0
<38> relative clause + *han*	124 (82.7%)	19 (12.7%)	7 (4.7%)

The detailed discussion of all possible linguistic and sociolinguistic threats to the reliability of the basic distribution might leave the reader with the impression that this reliability is not very high. Nothing could be further from the truth however. 1.062 tokens (86.3% of the necessary 1.230 tokens) were randomly chosen according to all linguistic and sociolinguistic criteria. In order to fill the lacunae of the basic distribution, 122 tokens (9.9%) were randomly added from the hitherto unused tokens and 46 tokens (3.7%) were randomly doubled. The share of non-ideal, but nevertheless carefully chosen tokens for the basic distribution therefore adds up to only 13.7% (168 tokens). In spite of the fact that we have to add the problem of an unwanted possible influence of a maximum of 123 tokens due to structural variations (6.5% of the total of 1,905 selected translations), the whole procedure can be qualified as reliable and valid.

4.2 The index for verb projection raising

We are now in a position to gauge the syntactic behavior of the Mennonite informants starting with the index for verb projection raising. Table 4-3 indicates the share of the NR-variants in the nine selected clauses (column *NR-variants*) and the share of the two raised V(P)R-variants taken together (column *V(P)R-variants*).

Table 4-3: Balanced basic distribution of the unraised and raised cluster variants in nine dependent clauses with two verbal elements (conditional clauses separated by the presence or absence of resumptive elements)

	n	NR-variants	V(P)R-variants
<7> complement clause + *han*	150	122 81.3%	28 18.7%
<8> complement clause + *han*	150	98 65.3%	52 34.7%
<15> conditional clause + modal verb	60	41 68.3%	19 31.7%
<16> conditional clause + modal verb	60	45 75%	15 25%
<17> conditional clause + *han*	60	54 90%	6 10%
<18> conditional clause + *han*	60	54 90%	6 10%
<15> conditional clause + modal verb + *dann*	60	33 55%	27 45%
<16> conditional clause + modal verb + *dann*	60	34 56.7%	26 43.3%
<17> conditional clause + *han* + *dann*	60	46 76.7%	14 23.3%
<18> conditional clause + *han* + *dann*	60	54 90%	6 10%
<35> relative clause + modal verb	150	84 56%	66 44%
<36> relative clause + modal verb	150	79 52.7%	71 47.3%
<38> relative clause + *han*	150	126 84%	24 16%

The concrete behavior of every informant with regard to every clause can be calculated with the figures from Table 4-3. Take for example stimulus sentence <36> *The doctor who wants to see my foot is very worried*. For this relative clause, the basic distribution for the selected 150 tokens shows 52.7% for the NR-variants and 47.3% for verb projection raising (15.3% for the V2-VPR-variant and 32% for the VR-variant). If an informant translates this clause with one of the V(P)R-variants, he gains a positive value of +0.527 (observed value minus expected value, i.e. 1-0.473). If he translates the clause with a NR-variant, he gains a negative value of -0.473 (0-0.473).[51] Now take stimulus sentence <7> *Peter is convinced that he has*

[51] The decision to use the simple difference between observed and expected value is far from trivial, since when looking at possible results for a couple of clauses, one realizes that a 20%-difference from an expected value of 10% is to be judged quite differently than a 20%-difference from an expected value of 70%. From a linguistic point of view, the first example indicates a speaker who is far ahead with regard to a linguistic change in its initial stages – he "uses" the variant in question three times as often as the average informant –, whereas the second speaker is ahead of a well-established change in its final stages "using" it only 1.28 times as often as the average informant. One could, therefore, think that using fractions instead of differences would be a more adequate method. Fractions are tricky, though, when the expected value is close to 0% or 100%. In these cases, they quickly become distortingly big or small. Another possibility would be to weight differences according to

understood the book. The basic distribution for this complement clause shows 81.3% for the NR-variants and 18.7% for the V(P)R-variants (14.7% for the V2-VPR-variant and 4% for the VR-variant). If an informant translates this clause with raised variants, he gains a high raising value of +0.813 (1-0.187), because the general probability for verb projection raising in this clause is low. If he does not apply verb projection raising, he gains a value of -0.187. With this approach, the structural difference between the two clauses is taken into account.

Having explained the procedure of allotting a value for verb projection raising to a single token, we still have to explain how the values were allotted to the informants. This procedure will be illustrated by means of three informants with five usable translations each. Informant Mex-106 did not translate sentences <7>, <17>, <18>, and <38> (in a usable way); for informant Mex-51, the same is true for sentences <15>, <17>, <35>, and <38>; and for informant Men-36, this applies to sentences <7>, <8>, <35>, and <38>. This means that we are dealing with three speakers with three different sets of five clauses each. The average expected values, the average observed values, and the resulting index values of the informants are presented in Table 4-4:

Table 4-4: Calculation examples for the index of verb projection raising for three informants with five tokens

	expected average share of V(P)R-variants	**observed tokens with the V(P)R-variants**	**observed average share of V(P)R-variants**	**raising index**
Mex-106 (m/42/MLG+S)	42.9%	4	80%	**+0.371**
Mex-51 (m/22/MLG)	30.8%	2	40%	**+0.092**
Men-36 (f/18/MLG)	24.8%	0	0%	**-0.248**

There is a big difference in the expected shares of V(P)R-variants between Mex-106 and Men-36. The expected probability for the two raised variants for the clauses translated by the Mexican informant is 18.1% higher (42.9% - 24.8%) than the probability for the clauses translated by the informant from Menno. This difference is due to the fact that the informant from Menno did not translate two clauses with a high probability for verb projection raising, namely sentences <8> and <35> (cf. Table 4-3), thus lowering the average expectation for verb projection raising. The Mexican informant, on the other hand, did not translate two sentences <17> and <18> with a low probability for verb projection raising (regardless of the question whether the matrix clauses contain a resumptive element or not), thus increasing the expected value for raising. Aside from this, the Mexican informant uses the resumptive element *dann* in the other two conditional sentence compounds, thus again exhibiting higher

the expected value. If the expected value was close to 0% or to 100% one could introduce a factor in order to represent the well-known S-curve in linguistic change. This factor should, for example, increase the value for a linguistically progressive informant during the initial stages of a change. Due to the fact that in the basic distribution, the maximum range of expected values is only 37.3% (from 10% of raised variants in the conditional clauses of sentences <17> and <18> without resumptive elements to 47.3% in the relative clause of sentence <36>), we opted for simple, unweighted differences. For the scrambling index, however, the maximum range is 78.6% (cf. Tables 4-7 and 4-12). In spite of this much larger range, the same procedure was applied.

expected raising values, while the informant from Menno does not use *dann* one single time in the four conditional sentence compounds she translates.

In order to calculate the value for the raising index, we simply have to subtract the expected average value from the observed average value, i.e. the share of V(P)R-variants the informants really produced in the five clauses. The informant from Menno did not produce a single raised variant and, therefore, ends up with a negative value of -0.248 (0% - 24.8%). The first Mexican informant translates four of the five clauses with a V(P)R-variant and gains a positive value of +0.371 (80% - 42.9%), while the second Mexican informant has an intermediate value of +0.092 (40% - 30.8%). One can clearly see the normalizing effect of the basic distribution. All informants are evaluated according to the clauses they actually translated. One more point to discuss in this section is the average number of translations available for each informant. Table 4-5 presents this information:

Table 4-5: Distribution of the number of selected translations of nine dependent clauses with two verbal elements among the informants in six Mennonite colonies (clauses#/informant=number of clauses per informant after the exclusion of the informants with less than 3 usable translations)

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (informants)	67	103	8	56	42	37	313
n (clauses)	363	574	53	389	262	264	1905
clauses/informant	5.4	5.6	6.6	6.9	6.2	7.1	6.1
0 clause	0	0	0	0	1	0	1
1 clause	0	0	0	0	1	0	1
2 clauses	2	7	0	0	1	0	10
3 clauses	8	3	0	1	0	0	12
4 clauses	8	11	0	2	5	2	28
5 clauses	13	30	2	4	5	5	59
6 clauses	19	20	2	13	4	4	62
7 clauses	13	21	2	16	14	7	73
8 clauses	3	9	1	12	7	13	45
9 clauses	1	2	1	8	4	6	22
clauses#/informant	5.5	5.8	6.6	6.9	6.6	7.1	6.3

The average for all 313 informants in Table 4-5 is 6.1 out of nine clauses, ranging from 5.4 in the USA to 7.1 in Fernheim. The mode for all colonies is seven clauses (shaded cells), i.e. for 23.3% of the informants, seven of the nine clauses can be used to evaluate their behavior with regard to raising. For 141 informants (45%), we have seven or more clauses and for 261 informants (83.4%), we have at least five clauses. The important question is where to set the cutoff point, i.e. which number of clauses do we consider necessary to reliably characterize the informant's raising behavior. As we are using a rather refined way of gauging the raising behavior, a minimum number of three clauses per informant was considered sufficient. Setting the cutoff point at this level, we lose twelve informants. All further analyses using this index are, therefore, based on 301 instead of 313 informants. The average number of clauses used for the index rises from 6.1 to 6.3 clauses per informant after excluding informants with fewer than three selected translations. They now range from 5.5 clauses in the USA to 7.1 clauses in Fernheim. The general idea of the normalization procedure can thus be summarized in the following way:

Summarizing Box 4-1: The gist of index formation

By comparing the informants' observable use of specific cluster variants in a robust number of clauses with the average probability of the occurrence of these cluster variants in these clauses, one obtains a normalized and reliable measure for the informants' preference or lack of preference for verb projection raising (and further below for scrambling) regardless of the linguistic characteristics of the clauses actually translated.

Before shifting our attention to the scrambling index, it is necessary to characterize the type of variable represented by the raising and the scrambling index. Obviously, values like the ones presented in Table 4-4 do not represent a true interval scale variable, i.e. not all values between the two extreme points of -0.454 and +0.88 can result.[52] The raising scale, however, constitutes a quasi-interval scale variable, because the number of possible values is very large indeed. With regard to informants with five usable translations, the number of possible expected values can be calculated with the formula for the binominal coefficient, i.e. *n! / (k! * (n-k)!)* with n=9 and k=5. This gives us 126 possible values for an unordered subset of five out of nine clauses. In order to obtain the possible values for the raising index, we still have to multiply these values by six, as there can be six different values for the observed number of the V(P)R-variants (no raised variant through 5 raised variants). This means that the subset of five clauses already gives us 756 possible values for the raising index. Without going into more detail, we end up with a total of 2,689 different possible values for unordered sets from three through nine clauses out of a total of nine clauses; a truly large number which should not be too far away from a true interval scale.

4.3 The index for scrambling

4.3.1 Presentation of the phenomenon

The second index we need in order to characterize the informants' syntactic behavior is the scrambling index (cf. also the discussion in KAUFMANN 2008: 105–117). Unfortunately, the formation of this index is more complex than the formation of the raising index since the categorization of the NR-variants turned out to be a tricky issue both with regard to methodological and with regard to theoretical considerations. DEN BESTEN and BROEKHUIS' (1989; quoted and translated in HAEGEMAN 1994: 512) comment does not cover the NR-

[52] The highest possible value for raising in the MLG data set is +0.88 (3 raised tokens in the conditional clause of sentence <17> without *dann* ('then'), in the conditional clause of sentence <18> with or without *dann*, and the relative clause of sentence <38>; cf. Table 4.3). The lowest possible value is -0.454 (3 unraised tokens in the conditional clause of sentence <15> with *dann* and in the relative clauses of sentences <35> and <36>). The highest existing value was calculated for Mex-101, an older man with five usable translations; it is +0.751. The lowest existing value was calculated for Men-19, an older woman with five usable translations; it is -0.379.

variants. They argued: "[…] VR is interpreted as the limiting case of VPR, an instantiation of VPR where all nonverbal material has been scrambled out of the adjoined VP," i.e., we can distinguish scrambling in the two raised cluster variants, but not in the two unraised cluster variants. Therefore, two different approaches to scrambling have to be applied. The first one is based on the two raised variants (cf. Section 4.3.2), while the second one uses translations with unraised cluster variants featuring both an ObjNP and an adverb (cf. Section 4.3.3). We are aware of the fact that using two methods for measuring the same phenomenon is a problematic undertaking, but we will provide several analyses throughout this study showing that both approaches are valid measures for one and the same phenomenon (cf. Section 4.5, Excursus 5.1.2 and 5.2). We will call this phenomenon scrambling in a rather broad sense. This decision leads us to a theoretical problem. On the one hand, scrambling is, indeed, a multifaceted topic for which it is hard to find any uncontroversial claim; on the other hand, there do not seem to be any generally accepted boundaries between phenomena like scrambling, object shift, and pronoun fronting. In this section, we will, therefore, discuss some theoretical approaches, but will do so without going into technical details. The core of the section will be reserved for the analysis of empirical data dealing with movements of MLG ObjNPs/PPs. After all, if we want to create a scrambling index for speakers of MLG, we first have to demonstrate that scrambling in this variety exists at all.

Long gone are the days in which HAEGEMAN's (1991: 543) statement about scrambling – "[w]hen an object NP is separated from its case assigning verb by intervening material we consider this to be a derived order" – covered all cases in which the ObjNP surfaced in a position not adjacent to its governing verb. For HAEGEMAN (1991: 543–544), NPs, PPs, and pronouns in Dutch could scramble, a view shared by DE HOOP and KOSMEIJER (1995). Nowadays, scrambling is frequently judged to be a more restricted movement type, both with regard to the moved constituent and with regard to intervening material. In order to illustrate some of these differentiations, we will garnish our discussion with MLG data. The classical case of scrambling is best represented by clauses containing a bi-transitive verb such as the one in stimulus sentence <46> *I should have shown the little dog to the kids*. Unfortunately, this sentence cannot be used for the scrambling index because there were too many different ways in which it was translated. This made it impossible to create a balanced basic distribution of 150 tokens. In spite of this, some translations constitute prototypical cases of scrambling (cf. (4-20b+d)). This is – as already mentioned – important because we can thus show that scrambling in MLG exists in a narrow sense, a necessary precondition for interpreting non-prototypical cases like the VR-variant as the consequence of scrambling in a broader sense.

stimulus <46> Portuguese: **Eu deveria ter mostrado o cachorrinho para as crianças**
English: I should have shown the little dog to the kids

(4-20) a. *ik hat [0.5] de Kinder daut Hundje wiese sollt* (Bra-3; f/52/MLG)
I had-VERB1 […] the children-INDOBJ the doggy-DIROBJ show-VERB3 should-VERB2

(4-20) b. *ik hat daut Hundje [0.5] de Kinder wiese sollt* (Bra-51; m/33/MLG+P)
I had-VERB1 the doggy-DIROBJ […] the children-INDOBJ show-VERB3 should-VERB2

c. *ik hat sollt de Kinder det Hundje wiese* (Bra-38; f/42/MLG)
I had-VERB1 should-VERB2 the children-INDOBJ the doggy-DIROBJ show-VERB3

d. *ik hat sollt daut Hundje de Kinder wiese* (Bra-19; f/50/MLG)
I had-VERB1 should-VERB2 the doggy-DIROBJ the children-INDOBJ show-VERB3

Translations (4-20a+b) show an unraised, left-branching configuration with the sequence *ObjNP-ObjNP-V3-V2* in the clause-final cluster, while translations (4-20c+d) show a raised, right-branching configuration with the sequence *V2-ObjNP-ObjNP-V3*. All ObjNPs in these four tokens surface adjacent to their governing verb. In HAIDER's (2010: 152 – property (vii)) view, the relevant fact for scrambling is the internal ordering of the two adjacent ObjNPs[53] and not, for example, possible non-adjacency to the governing verb as in the VR-variant or in example (4-22d). In (4-20a+c) (7 and 50 tokens, respectively), the indirect ObjNP *de Kinder* ('to the children') precedes the direct ObjNP *daut*/*det Hundje* ('the doggy'), while in (4-20b+d) (15 and 48 tokens, respectively), the precedence of the direct ObjNP is assumed to be the consequence of scrambling. EISENBERG (2013b: 384–386) regards both sequences as normal, i.e. as possible without the necessity of placing focal stress on one of the ObjNPs. His examples (5)a and 5(b) on page 383 are quoted here as (4-21a+b) (glosses and translations by G.K.):

(4-21) a. *Emma hat dem Studenten das Auto geliehen*
Emma has the.DAT student.DAT the.ACC car borrowed
'Emma has lent the car to the student'

b. *Emma hat das Auto dem Studenten geliehen*
Emma has the.ACC car the.DAT student.DAT borrowed

Although both sequences are considered normal, EISENBERG (2013b: 385) considers the sequence of (4-21a) unmarked since both ObjNPs can receive rhematic stress only in this sequence. Putting rhematic stress on the direct object in (4-21b) makes the sentence ungrammatical. It is because of this that most linguists regard (4-21b) and (4-20b+d) as derived realizations of the basic sequences (4-21a) and (4-20a+c). The movement of the direct ObjNP over the indirect ObjNP thus constitutes the classical case of scrambling. HAIDER (2010: 130 and 157–158), for example, rejects cases like object shift in Scandinavian languages, pronoun fronting, or the difference in the sequences *ObjNP-adverb* and *adverb-ObjNP* as scrambling. He (2010: 184–185) writes:

> […] scrambling is used to refer to a wide range of word order variation phenomena (typical OV scrambling with the full range of permutation of arguments; argument-adverb order as in Dutch; string vacuous movement for evacuating the VP; object shift; and so on). Any attempt at uniformly

[53] Importantly, HAIDER (2010: 130) says that scrambling only occurs in head-final phrases. He analyzes scrambling as a movement operation, while many linguists believe that both sequences in (4-21a+b) are base-generated thus negating a movement account for scrambling (cf. the relevant comments in MÜLLER 1995: 91 and HAIDER 2010: 130).

> reconstructing these phenomena in a theory of grammar is bound to fail, if they do not constitute a consistent domain […]. Third, the empirical basis is still very narrow. Sufficiently peer-reviewed, detailed, in-depth analyses are available for only a few languages […].

Because of the limitations of the MLG data set, we will not be able to offer a conclusive in-depth analysis for MLG, but we will show that several phenomena that are connected to the position of the ObjNP behave in strikingly similar ways. Whether these empirical facts are sufficient to assume that these phenomena "constitute a consistent domain" is a different question though. Comparing EISENBERG's examples with the tokens from stimulus sentence <46>, one notes a certain mismatch. The marked tokens (4-20b+d) do not seem to be as marked – they do not occur less frequently than (4-20a+c) – as EISENBERG's marked token (4-21b). The reason for this may be differences in animacy. In stimulus sentence <46>, both ObjNPs denote animate entities, while in EISENBERG's examples only the indirect object is human. This means that the tendency of animate entities to appear before inanimate entities in the SG midfield does not influence our translations. KEMPEN and HARBUSCH (2005: 334) write that "[m]ild conceptual factors such as animacy [...] enable full argument NPs to occupy the more leftward position." Granted, UNGERER (2002: 376) also mentions the tendency of NPs denoting human beings to appear in front of NPs denoting non-human, animate beings – a tendency which is violated by (4-20b+d) –, but the animal in sentence <46> is not just an animal. It is probably interpreted by the informants as a cute pet dog. After all, why else should someone have to show it to the children. Abstracting from these nuances, EISENBERG's example (4-21b) is definitely more marked than the tokens (4-20b+d) since a non-animate direct object appears in front of a human indirect object.

With regard to (4-20a-d), one more point has to be mentioned: While we can – at least according to our analysis of raised verb clusters – be sure that the direct object in (4-20d) has only been scrambled within the most deeply embedded VP3, we cannot be sure whether the same thing happened in (4-20b). We obviously know that the finite verb has moved to the head position of CP, but we do not know whether the direct object was only scrambled within VP3 or whether it left VP3 and adjoined to a higher functional phrase. This means that we may be dealing with two different types of scrambling which could be called short and long scrambling (cf. also Footnote 43 in this chapter).[54] Be this as it may, there are more indications for scrambling in the broad sense in the MLG data set:

stimulus <46> Spanish: **Yo les debería haber mostrado el perrito a los niños**
Portuguese: **Eu deveria ter mostrado o cachorrinho para as crianças**
English: **I should have shown the little dog to the kids**

(4-22) a. *ik mot mine Kinder [0.3] jeder Tag dem [0.3] klenen Hund wiese* (Fern-12; m/42/MLG)
I Ø <u>must</u>-VERB1 <u>my</u> children-INDOBJ […] ~~every~~.NOM ~~day~~ the.DAT […] little dog-DIROBJ show-VERB2
'Every day I have to show the little dog to my children'

[54] The term *long scrambling* is used differently from BOŠKOVIĆ's (2004a) term *long-distance scrambling*. It does not mean that the scrambled ObjNP leaves the finite clause; it just means that it leaves its VP (cf. also HINTERHÖLZL's (1999: 1 and 13) use of the terms *short* and *long (distance) scrambling* and KAYNE's (2000: 223) use of *short* and *long movement*).

(4-22) b. *ik hat de Kinder sollt de Hund wiese* (Bra-8; f/14/P>MLG-∅)
I had-VERB1 the children-INDOBJ should-VERB2 the.REDUCED[55] <u>dog</u>-DIROBJ show-VERB3

c. *ik hat det- [0.6] det Hundje sollt [0.3] die Kinder wiese* (Bra-31; f/59/MLG)
I had-VERB1 ~~the~~- […] the doggy-DIROBJ should-VERB2 […] the children-INDOBJ show-VERB3

d. *ik ha den klenen Hund de Kinder sollt wiesen* (Mex-90; m/35/MLG)
I had-VERB1 the little dog-DIROBJ the children-INDOBJ should-VERB2 show-VERB3

In (4-22a), the ObjNPs surface in the unmarked sequence with the indirect ObjNP before the direct ObjNP. In spite of this, the two objects are separated by the erroneously inserted temporal adverbial *jeder Tag* ('every day'). The question whether the sequence *ObjNP-adverb(ial),* i.e. the position of the indirect object *mine Kinder* ('my children') in front of the adverbial *jeder Tag* constitutes a case of scrambling is rather controversial since many linguists claim that adverb(ial)s can be base generated in different positions. D'AVIS (1995: 110 and 112) and DE HOOP and KOSMEIJER (1995), however, accept the sequence *ObjNP-adverb* as an instance of scrambling. In spite of this lack of clarity, sequences with adverbs will turn out to be of the utmost importance for the formation of the scrambling index (cf. Section 4.3.3).

The translations in (4-22b-d) illustrate other possible cases of (multiple) scrambling. In (4-22b) (31 tokens) and (4-22c) (11 tokens), one of the two arguments of the main verb *wiese* ('show') has left VP3 and appears in front of the modal verb *sollt* ('should'). This is the indirect object in (4-22b) not changing the relative sequence of the arguments, and the direct object in (4-22c) changing this sequence. Interestingly, the indirect ObjNP appears non-adjacent to its governing verb almost three times as often as the direct ObjNP.[56] In (4-22d), both ObjNPs are non-adjacent to their governing verb *wiesen* ('show'). On top of this, the direct object appears before the indirect object changing the basic order of the two arguments, a case of scrambling in HAIDER's (2010) sense. Importantly, HAIDER (2010: 275) considers compact clause-final verb clusters as a single constituent and not as the surface consequence of several left- or right-branching head-final VPs. Because of this, the problem of the superficial non-adjacency of the ObjNP(s) and the governing verb in variants (4-22b-d) does

[55] The frequently occurring form *de* will only be labeled as REDUCED in case the singular noun in question is neuter or masculine (except in the nominative). Plural *die* (dative *den* practically does not exist, not even in Paraguay), masculine nominative *der*, and feminine *die* or *der* are too easily reduced to *de* in allegro forms to justify a special labeling. Whether the occurrence of different forms of the definite article is a case of gender confusion is controversial. It may also be a way to mark the (non-)occurrence of scrambling by using (lighter or) heavier article forms. For this hypothesis, the reader is referred to Footnote 42 in this chapter, Excursus 4.6.1 and especially to KAUFMANN (2008).

[56] If we compare this with the variants discussed above, we see that both sequences occur in equal frequency in the first position in the raised variants (cf. (4-20c+d); 48 and 50 tokens, respectively). In the unraised variants of (4-20a+b), the direct ObjNP appears even more frequently in first position than the indirect ObjNP (15 and 7 tokens, respectively). This may be an indication that there is really a difference between short and long scrambling. In (4-20b+d) short scrambling is sufficient for the direct ObjNP to appear in front of the indirect ObjNP. In (4-22b+c), however, the superficial distance between the base position of the ObjNP and the position in which it actually surfaces is longer, because the ObjNP must have left its verb phrase. Aside from this, the direct ObjNP in (4-22c) must – at least superficially – first pass the indirect ObjNP and then the main verb. This may explain the rather rare occurrence of variant (4-22c).

not exist for him, or rather: These elements are actually adjacent to their governing verb cluster. This is one of the reasons why Haider (2010) only comments on the linear ordering of arguments as real cases of scrambling. That being said, Haider obviously has to explain why one of the ObjNPs in (4-22b+c) appears deeply embedded within this verbal constituent, i.e. in between two non-finite verbal elements (cf. the thorough discussion in Section 3.1).

So far, we have only provided examples of scrambling of full definite ObjNPs. There are, however, two further possibilities to demonstrate that scrambling is a widely used device in MLG. Haider (2010) mentions both for SG, the movement of full indefinite DPs (Haider 2010: 170) and the movement of PPs (Haider 2010: 147, 158, and 173). The importance of the first case lies in the fact that indefinite ObjNPs normally mark new information and, therefore, do not scramble easily. Broekhuis (2007: 121), for example, states for Dutch that "non-specific, indefinite noun phrases never shift, which is due to the fact that they are necessarily part of the focus of the clause." Bošković (2004b: 101) writes – referring to Diesing – about object shift of indefinite NPs in Icelandic:

> Diesing (1996) shows object shift in the clausal domain is accompanied by a specificity/definiteness effect: objects undergoing it receive a specific/definite interpretation, non-specific indefinite NPs not being able to undergo it.

The decisive point for us is that if we can show that indefinite ObjNPs can leave their base position in MLG, this should be even easier for definite ones. After all, definite ObjNPs normally do not code new information and are not part of the clausal focus. This would then constitute another indication for the fact that scrambling is possible in MLG. Unfortunately, most of the stimulus sentences feature definite ObjNPs. Some of the informants, however, changed features of the stimulus sentences every now and then, one of them being the definiteness of the ObjNP. We will give one example each for stimulus sentences <17>, <19>, and <29>:

stimulus <17> English: **If he really killed the man, nobody can help him**

(4-23) *wann dei en Mensch haf todgemeak dann keiner kann den helpen* (USA-76; m/47/MLG)
if he a person has-VERB1 killed-VERB2 ~~then~~ nobody can him help

stimulus <19> English: **If he really had wanted to write this letter, he would have found the time**

(4-24) *wann her ap ierms hat en letter wollt schriewen dann würd her han de Tied gefungen* (USA-75; m/17/E>MLG-64%)
if he in earnest had-VERB1 a letter wanted-VERB2 write-VERB3 ~~then~~ would he have the time found

stimulus <29> Spanish: **Está furioso porque podría haber comprado la casa por mucho menos**
English: He is angry, because he could have bought the house for much cheaper

(4-25) *hei is en bit nervous also wejen hei [0.5] würd e- [0.5] en Hüs han könnt billiger köpen* (Mex-7; m/15/MLG+S)
he is a bit nervous ~~also~~ because he […] would-VERB1 ~~a-~~ […] a house have-VERB2 could-VERB3 cheaper buy-VERB4
'He is a little bit nervous, well, because he would have been able to buy a house cheaper'

The ObjNPs *en Mensch* (‘a person’), *en letter* (‘a letter’), and *en Hüs* (‘a house’) are separated from their governing verbs. The distance is especially striking in (4-25),[57] in which *en Hüs* is separated from its governing verb *köpen* (‘buy’) by two verbal elements and by the adverb *billiger* (‘cheaper’). As the MLG indefinite ObjNPs in (4-23) through (4-25) can move from their base position – at least according to our assumptions –, interpreting this movement as an object shift in BOŠKOVIĆ’s (2004b: 101) sense does not seem to be correct, provided that “not being able” is supposed to mean “not being able under any circumstances”. Unlike this, scrambling is generally assumed to be a non-obligatory movement and thus offers a better interpretation for what is happening in MLG. In any case, examples (4-23) through (4-25) show that indefinite ObjNPs in MLG can appear in the same superficial positions in which definite ObjNPs can appear. They do so much less frequently though (cf. Tables 4-9, 5-36, and 5-37).

The second point HAIDER mentions is the scrambling of ObjPPs (cf. also MÜLLER 1995: 101 and BROEKHUIS 2007: 131–134). We will exemplify this kind of scrambling by means of two different types of ObjPPs in stimulus sentences <5> and <46>. The prepositions of the PPs ***del** país* and ***do** país* (‘from the country’) in the Spanish and Portuguese versions of stimulus sentence <5> are selected by the verb. This means that ObjPPs like ***üt** dem Land* (‘from the country’) are different from prepositionally marked indirect objects like ***für** de Kinder* (‘for the children’) in sentence <46>. There, the verb does not select the preposition (cf. point (d) in Section 4.1 and examples (4-26a-c) below). HAIDER (2010: 140) writes that “[p]repositional objects are the lowest ranking objects,” i.e. ObjPPs like ***üt** dem Land* constitute the most deeply embedded argument in the verb phrase. He (2010: 187) also stresses the connection between such arguments and scrambling:

> [O]nly elements with a unique base position, i.e. selected elements, can be said to scramble. Alternative serializations of adjuncts relative to arguments and relative to each other are adequately described as generated in alternative positions.

While the second part of HAIDER’s quote constitutes a problem for our second approach (cf. Section 4.3.3) since adjuncts (e.g., adverb(ial)s) are said to be base-generated in alternative positions (cf., however, the opposite opinion expressed in BROEKHUIS 2007: 136 – Footnote 21), the first part makes it clear that argument-PPs must have scrambled if they appear in a position in front of a direct object (HAIDER’s view) or non-adjacent to the main verb (our opinion).

We will shortly see that both selected ObjPPs and prepositionally marked indirect ObjPPs in MLG have a rather restricted potential for scrambling, much more restricted than that of ObjNPs. This does not mean, however, that they cannot move at all. The ObjPPs in sentences <5> and <46> can, for example, be extraposed to the postfield. Obviously, this movement is governed by rules entirely unrelated to scrambling; a fact which is supported by distributional

[57] Translation (4-25) is either a case of non-verbal material in the verb cluster as in (4-24) or – when we consider causal clauses in the North American colonies as reanalyzed main clauses (cf. Section 6.3 and KAUFMANN 2003a: 188–189) – it is a case of the ObjNP appearing in front of the verb cluster as in (4-23).

facts. In the translations of stimulus sentence <46> *I should have shown the little dog to the kids*, nine of the 56 tokens with prepositionally marked indirect objects are extraposed as in (4-26a). In none of the other 47 tokens with ObjPPs, however, does the ObjPP appear in front of the direct ObjNP *daut Hundje* (‘the doggy’) regardless of whether the two objects are adjacent or not (cf. (4-26b+c)). Furthermore, all these ObjPPs are not only stuck behind the direct object; they also surface directly to the left of their governing verb, i.e. they never appear in raised sequences like *direct ObjNP-indirect ObjPP-V2-V3*.

stimulus <46> Portuguese: **Eu deveria ter mostrado o cachorrinho para as crianças**
English: **I should have shown the little dog to the kids**

(4-26) a. *ik ha den klenen Hund sollt wiesen to de klene Kinder* (Mex-54; f/19/MLG)
I have-VERB1 the little dog-DIROBJ should-VERB2 show-VERB3 to the ~~little~~ children-INDOBJ

b. *ik hat sollt den Hundje für die Kinder wiese* (Bra-39; m/14/P>MLG-∅)
I had-VERB1 should-VERB2 the.MASC doggy-DIROBJ for the children-INDOBJ show-VERB3

c. *Ik hat den kline Hund sollt [0.7] to de Kinder wiesen* (USA-15; f/35/MLG)
I had-VERB1 the little dog-DIROBJ should-VERB2 […] to the children-INDOBJ show-VERB3

The scrambling-unfriendliness of MLG ObjPPs contrasts with Dutch, in which – as for Haider’s (2010) narrow definition of scrambling – argument-PPs scramble much more easily than argument-DPs. Haider (2010: 152) assumes that the reason for this is that only prepositional arguments are morphologically distinct in Dutch since Dutch has lost its morphological encoding of case. This is not the case in MLG, although MLG does not have the full-fledged case morphology of SG. Unsurprisingly then, the facts of MLG do not coincide with the facts of Dutch.[58] For SG, Schmitz (2006: 44) assumes that scrambling of prepositional objects is possible, but that its acceptability is lower than that of scrambled non-prepositional complements. An intonational correlate for this may be the fact that unmarked rhematic stress in SG is located on the most deeply embedded constituent. Abraham (1992: 43; cf. also Abraham & Fischer 1998: 45) writes that “[t]he head of the D-structurally deepest-embedded lexical constituent carries GA [grammatical accent; G.K.] and, consequently, has focal status.” As this constituent is normally the one closest to the clause-final base position of the verb, this would – in verbs governing two internal arguments – be the ObjPP or the accusative ObjNP. In any case, Schmitz’ and Abraham’s assumptions coincide with the MLG constellation.

Although scrambling of ObjPPs is rather rare in MLG, there are tokens where the ObjPP surfaces in a non-adjacent position to its governing verb. The following three examples represent the basic cluster variants, an example of a NR-variant in (4-27a), one of the V2-

[58] The reader may look at the Dutch example (25d) by de Hoop and Kosmeijer (1995: 150): *[D]at ik aan de jongen gisteren het boek gegeven heb* (gloss: that I to the boys yesterday the book given have), a complement clause where the indirect ObjPP *aan de jongen* appears in front of the adverb *gisteren* and in front of the direct ObjNP *het boek*. This complement clause is rated grammatical for Dutch. In the MLG translations of sentence <46>, we do not find a single token where the indirect ObjPP appears before the direct ObjNP.

VPR-variant in (4-27b), and one of the VR-variant in (4-27c).[59] If this last example is the consequence of both raising and scrambling, we do have evidence for a scrambled ObjPP in MLG.

stimulus <5> Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn't know that he can leave the country

(4-27) a. *Henrik weit nich daut hei üt dem Land rütfahren kann* (Mex-88; m/41/MLG+S)
Henry knows not that he out the country out-drive-VERB2 can-VERB1

b. *Henrik weit nich daut der kann üt dem Land gon* (Mex-68; m/35/MLG+S)
Henry knows not that he can-VERB1 out the country go-VERB2

c. *Hein der weit daut nich daut hei üt den [0.6] pais kann rütfahren* (Mex-99; f/21/MLG+S)
Henry ~~he~~ knows ~~that~~ not that he out the.ACC […] country can-VERB1 out-drive-VERB2

The next two tokens deal with the sequence of ObjPPs and adverbial elements, in this case the negation particle:

stimulus <5> Portuguese: **O Enrique não sabe que ele pode sair do país**
Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn't know that he can leave the country

(4-28) a. *De*[60] *Hein weit nich daut hei nich üt den Land rüterdarf* (Bra-64; m/23/MLG+P)
the Henry knows not that he ~~not~~ out the.ACC country out-<u>may</u>-VERB

b. *Henrik weit nich daut hei üt den Land nich rütkann* (Mex-61; m/31/S>MLG-64%)
Henry knows not that he out the.ACC country ~~not~~ out-can-VERB

The fact that these translations feature the negation particle exclusively in the dependent clause and not in the matrix clause anymore (cf. (4-30a)) or – as in (4-28a+b) – in addition to the matrix clause could be seen as an indication that the informants incorrectly assumed that something like negative raising has taken place in the stimulus version (cf. In-Depth Analysis 7.1.3.3 for a detailed analysis). Be this as it may, translation (4-28b) may be seen to represent scrambling of the ObjPP over a negative particle, an element, which many would categorize as an adverb (cf., e.g., HAIDER 2010: 146 – Footnote 18 and 159). The vast majority of 25 out of 27 relevant tokens follow the linearization in (4-28a) though. This result is in harmony with the following examples which focus on dependent clauses with two verbal elements and *nich* in the complement clause. Using these examples, the behavior of ObjPPs and ObjNPs can be compared directly. Let us start with ObjPPs:

stimulus <5> Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn't know that he can leave the country

(4-29) a. *Hein weit nich daut hei nich üt dem Land rütfahren kann* (Mex-105; m/23/MLG)
Henry knows not that he ~~not~~ out the country out-drive-VERB2 can-VERB1

[59] For the interesting doubling of the preposition *üt* and the particle *rüt(er)* in examples (4-27a+c) and (4-28a+b), the reader may look at EISENBERG's (2013a: 253) example *Sie klebt ihm einen Bart **an** die Backe **an*** (gloss: she glues him a beard at the cheek on; 'She fixes a beard on his cheek'). For pure prepositional doubling, FLEISCHER (2002: 354–361) should be consulted.

[60] The presence of a definite article in front of a proper name is a clear case of Portuguese (long-term) priming. It appears quite often in Brazil (cf. also (8-8b+d)), but only very rarely in the other colonies.

(4-29) b. *Enrique weit nich daut hei nich üt den Land kann rütgon* (Mex-7; m/15/MLG+S)
Henry knows not that he ~~not~~ out the.ACC country can-VERB1 out-go-VERB2

In none of the fourteen tokens (12 with the NR-variant as in (4-29a); 2 with the VR-variant as in (4-29b)), does the ObjPP surface in front of *nich*. *Nich*, therefore, seems to be in a position high up in the structural tree. After all, the ObjPP is supposed to have scrambled in the two tokens with the VR-variant. In spite of this, it did not land in front of the negation particle. If we look at translations with ObjNPs, things turn out to be quite different:

stimulus <5> Portuguese: **O Enrique não sabe que ele pode sair do país**
English: **Henry doesn't know that he can leave the country**

(4-30) a. *Heinrich weis*[61] *daut hei nich daut Land verlote soll* (Bra-35; f/75/MLG)
Henry knows ∅ that he ~~not~~ the country leave-VERB2 shall-VERB1

b. *Henrik weit daut nich daut hei det Land nich verloten kann* (Mex-90; m/35/MLG)
Henry knows ~~that~~ not that he the country ~~not~~ leave-VERB2 can-VERB1

c. *Henry weit nich daut dei de [0.3] country nich kann verloten* (USA-22; f/15/E>MLG-∅)
Henry knows not that he the.REDUCED country ~~not~~ can-VERB1 leave-VERB2

There are a total of twelve tokens for these three variants. Eight of them feature a NR-variant (5 tokens comparable to (4-30b); 3 to (4-30a)) and four a VR-variant (all comparable to (4-30c)). This means that ObjPPs do not appear a single time in front of *nich* ('not') in fourteen tokens, while ObjNPs appear in front of *nich* in nine out of twelve tokens. This is indeed a huge difference, again suggesting that scrambling ObjPPs is a strongly marked option. So far, we have not shown any tokens with the V2-VPR-variant, since *nich* only appears twice in this constellation. Both of them feature an ObjNP following the negation particle; example (4-31) has already been presented as (3-35):

stimulus <5> English: **Henry doesn't know that he can leave the country**

(4-31) *Henry gleuft nich [0.8] hei weit daut hei kann nich die country verlote* (USA-38; f/60/MLG)
Henry ~~believes~~ ~~not~~ […] ~~he~~ knows ∅ that he can-VERB1 ~~not~~ the country leave-VERB2

Table 4-6 presents the distributional information for all tokens represented by (4-30a-c) and (4-31):

Table 4-6: Distribution of the sequence *nich*-ObjNP and ObjNP-*nich* for three cluster variants

	V2-VPR-variant	NR-variants	VR-variant	Total
n (tokens)	2	8	4	14
***nich*-ObjNP**	2	3	0	5
	100%	37.5%	0%	35.7%
χ^2 (2, n=14) = 5.8, p=0.054(*) / Cramer's V: 0.65 / 5 cells (83.3%) with less than 5 expected tokens				
ObjNP-*nich*	0	5	4	9
	0%	62.5%	100%	64.3%

[61] Interestingly, this informant, who claims a high compentence in SG (12 of 14 points), produces the MLG verb *weite* in its SG form, i.e. with a final *-s* instead of a final *-t* (cf. Section 8.2.1 for an analysis of SG borrowings).

Despite the low number of only fourteen tokens – a fact which obviously constitutes a serious problem for statistical testing –, the distribution in Table 4-6 reaches a statistical tendency with a very high value for Cramer's V. According to our assumptions, the ObjNP in the VR-variant has been scrambled out of its verb phrase and the ObjNP in the V2-VPR-variant remains there. If we just compare these cases, it is somewhat surprising that the two tokens with the V2-VPR-variant represented by (4-31) both present the sequence *nich-ObjNP*. After all, short scrambling would have been sufficient to put the ObjNP in front of *nich*. As all four tokens with the VR-variant represented by (4-30c) feature the sequence *ObjNP-nich*, one has the impression that if the ObjNP scrambles out of its verb phrase, it goes the whole way, landing not only to the left of the verbal elements, but also to the left of *nich*. This is another interesting difference to an example such as (4-29b), which features an ObjPP.

The tokens of the NR-variants have an intermediate position with regard to the sequence of ObjNP and *nich*. This again meets our expectations since the NR-variants can be divided into an unscrambled and a scrambled subvariant. With these results, we have a first indication that (the lack of) scrambling with regard to verb clusters is connected to (the lack of) scrambling in the sequence between an ObjNP and an adverb(ial)/negative particle, i.e. we have either a co-occurrence of the scrambled VR-variant and the scrambled sequence *ObjNP-nich* or we have a co-occurrence of the unscrambled V2-VPR-variant and the unscrambled sequence *nich-ObjNP* (cf., however, Table 5-17, in which this difference does not show up). These two phenomena represent the two approaches, which will be used for the formation of the scrambling index. The last two tokens we would like to discuss with regard to possible scrambling of ObjPPs approach the classical case of the re-ordering of two arguments:

stimulus <23> Spanish: **No te puede escuchar porque está sacando las cosas de la maleta**
English: He can't listen to you, because he is unpacking his luggage[62]

(4-32) a. *hei kann di nich hiere wegens hei üt sinem Rucksack die Sache rütnimmt*
(Fern-30; m/30/MLG)
he can you not hear because he out his backpack the things out-takes-VERB

b. *hei kann di nich hieren wegen hei dät von sinen Tasch [0.3] Sachen rütdue*
(Mex-4; m/16/S>MLG-71%)
he can you not hear because he ~~does~~ from his.MASC bag […] things out-do-VERB

Some readers may not share our opinion that *üt sinem Rucksack* ('out his backpack') in (4-32a) and *von sinen Tasch* ('from his bag') in (4-32b) are verb complements and instead consider them noun arguments (attributes) to *Sache(n)* ('things'). Even in this case, however, one could still assume scrambling. STERNEFELD (2008: 316 – example (62)), for instance, analyzes the following causal clause as a possible case of scrambling: *[W]eil ich über diesen Studenten jetzt kein Urteil fällen will* (gloss and translation by G.K.: because I about this student now no judgment render want; 'because I do not want to render a judgment about this

[62] Like sentence <5>, sentence <23> is a good example for the fact that sometimes the different stimulus versions could not be generated in a completely identical way. There just is no simple Portuguese or Spanish verb for English *unpack*. Because of this, we had to opt for the more complex construction *take the things out of the bag*.

student now'). In this clause, the PP *über die Studenten* is most probable an attribute to *Urteil* ('judgment'). This attribute is then not only moved in front of the NP containing its governor, but also in front of the temporal adverb *jetzt* ('now'). Interestingly, the informants producing tokens (4-32a+b) will both be qualified as scrambling-friendly. As tokens like (4-32a+b) are not used in the formation of the scrambling index, one could see in this coincidence an early piece of evidence for the validity of this index.

As already mentioned, sentence <46> *I should have shown the little dog to the kids* cannot be used in the formation of the scrambling index and it cannot serve as independent evidence for the validity of this index either. This is indeed a pity since coinciding results would show that what we call scrambling is not only scrambling in a rather broad sense, but also scrambling in HAIDER's (2010) narrow sense. No statistical analysis, however, showed any conclusive result with regard to sentence <46>, in either direction. This does not mean much though because there are too many theoretical and empirical uncertainties connected to these analyses. With regard to theory, one must not forget that both ObjNPs in sentence <46> are animate. This complicates the interpretation of different surface sequences. With regard to methodology, the heterogeneous nature of the 287 good translations is a problem. These translations feature between two and five verbal elements, they exhibit indirect ObjNPs (cf. (4-22a-d)) and indirect ObjPPs (cf. (4-26a-c)), and they show adjacent (cf. (4-20a-d)) and non-adjacent sequences of the two arguments (cf. (4-22a-d)). Aside from this, one always has to reckon with the possibility of string-vacuous scrambling of both ObjNPs although HAIDER (2010: 185 and especially 187) does not consider the possibility of this invisible type of scrambling. In our opinion though, a scrambling-friendly informant may easily scramble both ObjNPs, thus following his general syntactic preference without necessarily changing the surface ordering of the ObjNPs.

We can nevertheless conclude, based on the analysis of tokens (4-23) through (4-25) that scrambling of indefinite ObjNPs in the broad sense is possible in MLG. This is bound to imply the less marked possibility of scrambling definite ObjNPs. With the analysis of tokens (4-27c), (4-28b), and (4-29b), we can also conclude that scrambling of MLG ObjPPs in the broad sense is possible. It does, however, occur much less frequently than scrambling of ObjNPs. Furthermore, we have clear cases of scrambling in the narrow sense. For ObjNPs, there are fifteen tokens represented by (4-20b) and 48 tokens represented by (4-20d); for ObjPPs, there are two tokens (cf. (4-32a+b)). Scrambling in the narrow and in the broad sense is, therefore, a component of MLG.

4.3.2 First approach to the formation of the scrambling index

After the discussion in Section 4.3.1, we will now present the two approaches to the formation of the scrambling index. The first approach is rather unproblematic since the nine clauses already included in the formation of the raising index can be re-used. Unfortunately, however, re-using the tokens with the NR-variants is not possible since they do not reveal the informants' scrambling behavior. The only exception to this are the conditional clauses of sentences <15> and <17>, which feature an adverb and can, therefore, be used for the raising index and for both approaches to the scrambling index. With regard to the raised variants, the VR-variant is – according to our assumptions – the result of scrambling the ObjNP/PP out of VP2, while the V2-VPR-variant is characterized by the lack of such scrambling. Using these tokens a second time is not problematic since we now want to measure something which was not measured in the formation of the raising index. For that index, both variants were lumped together in the category *V(P)R-variants* (cf. Table 4-3). In Table 4-7, the number of tokens for the V2-VPR- and the VR-variant in the basic distribution are given:

Table 4-7: Balanced basic distribution of the V2-VPR-variant and the VR-variant in nine dependent clauses with two verbal elements (conditional clauses separated by the presence or absence of resumptive elements)

	n	V2-VPR-variant	VR-variant
<7> complement clause + *han* (no correlate)	28	22 78.6%	6 21.4%
<8> complement clause + *han* (no correlate)	52	27 51.9%	25 48.1%
<15> conditional clause + modal verb	19	3 15.8%	16 84.2%
<16> conditional clause + modal verb	15	7 46.7%	8 53.3%
<17> conditional clause + *han*	6	0 0%	6 100%
<18> conditional clause + *han*	6	1 16.7%	5 83.3%
<15> conditional clause + modal verb + *dann*	27	5 18.5%	22 81.5%
<16> conditional clause + modal verb + *dann*	26	8 30.8%	18 69.2%
<17> conditional clause + *han* + *dann*	14	0 0%	14 100%
<18> conditional clause + *han* + *dann*	6	3 50%	3 50%
<35> relative clause + modal verb	66	31 47%	35 53%
<36> relative clause + modal verb	71	23 32.4%	48 67.6%
<38> relative clause + *han*	24	10 41.7%	14 58.3%

The index for scrambling is calculated in the familiar way, i.e. an informant who uses the unscrambled V2-VPR-variant in sentence <8> receives a scrambling value of -0.481 (0 for not having used the VR-variant, i.e. for not having scrambled, minus 0.481, the expected probability for the VR-variant in this clause). Informants who use the scrambled VR-variant obtain a value of +0.519 (1-0.481). In contrast to this, an informant who uses the V2-VPR-variant in the conditional clause of sentence <15> without a resumptive element receives a scrambling value of -0.842 (0-0.842), because the probability for the VR-variant in this clause is much higher than in the complement clause of sentence <8>. If the informant uses the VR-variant, he obtains a positive value of +0.158 (1-0.842).

Although this calculation should not make the reader feel uneasy anymore, the basic assumptions underlying it may still cause such a sensation. We will offer a whole battery of empirical evidence supporting these assumptions later on, but some more supporting facts will be presented right away (cf. also Table 3-1). These facts are connected to the normal behavior of ObjNPs/PPs with regard to scrambling. In Section 4.3.1, we saw that indefinite ObjNPs/PPs in general and ObjPPs in MLG do not scramble frequently. Consequently, if the V2-VPR-variant is the consequence of a lack of scrambling and the VR-variant the consequence of scrambling, the distribution of these two variants should be sensitive to the morphological shape of the complement. We expect the V2-VPR-variant to appear more frequently with ObjPPs and with indefinite ObjNPs than the VR-variant.

Let us begin with definite ObjPPs. The following analysis is based on tokens from the relative clauses from sentences <32>, <35>, <37>, and <39>. They all feature two verbal elements and an indirect object and exhibit some variation with regard to the presence or absence of a preposition in the complement. A total of 143 of the 198 tokens with raised cluster variants come from sentence <35>, the only sentence used for index formation. Examples (4-33a+b) show definite ObjNPs in both variants, examples (4-33c+d) definite ObjPPs:

stimulus <35> Portuguese: **Esse é o filme que tu queres mostrar para todos os teus amigos?**
English: Is this the film you want to show to all your friends?

(4-33) a. *is det de F:ilm waut du willst all dine Frend wiese* (Bra-13; m/22/P>MLG-89%)
is this the movie that you want-VERB1 all your friends show-VERB2

b. *det is de Film waut du all dine Frend willst wiese* (Bra-54; f/17/P>MLG-71%)
this is the movie that you all your friends want-VERB1 show-VERB2

c. *is det- daut de Fil- Film waut du willst to dine ganze Frend wiese*
(Bra-33; f/17/P>MLG-43%)
is ~~this-~~ this the ~~mov-~~ movie that you want-VERB1 to your whole friends show-VERB2

d. *det is de Film waut du für all dine Frend willst wiese* (Bra-15; f/44/MLG)
this is the movie that you for all your friends want-VERB1 show-VERB2

We have already mentioned the fact that the different shapes of the matrix clauses in (4-33a-d) do not influence the verb cluster in the dependent clause (cf. point (e) in Section 4.1). Twenty-eight of the 198 tokens with raised cluster variants feature ObjPPs (14.1%) in the four relative clauses, the rest feature ObjNPs. 144 tokens have a finite modal verb plus infinitive (72.7%), 22 tokens appear with finite *han* (‘have’) and a past participle (11.1%), nineteen tokens with *woare* (‘will’) plus infinitive (9.6%), and thirteen tokens with *dune* (‘do’) plus infinitive (6.6%). The different finite verbs do not have an effect on the distribution presented in Table 4-8:

Table 4-8: Distribution of the tokens of the two raised V(P)R-variants in four relative clauses with two verbal elements separated by the prepositional marking of the definite complements

	definite ObjNP	**definite ObjPP**	**Total**
n (tokens)	170	28	198
V2-VPR-variant	70	20	90
V1-Obj-V2	41.2%	71.4%	45.5%
χ^2 (1, n=198) = 8.9, p=0.003** / Phi: +0.21 / 0 cells with less than 5 expected tokens			
VR-variant	100	8	108
Obj-V1-V2	58.8%	28.6%	54.5%

Almost three quarters of the tokens with scrambling-unfriendly ObjPPs appear in the supposedly unscrambled V2-VPR-variant, while this is true for less than half of the tokens with more scrambling-friendly ObjNPs. Faced with this significant result, the reader must not forget that the ObjPPs of sentence <35> enters the procedure of index formation. This is one of the few threats to the reliability of the scrambling index. The reason for maintaining these tokens was given in point (d) of Section 4.1.

In Table 4-9 the reader can see the results with regard to definite and indefinite ObjNPs. In contrast to Table 4-8, we will now include tokens with the verbal sequence *adverb-V1-ObjNP-V2*, i.e. tokens of the non-V2-VPR-variant. We do this because there are many tokens of this kind and because there are rather few tokens with indefinite ObjNPs. It is important to note that this procedure is justified both theoretically and empirically. Theoretically, we assume that in the non-V2-VPR-variant, the ObjNP has not been scrambled out of the verb phrase just like in the V2-VPR-variant. Empirically, the distribution shows that there is no difference between the two cluster types. The share of indefinite ObjNPs is comparable (8 of 142 tokens for the V2-VPR-variant (5.6%); 3 of 41 tokens for the non-V2-VPR-variant (7.3%)). The share of indefinite ObjNPs is only 0.6% for the VR-variant (1 of 173 tokens). The tokens come from seven dependent clauses with two verbal elements. Examples (4-34a-c) show translations of sentence <17> with definite ObjNPs in the VPR-variants and the VR-variant; examples (4-34d) and (4-34e), which was already presented as (1-9), feature indefinite ObjNPs in a non-V2-VPR- and a VR-environment.

stimulus <17> Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: **If he really killed the man, nobody can help him**

(4-34) a. *wann hei wirklich haf den Ohmtje todgemeak kann keiner ihm helpen*
(Mex-9; f/16/E>MLG-86%)
if he really has-VERB1 the man killed-VERB2 can nobody him help

b. *wann hei haf den Mann ge- [äh] todgemeakt keiner kann ihm helpen* (Mex-36; f/18/MLG)
if he Ø has-VERB1 the man ~~ki~~- [eh] killed-VERB2 nobody can him help

c. *wann der wirklich den Mann haf todgemeak dann kann ihn keiner helpen*
(USA-69; m/29/E>MLG-71%)
if he really the man has-VERB1 killed-VERB2 ~~then~~ can him.ACC nobody help

(4-34) d. *wann her wirklich haf en Mann [0.4] [äh] ge- [0.5] todgemeak dann kann hei de Mann nich helpen* (Mex-37; f/18/MLG)
if he really has-VERB1 a man […] [eh] ~~ki~~- […] killed-VERB2 ~~then~~ can he the.REDUCED man not help
'If he really killed the man, he cannot help the man'

e. *wann dei en Mensch haf todgemeak dann keiner kann den helpen* (USA-76; m/47/MLG)
if he a person has-VERB1 killed-VERB2 ~~then~~ nobody can him.ACC help

As already mentioned, only twelve of the 356 tokens contain an indefinite ObjNP (4%). This low share is no surprise because the stimulus versions of the seven clauses feature definite ObjNPs, i.e. the tokens with indefinite ObjNPs constitute deviations from the intended translations. These deviations, however, now prove their usefulness. The tokens come from four complement clauses (177 tokens of sentences <1>, <3>, <8>, and <9>; 49.7%), from two conditional clauses (151 tokens of sentences <17> and <18>; 42.4%), and from one relative clause (28 tokens of sentence <38>; 7.9%). 287 tokens feature finite *han* ('have') with a past participle (80.6%), 34 tokens finite *dune* ('do') plus infinitive (9.6%), 24 tokens finite *woare* ('will') plus infinitive (6.7%), and 11 tokens appear with a finite modal verb plus infinitive (3.1%). Table 4-9 shows the distribution of the ObjNPs:

Table 4-9: Distribution of the tokens of the two raised V(P)R-variants in seven dependent clauses with two verbal elements separated by the definiteness of the ObjNP

	definite ObjNP	**indefinite ObjNP**	**Total**
n (tokens)	344	12	356
(non-)V2-VPR-variant	172	11	183
(adverb-)V1-ObjNP-V2	50%	91.7%	51.4%
χ^2 (1, n=356) = 8.1, p=0.005** / Phi: +0.15 / 0 cells with less than 5 expected tokens			
VR-variant	172	1	173
ObjNP-V1-V2	50%	8.3%	48.6%

Like in Table 4-8, the distribution in Table 4-9 is highly significant. Although the association is weak, the result again confirms our expectation. Scrambling-unfriendly indefinite ObjNPs are found more frequently in the supposedly unscrambled V2-VPR-variants than more scrambling-friendly definite ObjNPs. Thus, indefinite arguments do not only appear after definite arguments in the midfield of SG (cf. EISENBERG 2013b: 382 – tendency (1e)), but also in MLG verb clusters.[63] While both the sequences *$ObjNP_{definite}$-V1-V2* and *V1-$ObjNP_{definite}$-V2* are normal in EISENBERG's (2013b: 384–386) sense, the sequence *$ObjNP_{indefinite}$-V1-V2* definitely constitutes a marked exception. This fits ABRAHAM's (1992: 47) conviction about "indefinite object-NPs, which are always within VP and, consequently, invariably carry GA [grammatical accent; G.K.]." With these results, we have provided a second indication that the VR-variant in MLG is really the result of scrambling (cf. also Table 3-1). The most

[63] Thus, definiteness in SG and MLG NPs is frequently marked twice, by means of determiners and by means of their clausal position. In languages without articles, only the second of these possibilities can be used. HEWSON and BUBENIK (2006: 364) write about such languages: "Languages that have extensive case systems tend to mark the definite versus indefinite contrast […] by position, promoting definite nouns to the beginning of the clause and demoting indefinite nouns to the end of the clause […]."

scrambling-friendly complement type, definite ObjNPs, appears more frequently in this variant than scrambling-unfriendly indefinite ObjNPs (cf. Table 4-9) and definite ObjPPs (cf. Table 4-8). This constitutes strong independent support for our hypothesis. In the second part of In-Depth Analysis 5.1.4, two more phenomena (floating quantifiers and preposition stranding) will yield more independent evidence.

4.3.3 Second approach to the formation of the scrambling index

As previously mentioned, stimulus sentence <46> *I should have shown the little dog to the kids* would be the ideal candidate for an alternative approach towards scrambling since it is the only sentence in the data set featuring two non-pronominal complements. There are, however, too many uncertainties related to this sentence (cf. the discussion at the end of Section 4.3.1). We, therefore, have to rely on clauses with adverbs and unraised cluster variants in order to decide whether an ObjNP/PP has been scrambled or not. If the ObjNP/PP surfaces in front of the adverb, scrambling is assumed; if it surfaces after the adverb, lack of scrambling (or short scrambling) is assumed. This decision presupposes two things: First, we presume that complements are base-generated adjacent to their governing verb and second, we presume that adverbs are base-generated in their surface position (cf. (3-36) and (3-37)). While Müller (1995: 123 – example (57a) and 124 – example (59a)) and Broekhuis (2007: 136 – Footnote 21) seem to be sympathetic to an approach using the relative positions of complements and adverbs, Haider (2010: 12 and 171; cf. also Sternefeld 2009: 526) rejects it outright. Sapp (2011: 63–64) applies an identical categorization, but his results are not comparable, since he uses the categorization in both unraised NR-variants and raised V(P)R-variants. The latter ones are – in our opinion – already the consequence of (the lack of) scrambling. In any case, the results of the analyses carried out in Section 4.5 will back up the assumption that the hypothesis of fixed positions for adverbs is not entirely off target.

In principle, four sentences can be used for the chosen approach; two of them, sentences <15> and <17>, were already used for the formation of the raising index:

(4-35)	a.	**stimulus <2>**	John doesn't think that you know YOUR FRIENDS ***well***
	b.	**stimulus <13>**	If he quits his job, I won't help HIS FAMILY ***anymore***
	c.	**stimulus <15>**	If he has to sell THE HOUSE ***now***, he will be very sorry
	d.	**stimulus <17>**	If he ***really*** killed THE MAN, nobody can help him

Due to the fact that the adverbial element *anymore* in sentence <13> appears in the main clause, the translations of this sentence were not used. The setback of this exclusion is that there are fewer tokens for the calculation of the scrambling index. There is, however, also an asset connected to this exclusion. We will have an additional opportunity to verify the validity of the scrambling index (cf. Section 4.5.2.2). The relevant translation variants of the three remaining clauses are represented by Brazilian and Paraguayan tokens. We offer dependent clauses with one verbal element in sentence <2>, with three verbal elements in sentence <15>, and with two verbal elements in sentence <17>:

stimulus <2> Portuguese: **O João não acha que tu conheces bem os teus amigos**
English: John doesn't think that you know your friends well

no scrambling (***adverb***-OBJNP)

(4-36) a. *Hans gleuft daut nich daut [0.6] du gut [0.4] dine Frend kennst* (Bra-24; m/36/MLG+P)
Hans thinks ~~that~~ not that […] you well-ADVERB […] your friends-OBJNP know-VERB

scrambling (OBJNP-***adverb***)

b. *João denkt nich daut ik mine Frend gut kenn* (Bra-23; m/18/MLG+P)
João thinks not that I my friends-OBJNP well-ADVERB know-VERB

stimulus <15> Portuguese: **Se ele tiver que vender a casa agora, ele vai ficar muito triste**
Spanish: **Si tiene que vender la casa ahora, se va a poner muy triste**
English: If he has to sell the house now, he will be very sorry

no scrambling (***adverb***-OBJNP)

(4-37) a. *wann hei nu daut Hus verköpe wird mote dann wird her sehr trürig were* (Bra-26; m/28/P>MLG-∅)
if he now-ADVERB the house-OBJNP sell-VERB3 will-VERB1 must-VERB2 ~~then~~ will he very sad turn

scrambling (OBJNP-***adverb***)

b. *wann hei det Hüs nü verköpe wird mute [0.3] wird her sehr trürig sene* (Men-18; m/19/MLG)
if he the house-OBJNP now-ADVERB sell-VERB3 will-VERB1 must-VERB2 […] will he very sad be

stimulus <17> Portuguese: **Se ele realmente matou o homem, ninguém pode ajudar ele**
English: If he really killed the man, nobody can help him

no scrambling (***adverb***-OBJNP)

(4-38) a. *wann hei wirklich den Mensch todgemaakt haft dann [0.7] kann keiner ihm helpe* (Bra-22; m/37/MLG+P)
if he really-ADVERB the person-OBJNP killed-VERB2 has-VERB1 ~~then~~ […] can nobody him help

scrambling (OBJNP-***adverb***)

b. *wann hei den Mensch wirklich umgebracht haft kann ihm keiner helpe* (Bra-20; f/50/MLG)
if he the person-OBJNP really-ADVERB killed-VERB2 has-VERB1 can him nobody help

Obviously, these adverbs belong to different classes, a fact which can easily be seen in their different syntactic behavior (cf. Table 4-12 and Kaufmann 2007: 161–171). *Wirklich* ('really') in the conditional clause of sentence <17> is a sentence adverb – Zifonun et al. (1997: 1534–1535) call it an assertive-strengthening modal supplement – which is generated in a higher structural position than temporal adverbs/qualitative adjectives like *nu*/*nü* ('now') and *gut* ('well'). These adverbs modify the verb phrase (cf. Eisenberg 2013b: 244 and Zifonun et al. 1997: 1189). With regard to *wirklich*, the ObjNP might have been scrambled out of the verbal phrase string-vacuously even if it appears to the right of the adverb (cf. Footnotes 43 and 54 in this chapter). However, we can be sure that the marked sequence *ObjNP-adverb* in the conditional clause of sentence <17> is the result of scrambling.

Unlike in sentence <17>, the unmarked sequence in the dependent clauses of sentences <2> and <15> is *ObjNP-adverb*. Here, we can conclude that the marked sequence *adverb-ObjNP* is – due to the low structural position of the adverb – a clear sign for the lack of scrambling. In clauses with the sequence *ObjNP-adverb*, however, the ObjNP must have been scrambled. We cannot be sure though whether scrambling in this case covers the same distance as in the case of *wirklich*. A semantic side effect of the different nature of these adverbs and concurrently of their different position is that scopal differences may exist between (4-38a) and (4-38b),[64] which do not exist with regard to (4-36a+b) and (4-37a+b). In (4-38a), *wirklich* has scope over the entire verb phrase, i.e. what is at stake is the reality of *have killed the man*. In (4-38b), on the other hand, the scope of *wirklich* is reduced to *have killed*, i.e. one may understand the clause in such a way as it implies that something else than being killed happened to the man, a reading unavailable for (4-38a). However, including the ensuing matrix clause into the analysis and looking at the English stimulus sentence makes it improbable that the positional differences of (4-38a+b) coincide with different scope-related interpretations. We had already foreseen this state of affairs when we discussed Table 3-2 (cf. Footnote 35 in Chapter 3).

Be this as it may, due to the different unmarked positions of adverbs like *wirklich*, *nu*, and *gut*, we will not be able to present conclusive analyses with regard to this type of scrambling. The relative differences between the informants' behavior will, however, not be marred by this problem, because we will again develop a normalized measure for the three clauses, taking into account the different frequencies of the two possible sequences of ObjNP and adverb. In doing so, we should be able to reliably characterize the informants' scrambling behavior. As in Section 4.1 (cf. Table 4-2), the different sources of the tokens of the basic distribution for the scrambling index are represented in Table 4-10. Again, not all necessary translations were available.

Table 4-10: Source of the tokens of the unraised variants for the sociolinguistically balanced basic distribution for three dependent clauses with adverbs (the number of tokens is 150 for <2> and <17> and 120 for <15>)

	randomly balanced	**randomly non-balanced**	**randomly doubled**
all clauses (n=420)	353 (84%)	37 (8.8%)	30 (7.1%)
<2> […] that you know YOUR FRIENDS ***well***	140 (93.3%)	10 (6.7%)	0 (0%)
<15> If he has to sell THE HOUSE ***now*** […]	90 (75%)	10 (8.3%)	20 (16.7%)
<17> If he ***really*** killed THE MAN […]	123 (82%)	17 (11.3%)	10 (6.7%)

[64] ZIFONUN et al. (1997: 1562) analyze such scope differences as well. The SubjNP *so viele Menschen* ('so many people') in front of *wirklich* ('really') in their constructed example (9') *Müssen so viele Menschen wirklich ins Untersuchungsgefängnis gesteckt werden?* (gloss and translation by G.K.: must so many people really in-the remand prison put are; 'Is it really necessary to lock up so many people in remand prison?') is seen as background information, while *so viele Menschen* following *wirklich* in the original example (9) is interpreted as foregrounded information. Confer also a comparable discussion for bare plural objects in front or after quantificational adverbs like *immer* ('always') in D'AVIS (1995: 104–107).

84% of the tokens of the basic distribution are of a perfectly balanced nature with regard to origin, age, and gender. The rest of the tokens are either taken from the available non-balanced pool of tokens (37 tokens or 8.8%) or were randomly doubled from the extant 390 tokens (30 tokens or 7.1%). For sentence <15>, only 120 tokens could be used because in this clause, the number of tokens with the NR-variants is rather low (cf. Table 4-3). Nevertheless, the reader might notice in Table 4-11 that the number of tokens of unraised variants for sentences <15> and <17> is higher than the combined numbers of tokens of the NR-variants with and without a resumptive element *dann* in Table 4-3. This is due to translations which were excluded in the formation of the raising index and in the first approach to scrambling because of slight deviations. As we are now only interested in the sequence of adverb and ObjNP, finite verbs deviating from the stimulus versions were accepted.

Another difference to Section 4.1 is that it is now unnecessary to separate the two conditional clauses of sentences <15> and <17> in terms of resumptive elements (cf. Table 4-7) since no influence whatsoever on the sequence between adverb and ObjNP could be detected. In general, and this is a difference between the two approaches for scrambling, the sequence of adverb and ObjNP seems to be insensitive to many factors which influence the distribution between unraised and raised cluster variants and between the V2-VPR-variant and the VR-variant. Besides resumptive elements, this is also true for introducing elements. Due to this and due to the low number of tokens available for the scrambling index, we accepted eight complement clauses of sentence <2> that are introduced by *waut* and *baut* instead of the default complementizer *daut* (cf. Excursus 7.2.2.1 and Section 8.2.3). Such tokens were excluded in the formation of the raising index and in the first approach to scrambling. Other restrictions like the exclusion of indefinite ObjNPs still apply. There is, however, still another compromise we had to accept in order not to reduce the number of usable tokens too much. As we could only use unraised variants for this approach, we added some tokens which deviated from the expected number of verbal elements (one verb in sentence <2> and two verbs in sentences <15> and <17>). Table 4-11 shows this distribution:

Table 4-11: Number of verbal elements of the tokens used for the sociolinguistically balanced basic distribution for three dependent clauses with adverbs (no randomly doubled tokens)

	one verb	**two verbs**	**three verbs**
verbal sequence (adverbs suppressed)	ObjNP-V1	ObjNP-V2-V1	ObjNP-V3-V1-V2
<2> […] that you know YOUR FRIENDS ***well***	122 (81.3%)	28 (18.7%)	0 (0%)
<15> If he has to sell THE HOUSE ***now*** […]	6 (6%)	91 (91%)	3 (3%)
<17> If he ***really*** killed THE MAN […]	13 (9.3%)	127 (90.7%)	0 (0%)

It is important that in all selected tokens the ObjNP and the adverb surface adjacently to the left of all verbal elements and are always adjacent to the most deeply embedded main verb (cf. the line *verbal sequence* in Table 4-11). This means that the most deeply embedded verb phrase has never been raised (cf. for the sequence *ObjNP-V3-V1-V2* the discussion of Table 5-24 and Footnote 136). In any case, most tokens do follow the expectation with regard to the number of verbal elements (shaded cells). There is not a single significant difference in the distribution of the two sequences *adverb-ObjNP* and *ObjNP-adverb* depending on the number of verbal elements. This is somewhat surprising because the reader might rightly doubt that scrambling out of a deeply embedded VP2 or VP3 (in a clause with two or three verbal elements) and scrambling out of VP1 (in a clause with one verbal element) is the same thing. In this respect, however, superficial facts of linearization seem to overrule different degrees of embedding. This is especially true for the sentence adverb *wirklich* (‘really’) in sentence <17>, which does not form part of any verb phrase. Granted, one may assume the possibility of cyclic scrambling in clauses with two or three verbal elements. With this, each single movement would not be longer than scrambling out of a single verb phrase. There would still be a quantitative difference though, namely two or three short movements as opposed to one short movement. Table 4-12 gives the frequencies of the two sequences between ObjNP and adverb in the balanced basic distribution:

Table 4-12: Sequence of ObjNP and adverb in the tokens with unraised variants of the sociolinguistically balanced basic distribution for three dependent clauses with adverbs

	adverb-ObjNP **no scrambling**	***ObjNP-adverb*** **scrambling**
<2> […] that you know YOUR FRIENDS ***well***	21 (14%)	129 (86%)
<15> If he has to sell THE HOUSE ***now*** […]	12 (10%)	108 (90%)
<17> If he ***really*** killed THE MAN […]	129 (86%)	21 (14%)

With these values, we can now apply the method previously used in Section 4.2. An informant using the scrambled sequence *ObjNP-adverb* in the conditional clause of sentence <15> receives a scrambling value of +0.1 (1-0.9; a non-scrambler receives a value of -0.9), while an informant using the same sequence in the conditional clause of sentence <17> ends up with a value of +0.86 (1-0.14; an informant using an unscrambled sequence receives -0.14; 0-0.14). In this way, the rarer, possibly longer scrambling in sentence <17> is accounted for.

At the end of Section 4.3.2, we analyzed the behavior of scrambling-unfriendly definite ObjPPs and indefinite ObjNPs in comparison to more scrambling-friendly definite ObjNPs in order to show that scrambling is indeed the correct name for the movement described. We will now do the same for the second approach. Unfortunately example (4-39) from sentence <2> is the only usable token with a definite ObjPP in the translations of the three clauses (for examples with definite ObjNPs, the reader is referred to (4-36a+b)).

stimulus <2> Spanish: **Juan no cree que conozcas bien a tus amigos**
English: John doesn’t think that you know your friends well

(4-39) *Johann gleuft nich daut dü gut op dine Kinder appaßt* (Men-12; m/18/SG>MLG-71%)
John believes not that you well on your children on-look-VERB
‘John does not think that you take good care of your children’

Example (4-39) was obviously not used for index formation since it can hardly be called a correct translation. Informant Men-12 uses the verb phrase *to take good care of your children* instead of intended *to know your friends well*. In spite of this translational liberty, we will show the distributional results for sentence <2>. Due to the fact that (4-39) is the only token with an ObjPP, we restricted the analysis to tokens from Menno.

Table 4-13: Distribution of the tokens of the two sequences between ObjNP/PP and adverb in sentence <2> in Menno separated by the prepositional marking of the definite complements

	definite ObjNP	**definite ObjPP**	**Total**
n (tokens)	31	1	32
adverb-ObjNP/PP	1	1	2
	3.2%	100%	6.2%
χ^2 (1, n=32) = 15.5, p=0*** / Phi: +0.7 / 3 cells (75%) with less than 5 expected tokens / Fisher's Exact: p=0.062$^{(*)}$			
ObjNP/PP-adverb	30	0	30
	96.8%	0%	93.8%

In spite of the problematic fact that three of the four cells in Table 4-13 have fewer than five expected tokens, even Fisher's Exact Test reaches the level of a statistical tendency. The value for association is indeed impressive. If one does not discard this analysis outright due to the strongly deviating nature of example (4-39) and due to the problematic distribution, the scrambling hypothesis is once more supported. The definite ObjPP appears in a clause with the sequence *adverb-ObjPP*, while almost all definite ObjNPs appear in clauses with the sequence *ObjNP-adverb*. This – like the discussion of examples (4-29) through (4-31) – suggests that ObjPPs scramble less frequently than ObjNPs and more importantly, it suggests that the sequence of adverb and ObjNP/PP is indeed connected to scrambling. Indefinite ObjNPs are only found in sentence <17>. Examples for definite ObjNPs were given in (4-38a+b). We will give one example with an indefinite ObjNP:

stimulus <17> Portuguese: **Se ele realmente matou o homem, ninguém pode ajudar ele**
English: If he really killed the man, nobody can help him

(4-40) *wann hei wirklich einen: [0.4] Mensch umgebracht haft [0.5] kann ihm keiner helpe*
(Bra-3; f/52/MLG)
if he really <u>a</u> […] <u>person</u> killed-VERB2 has-VERB1 […] can him nobody help

The following distribution between definite and indefinite ObjNPs ensues:

Table 4-14: Distribution of the tokens of the two sequences between ObjNP and adverb in the conditional clause of sentence <17> in all colonies separated by the definiteness of their ObjNPs

	definite ObjNPs	**indefinite ObjNPs**	**Total**
n (tokens)	152	8	160
adverb-ObjNP	132	8	140
	86.8%	100%	87.5%
ns			
ObjNP-adverb	20	0	20
	13.2%	0%	12.5%

The distribution in Table 4-14 is not significant. This is probably caused by the fact that the linearization *adverb-ObjNP* is the unmarked sequence in sentence <17>. *Wirklich* (‘really’) is a sentence adverb occupying a high structural position. Nevertheless, there is not a single token with the sequence *ObjNP-adverb* when this complement is indefinite, while this sequence occurs twenty times with definite complements. In any case, although Tables 4-13 and 4-14 are inconclusive due to the low number of tokens with ObjPPs and indefinite ObjNPs, they do not counter our assumptions with regard to scrambling.

4.3.4 Combining the two approaches

In this section, we will show how the two approaches for gauging the informants’ scrambling propensity were combined. Table 4-15 gives the number of tokens which could be used in order to calculate the informants’ scrambling behavior. In the upper part, the reader can verify how many tokens per colony come from the distribution of the V(P)R-variants in nine clauses (first approach; cf. Section 4.3.2) and how many come from the position of the ObjNP in three clauses with unraised variants and an adverb (second approach; cf. Section 4.3.3). The maximum number of usable clauses for this index is ten. It is not twelve, as one might expect (9 clauses with the V(P)R-variants; 3 clauses with adverbs), because sentences <15> and <17> are used in both methods depending on the cluster variant.

Table 4-15: Distribution of the number of tokens of nine dependent clauses with two verbal elements (V(P)R-variants) and of three clauses with adverbs (unraised variants) among the informants in six Mennonite colonies (clauses#/informant = number of clauses per informant after the exclusion of the informants with less than two selected translations)

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (informants)	67	103	8	56	42	37	313
n (clauses)	337	408	29	185	108	100	1167
9 clauses (V(P)R-variants)	256	286	18	93	14	10	677
	76%	70%	62.1%	50.3%	13%	10%	58%
3 clauses (adverb + ObjNP)	81	122	11	92	94	90	490
	24%	30%	37.9%	49.7%	87%	90%	42%
clauses/informant	5	4	3.6	3.3	2.6	2.7	3.7
0 clause	0	1	0	1	2	0	4
1 clause	1	6	0	4	5	2	18
2 clauses	2	13	3	11	9	11	49
3 clauses	8	20	2	24	20	21	95
4 clauses	15	28	1	5	5	2	56
5 clauses	16	15	0	4	1	1	37
6 clauses	11	13	1	5	0	0	30
7 clauses	12	6	1	0	0	0	19
8 clauses	1	0	0	1	0	0	2
9 clauses	0	1	0	1	0	0	2
10 clauses	1	0	0	0	0	0	1
clauses#/informant	5.1	4.2	3.6	3.5	2.9	2.8	3.9

The mode in Table 4-15 is three clauses, 95 of the 313 informants fall into this category (30.4%). Seventy-one informants (22.7%) have fewer clauses, 147 informants (47%) have more clauses. The average for all 313 informants is 3.7 clauses. This means that both the mode (3 instead of 7 clauses in Table 4-5) and the average number of clauses (3.7 instead of 6.1) is lower than in the calculation of the raising index. If we were to apply the same cutoff point as in that index, i.e. three clauses, we would lose 71 informants. This number would obviously restrict all analyses to come dramatically. In order to avoid this, the cutoff point was lowered to two clauses,[65] thus only excluding 22 informants. Consequently, the scrambling index was calculated for 291 of the 313 informants. After excluding the informants with less than two usable translations, the general average rises from 3.7 to 3.9 clauses per informant. We find a range from 2.8 (for Fernheim) to 5.1 clauses (for the US-American colony). This distribution is mirror-inverted to the distribution of verb projection raising (there, we had 5.5 clauses in the USA and 7.1 clauses in Fernheim). The difference results from the fact that the North American informants produced more V(P)R-variants than the Paraguayan informants. Furthermore, there are nine possible clauses for informants using the V(P)R-variants, but only three clauses with an adverb for informants using unraised variants.

As we used two approaches for one linguistic phenomenon and as the reader is faced with a higher number of possible threats to reliability than in the case of the raising index, it would be quite understandable if some were not convinced that this index is a reliable and valid instrument. These readers may rest assured however because the analyses throughout this book will show that the scrambling index is a research instrument with explanatory power. In addition, we will show that the combination of the two approaches is a valid measure in Section 4.5. However, before we will do this, the informants will be categorized with regard to their raising and scrambling behavior.

4.4 Different types of speakers with regard to raising and scrambling

4.4.1 Grouping the informants into four types of speakers

The index for verb projection raising could be calculated for 301, that for scrambling for 291 of the 313 informants. A total of 282 informants produced enough tokens for both indexes.

[65] In order to learn the actual number of possible values between the possible extreme values of -0.95 and +0.823, we have to calculate the number of unordered sets from two through ten clauses out of a total of ten clauses and multiply each value by the number of observable scrambled variants. The result is 6.123 and thus even higher than the one for the raising index (2.689; cf. Section 4.2). The highest possible scrambling value in the data set is +0.823 (2 scrambled variants in the dependent clauses of sentences <7> (V(P)R-variant) and <17> (adverb + ObjNP)). The lowest possible value is -0.95 (2 unscrambled variants in the conditional clauses of sentences <17> (V(P)R-variant) and <15> (adverb + ObjNP)). The highest existing value for scrambling was calculated for Bol-5, an older man with three usable clauses; it is +0.506. The lowest existing value was calculated for USA-17, a younger woman again with three usable clauses; it is -0.718.

Based on these informants, a cluster analysis was applied aiming at four CLUSTERS.[66] These CLUSTERS and the informants who belong to them were then named after languages which coincide to their preference for one particular cluster variant. Informants who prefer unraised variants are called German-type informants (separated as for their scrambling behavior in two subtypes), informants who prefer the V2-VPR-variant are called Flemish-type informants, and informants who prefer the VR-variant are called Dutch-type informants. Three informants were re-grouped manually from the Flemish- to the Dutch-type CLUSTER in order to guarantee the maximum number of different groupings.[67] These informants are marked by thick short arrows in Figure 4-1.

Table 4-16 provides the pertinent information with regard to the raising behavior in the four CLUSTERS; Table 4-17 will do so with regard to scrambling. Obviously, the clear-cut differences in these tables are by no means surprising, since it is the very task of a cluster analysis to group the informants into a maximum of different CLUSTERS. We nevertheless deemed it important to present this information to the reader.

Table 4-16: Raising characteristics of four types of speakers

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
n (informants)	40	120	42	80	282
average value	**-0.163**	**-0.149**	**+0.403**	**+0.442**	**+0.1**
highest value	+0.102	+0.14	+0.751	+0.746	+0.751
lowest value	-0.338	-0.379	+0.123	+0.162	-0.379
n (clauses)	281	816	237	452	1786
NR-variants	246	702	69	107	1124
Obj-V1-V2	87.5%	86%	29.1%	23.7%	62.9%
V2-VPR-variant	28	10	126	66	230
V1-Obj-V2	10%	1.2%	53.2%	14.6%	12.9%
VR-variant	7	104	42	279	432
Obj-V1-V2	2.5%	12.7%	17.7%	61.7%	24.2%

The columns in Tables 4-16 and 4-17 represent the four types of informants. After the number of informants and their average raising values (together with the highest and lowest value for each CLUSTER), the reader finds the number of clauses used for the calculation of the raising index and the frequency distribution of the basic cluster variants in these clauses. This distribution is especially interesting for the two German-type CLUSTERS in Table 4-16

[66] When we refer to the result of the cluster analysis, we will use upper case letters for CLUSTER. Cluster in verb cluster will be written in lower case letters.

[67] This slight manipulation was undertaken in order to reach the actual objective of a cluster analysis mentioned by BORTZ and SCHUSTER (2010: 453): “*Mit der Clusteranalyse werden die untersuchten Objekte so gruppiert, dass die Unterschiede zwischen den Objekten einer Gruppe bzw. eines „Clusters“ möglichst gering und die Unterschiede zwischen den Clustern möglichst groß sind.*” [Translation by G.K.: The cluster analysis groups the analyzed objects in a way that minimizes the differences between the objects of a group or of a “cluster” and maximizes the differences between the clusters.]

because the relative preference with regard to the raised cluster variants coincides with the Flemish- (for German I-type informants) and Dutch-type informants (for German II-type informants), respectively. Two of the CLUSTERS show a negative average for the raising index (German-type informants) and two a positive one (Flemish- and Dutch-type informants). In absolute numbers, there are 122 informants (43.3%) with a negative value for the raising index, all belonging to the two German-type CLUSTERS. A total of 160 informants exhibit a positive value (56.7%). Among these, there are members of all CLUSTERS, even though the German-type informants constitute a clear minority.[68] Table 4-17 details the information for the scrambling index:

Table 4-17: Scrambling characteristics of four types of speakers (scr. = scrambling)

	German I informants	German II informants	Flemish informants	Dutch informants	Total
n (informants)	40	120	42	80	282
average value	**-0.377**	**+0.137**	**-0.313**	**+0.159**	**+0.003**
highest value	-0.16	+0.506	-0.103	+0.391	+0.506
lowest value	-0.696	-0.108	-0.718	-0.086	-0.718
n (clauses)	123	370	205	427	1125
scrambling (V(P)R)	**35 (28.5%)**	**114 (30.8%)**	**168 (82%)**	**345 (80.8%)**	**662 (58.8%)**
-scr. (V2-VPR-variant)	28 (80%)	10 (8.8%)	126 (75%)	66 (19.1%)	230 (34.7%)
+scr. (VR-variant)	7 (20%)	104 (91.2%)	42 (25%)	279 (80.9%)	432 (65.3%)
scrambling (adverb)	**88 (71.5%)**	**256 (69.2%)**	**37 (18%)**	**82 (19.2%)**	**463 (41.2%)**
-scr. (adverb-ObjNP)	68 (77.3%)	70 (27.3%)	19 (51.4%)	17 (20.7%)	174 (37.6%)
+scr. (ObjNP-adverb)	20 (22.7%)	186 (72.7%)	18 (48.6%)	65 (79.3%)	289 (62.4%)

Table 4-17 indicates the average scrambling value and the highest and lowest value for each CLUSTER. In the last six lines, the number of tokens in the two methods used for the formation of the scrambling index are presented. For each method, the number of scrambled and unscrambled tokens is given. Two of the CLUSTERS (German II- and Dutch-type informants) show a positive average value for the scrambling index, two of them (German I- and Flemish-type informants) a negative average. With regard to informants, 174 have a positive value (61.7%; all belonging to the German II-type and Dutch-type CLUSTERS), while 108 informants (38.3%) show a negative value. All four CLUSTERS are represented here, i.e. some members of the generally scrambling-friendly CLUSTERS have a negative scrambling value.[69]

[68] Thirty-eight of the informants with a positive value for raising are grouped into the two raising-unfriendly German-type CLUSTERS (23.8% of the 160 informants in these CLUSTERS). These informants are not only a minority within their CLUSTERS, but their raising index is among the 41 lowest positive values; their highest value is +0.14 (among all informants +0.751). The main reason for this somewhat counter-intuitive grouping is the positive mean of the raising index for all informants, which is +0.1.

[69] Twenty-six of the informants with a negative value for scrambling are grouped into the two scrambling-friendly CLUSTERS (13% of the 200 informants in these CLUSTERS). These 26 informants, however, are not only a minority within their CLUSTERS, but their scrambling index is among the 28 negative values closest to

With regard to the cluster analysis, we should not forget that even though the statistical program was asked to create four CLUSTERS, it could have created three CLUSTERS with a positive (or a negative) average value for one or both indexes and just one CLUSTER with a negative (or a positive) average value. Nevertheless, the cluster analysis created two CLUSTERS with clearly positive and two CLUSTERS with clearly negative average values for each index. This state of affairs is the consequence of the fact that the informants' distribution with regard to the two indexes is relatively even (cf. Figure 4-1). Aside from this, it is noteworthy that the average values for the two CLUSTERS that show a positive value and the two CLUSTERS that show a negative value are always comparable. Finally, each of the four CLUSTERS is represented by a robust number of forty to 120 informants, i.e. none of the four combinations seems to be "unnatural".

These are clear hints for the existence of four types of informants along the lines of the four cluster variants caused by verb projection raising and scrambling. We, therefore, conclude once again that the two mechanisms responsible for the superficial shape of MLG verb clusters are largely independent from each other[70] (cf. the discussion leading to Table 4-20 for one exception). The independence of these mechanisms and their influence on other phenomena will be discovered in many analyses to come. In this respect, it is interesting that the combination of independent processes already characterized EVERS' (1975) ground-breaking work. HAIDER (2010: 328) refers to this when he comments:

> In Evers's original proposal (1975), clustering and clause union are the result of two independent processes, namely 'verb raising' […], as right adjunction of the embedded verb to the selecting verb of the matrix, plus deletion of the headless structure ('pruning').

PENNER (1990: 172) also mentions the independence of raising and scrambling and their relationship to other phenomena:

> Turning now to the consequences this analysis has for the acquisition of VPR, we would like to say that the saturation component of the VPR Rule need not be independently acquired. On the one hand, the mechanism of adjunction is available to the child as part of the movement typology. On the other hand, scrambling in the midfield is an independent phenomenon in Bernese.

We can thus confidently summarize this section in the following way:

Summarizing Box 4-2: Verb clusters as epiphenomenon of verb projection raising and scrambling

The facts gathered so far are a strong indication for the independence between verb projection raising and scrambling, i.e. a particular value for one of the two indexes does not imply a particular value for the other one. Therefore, we conclude that the four basic cluster variants in MLG have no reality of their own; they are just the superficial result of the (non-)application of two independent syntactic mechanisms.

zero; their lowest value is -0.108 (among all informants -0.718). Contrary to the raising index, the mean of the scrambling index for all informants is close to zero (+0.003).

[70] There is not a single noteworthy correlation between the two indexes, neither for all 282 informants taken together, nor for the informants in any colony or in any CLUSTER.

A final thought with regard to the tool of analysis developed in this chapter should be given. In almost all analyses to come, we will provide two types of information: On the one hand, we will show the distribution of the phenomenon in question with regard to the four CLUSTERS. The advantage of this is that distributions are quite illustrative and thus easily accessible. On the other hand, we will present the average values for the raising and the scrambling index of the informants producing the different variants of the phenomenon in question. This piece of information is obviously the more reliable and thus more important one. Its greater reliability has to do with the fact that metrical values allow the use of stronger statistical tests (ANOVA), while a frequency distribution only allows the use of tests such as Chi-Square. Another advantage is that the index values are based on slightly more tokens since tokens produced by informants who lack a value for one of the two indexes could not be classified as belonging to one of the four CLUSTERS. Their values for one of the two indexes can be used in a comparison of means though. With these final comments, it also becomes clear that the manual re-grouping of three informants is nothing more than esthetic surgery (cf. Figure 4-1). It only affects the informants' distribution in the CLUSTERS, not their index values.

4.4.2 Sociolinguistic characteristics of the four types of speakers

So far, we have analyzed the informants exclusively with regard to their syntactic behavior. In spite of the fact that this is the primary focus of this study, it would be negligent if we did not investigate the result of the cluster analysis for possible inter-relationships with sociolinguistic factors as well. We thus follow LEPAGE and TABOURET-KELLER (1985: 152), who wrote:

> […] the intention was to find a method of clumping the children together according to similarities in their verbal behavior, and then to explore the question of what non-linguistic attributes membership of the same linguistic clump implies.

Table 4-18 shows the average values for raising and scrambling in the six Mennonite colonies and the distribution of the four CLUSTERS.

Table 4-18: The syntactic behavior of the informants in six Mennonite colonies and their share of four types of speakers →

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (balanced)	42	42	8	42	30	30	194
raising	+0.381	+0.169	+0.044	-0.034	-0.212	-0.25	+0.042
F (5,188) = 38.9, p=0***							
scrambling	+0.058	+0.037	-0.129	-0.073	+0.019	-0.022	-0.001
ns							
n (not balanced)	64	90	8	51	34	35	282
German I-type	1	7	2	15	5	10	40
	1.6%	7.8%	25%	29.4%	14.7%	28.6%	14.2%
χ^2 (15, n=282) = 119.9, p=0*** / Cramer's V: 0.38 / 6 cells (25%) with less than 5 expected tokens							

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
German II-type	9	32	4	24	27	24	120
	14.1%	35.6%	50%	47.1%	79.4%	68.6%	42.6%
Flemish-type	14	17	2	7	2	0	42
	21.9%	18.9%	25%	13.7%	5.9%	0%	14.9%
Dutch-type	40	34	0	5	0	1	80
	62.5%	37.8%	0%	9.8%	0%	2.9%	28.4%

In the upper part of Table 4-18, the average index values for a sociolinguistically balanced subset of informants are presented. For the colonies in the USA, Mexico, and Brazil, seven informants could be randomly selected for each age-gender-subgroup; for the two Paraguayan colonies this number had to be reduced to five. Besides these balanced subgroups, all eight Bolivian informants are listed. The colonies are ranked according to their raising behavior starting with the most raising-friendly US-American colony on the left-hand side.

There is a highly significant relationship between a strong propensity for verb projection raising and a low competence in SG. The US-American colony has an average raising value of +0.381, while Fernheim has a value of -0.25. Therefore, we can say that verb projection raising is a SG-sensitive phenomenon (cf. KAUFMANN 2011 for a more detailed discussion of MLG convergence to or divergence from SG). The 71 informants with a raising value above +0.4 are strongly concentrated in the North American colonies. Thirty-eight of these informants come from the United States (58.5% of the 65 US-American informants with a measurable index value for raising), 28 from Mexico (29.5% of 96 informants). Only five informants come from the South American colonies (4 from Brazil, 1 from Menno).

Among these strongly raising-friendly informants, there is also a clear predominance of younger and female informants. Thirty-six of the 71 informants are younger informants (32.4% of 111 informants), twenty are middle-aged informants (19.4% of 103 informants), and only fifteen are older informants (17.2% of 87 informants). Forty strongly raising-friendly informants are women (28% of 143 informants), 31 men (19.6% of 158 informants). Ten younger women can be found among the fourteen most raising-friendly informants. In addition, there are two younger men and two older men. 35.7% of all younger women (20 of 56 informants) and 29.1% of all younger men (16 of 55 informants) are among the 71 most raising-friendly informants. These distributional patterns exhibit a certain similarity to processes LABOV (2001: 280) calls changes from below. Normally it is (young) women who lead such changes. In order to see which of the colonies are responsible for these patterns, we checked for age and gender differences in the six colonies. In two of them, the raising value depends on the informants' age. Table 4-19 provides the pertinent information. As we are not comparing colonies in this part, we do not have to restrict the analysis to the balanced subset of informants.

Table 4-19: Significant age differences in the raising index

	Mexico		Brazil	
	n	∅	n	∅
n (informants)	96	+0.19	56	-0.05
younger informants	34	+0.367	18	+0.094
	F (2,93) = 11.4, p=0***		F (2,53) = 13.7, p=0***	
middle-aged informants	37	+0.091	18	+0.024
older informants	25	+0.1	20	-0.247

Age causes a highly significant difference in Mexico and Brazil. In both cases, it is the younger informants who apply verb projection raising most frequently. In Brazil, one can again connect this behavior to the level of SG competence. As SG was forbidden in the Brazilian school context in the 1940s (cf. Section 2.1), the MLG of middle-aged and younger informants has not been roofed by SG anymore, i.e. the SG target for possible syntactic convergence has been lost. In Brazil, there is also an interesting interaction between gender and age. It is younger women who are in the lead for more raising (in Mexico both younger men and younger women are in the lead). Their average raising value is the highest of all Brazilian subgroups (+0.139). Middle-aged women have the second highest value (+0.059) (cf. KAUFMANN (2011: 217–221) for a detailed analysis).

In Mexico, there has not been any dramatic change with regard to the already low competence level in SG. Nevertheless, the drive for verb projection raising is the same. With +0.367, younger informants almost reach the raising value of the US-American colony (the average for all 64 informants there is +0.389). They thus seem to have caught up with a development that started thirty years ago in Texas and was probably caused by the immigration experience of these Mennonites. Interestingly, the Mexican change is less steady than in Brazil. It is only the younger informants, who strongly start to raise.

With regard to scrambling, the two North American colonies again show the highest average values, but there are decisive differences to raising: (a) The biggest difference between the scrambling values in the six colonies is 0.187 (+0.058-(-0.129); for raising, the maximum span is 0.631; +0.381-(-0.25)); (b) the difference between the colonies is not significant; and (c) the Bolivian and Brazilian informants, not the Paraguayan ones, exhibit the lowest average scrambling values. As these informants' competence in SG is (far) lower than that of the Paraguayan informants, scrambling does not have a direct connection to the informants' competence in SG. This is not surprising since the correlation between the competence in SG and raising, but not scrambling, coincides with linguistic facts. Verb projection raising in SG is a marginal phenomenon, which is only licensed when certain, highly specific structural constellations exist.[71] Scrambling in SG, on the other hand, has a

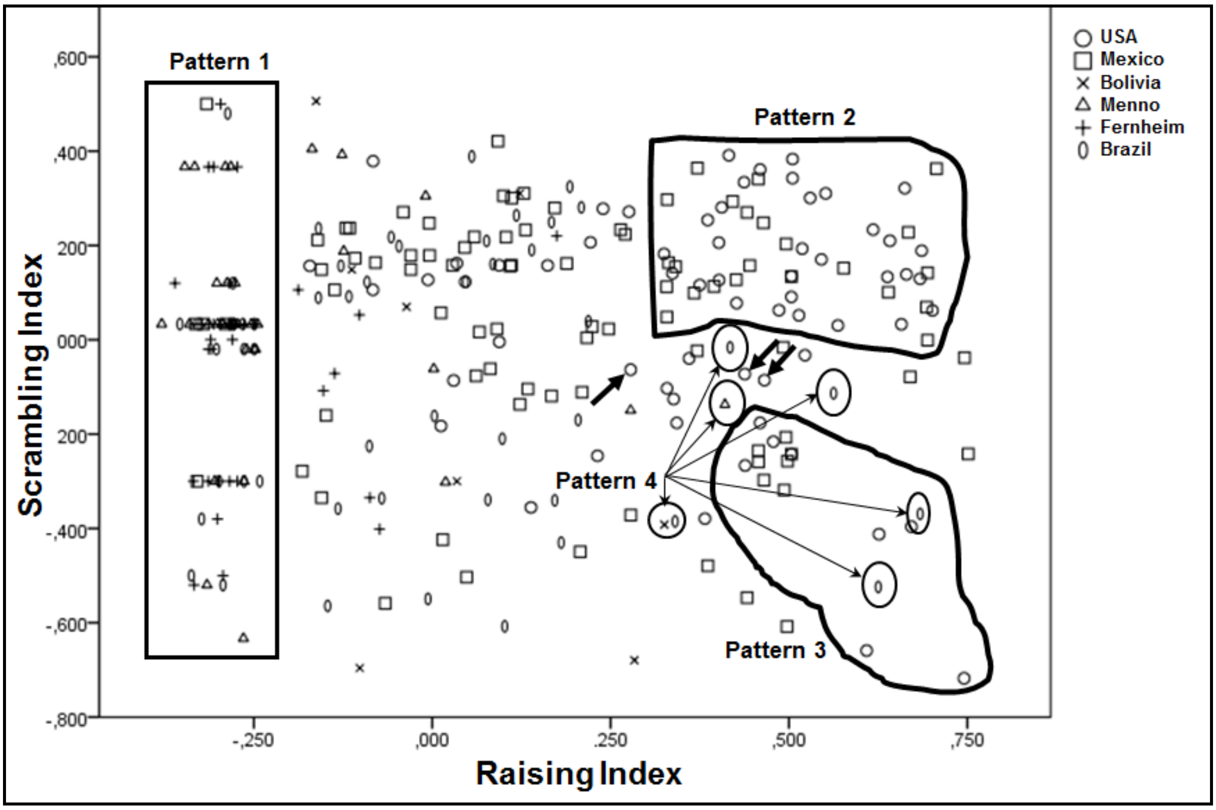
[71] Verb projection raising in SG only occurs in dependent clauses with three or more verbal elements. With regard to clusters with three verbal elements, it is restricted to clusters, where both non-finite verbs appear morphologically as infinitives governed by finite *werden* ('will') or *haben* ('have'; IPP-effect). An example for

much wider field of application and is driven much less by normative pressures or structural constellations (apart from the question of definiteness and the presence of prepositions; cf. the discussion in Section 4.3.1). The reason for its application is more pragmatic than syntactic.

The different status of scrambling also appears when looking at the 69 informants with a scrambling value above +0.2. In contrast to the raising index, all colonies are more or less evenly represented in this group. The highest share is 30.2% in Mexico (29 of 96 Mexican informants with a measurable index value); the lowest is 14.3% in Fernheim (5 of 35 informants). With regard to the age-gender-subgroups there is not a single striking deviance. Among the fourteen most scrambling-friendly informants, there are members from all six subgroups (4 younger women, 3 younger men). Among the 69 most scrambling-friendly informants are 36 women (26.3% of 137 informants) and 33 men (21.4% of 154 informants); the shares for the age groups range from 21.2% (old) to 26.5% (middle-aged).

We just mentioned that a direct connection between scrambling and the competence in SG does not exist. An indirect relationship between scrambling and language competence in SG and the majority languages can be detected however once one starts looking at Figure 4-1. This scatterplot shows the distribution of the 282 informants with values for both indexes (the 3 thick short arrows indicate the informants whose CLUSTER affiliation was manually changed).

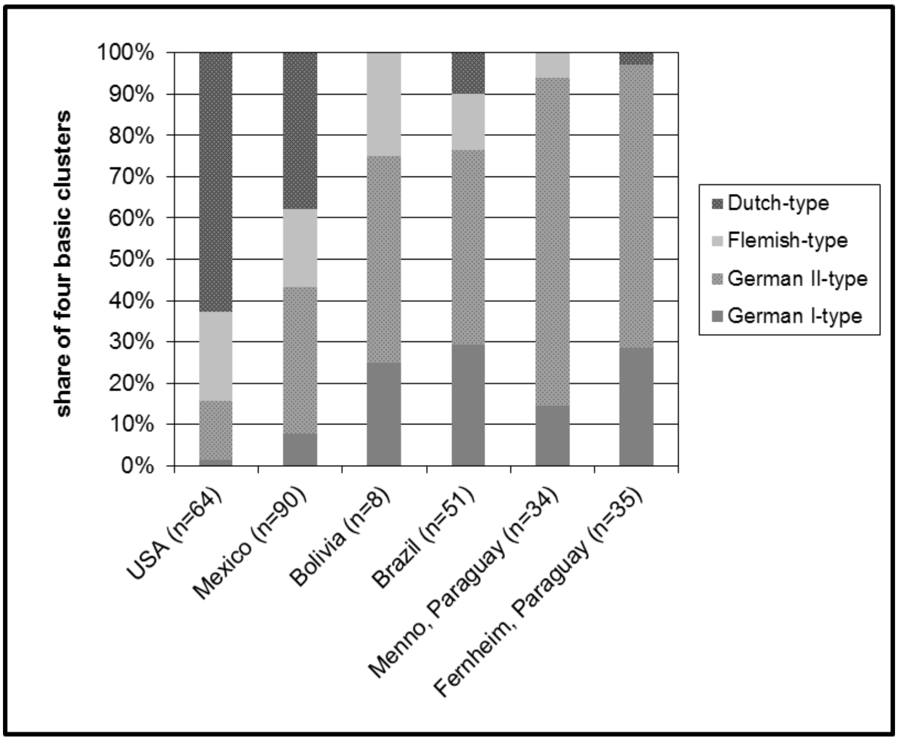
Figure 4-1: Scatterplot of the raising and scrambling behavior of 282 informants



the latter case is the sentence *Peter weiß, daß er seiner Mutter* ***hat*** *helfen müssen* (gloss: Peter knows that he his mother has-VERB1 help-VERB3 must-VERB2; 'Peter knows that he had to help his mother').

The rectangle on the left-hand side of Figure 4-1 (Pattern 1) includes 76 informants with a very low raising value (lower than -0.2) and a freely varying scrambling value. In this area, there are only five North American informants and all of them come from the Mexican colony (there are only two symbols clearly visible, the others are hidden in the parts with strong concentrations of informants). This unequal distribution can also be seen in the lower part of Table 4-18 where all 282 informants are distributed with regard to the CLUSTER to which they belong. Figure 4-2 illustrates this distribution:

Figure 4-2: Shares of four types of speakers in six Mennonite colonies



Only 49 of the 154 North American informants (31.8%) belong to the raising-unfriendly German-type informants, while the share of the four South American colonies in these CLUSTERS is 86.7% (111 of 128 informants). Going back to Pattern 1 in Figure 4-1, this uneven distribution becomes even more marked. As mentioned above, there are only five North American informants (3.2% of 154 informants), but 71 South American ones (55.5% of 128 informants), i.e. the North American informants are not only heavily underrepresented in the two German-type CLUSTERS, but within these raising-unfriendly CLUSTERS they represent the more raising-friendly members. The average raising value of the 49 North American informants in the German-type CLUSTERS is -0.036, the one of the 111 South American informants -0.204 ($F(1,158) = 53.1$, $p=0$***).

Looking at the circled section in the upper right-hand corner of Figure 4-1 (Pattern 2; left-hand limit at a raising value of +0.3; lower limit at a scrambling value of zero), we can detect another interesting fact. All informants in this pattern come from the two North American colonies (31 from the USA, i.e. 48.4% of 64 informants; 22 from Mexico, i.e. 24.4% of 90 informants). This does not mean that there are no South American Mennonites among the 92 informants with a raising value equal to or above +0.3. As a matter of fact, there are seven (5 from Brazil, 1 from Bolivia, and 1 from Menno; indicated by small circles conjointly labeled as Pattern 4). The difference to the strongly raising-friendly informants in North America is that all of them have a scrambling value lower than zero. Again, this does not mean that there are no Brazilian, Bolivian, or Paraguayan informants with a scrambling value above zero – on the contrary, the majority of them belongs to this group (71 of 128 informants, i.e. 55.5%) –, but they all have a raising value lower than +0.3. So in spite of the general lack of a correlation between the two indexes, in certain areas there seem to be interrelationships.

The question that arises is why the South American informants do not combine a high raising value with a high scrambling value and why the most raising- and most scrambling-friendly informants come exclusively from the North American colonies, the colonies least influenced by SG. What makes the VR-variant so attractive for these informants? In-Depth Analysis 7.2.4.2 and Section 8.2.3 will give a possible answer to this question. The gist of the story is that it seems to be easier for a raising- and scrambling-friendly Dutch-type informant to suppress scrambling than it is for a raising-friendly, but scrambling-unfriendly Flemish-type informant to apply scrambling. With the possibility to apply scrambling at will, the Dutch-type informants gain a tool to express the degree of syntactic (dis)integration of complement clauses.

If we focus on the area marked by a raising value of at least +0.3 and a scrambling value below zero, we find 39 informants: 32 North American Mennonites and the seven South American Mennonites from Pattern 4. The circled subarea in this field (Pattern 3) offers one more noteworthy piece of information which may be connected to the question of the previous paragraph. There are only eight US-American informants in this area, but all of them indicate English (7 informants) or Spanish (1 informant) as their dominant language. Granted, there are 22 more US-American informants, who are dominant in English (or Spanish) and nevertheless exhibit high scrambling values (13 of them can be found in Pattern 2). In spite of this, the combination of a high raising value and a low scrambling value in the US-American colony is uniquely found in the English/Spanish-dominant group.

In the linguistically more stable Mexican colony, only nine out of ninety informants consider Spanish (6) or English (3) dominant. Because of this low number, a comparable analysis is less reliable. Nevertheless, the gist of the story is the same. Among the sixteen Mexican informants in Pattern 3, there are three Spanish/English-dominant informants (18.8%). Among the rest of the Mexican informants, this share drops to 8.1% (6 out of 74 informants). In view of this, one could formulate a hypothesis that initial language attrition among raising-friendly informants furthers the occurrence of the V2-VPR-variant. The eight non-MLG-dominant informants from the US-American colony in Pattern 3 all belong to the Flemish-type CLUSTER and have a share of 73.2% of the V2-VPR-variant in their translations selected for index formation. The five MLG-dominant US-American informants in this CLUSTER have a much lower share of 40%. Due to this possible effect of an initial stage of language attrition, the most refined analyses of this project, those in Section 8.2, will exclude informants with a competence level of MLG below ten out of fourteen points.

If we try to translate all these facts into different stages on a time line, one may assume the following developmental sequence:

Summarizing Box 4-3: Possible developmental stages with regard to raising and scrambling

(i) As long as the informants do not reach a raising value equal to or above +0.3, the scrambling value can cover the whole possible range, i.e. there is no inter-relationship between raising and scrambling. The reason for this could be that the share of raised cluster variants in the speech of these informants has not yet reached a critical mass in order to be used functionally.

(ii) The first speakers in a colony that start to become very raising-friendly (especially the 7 South American informants of Pattern 4 in Figure 4-1) have low scrambling values. The reason for becoming more raising-friendly may be connected to parsing difficulties with strictly left-branching verb clusters in a context where SG norms are no longer present. After all, six of the seven informants in question come from Brazil and Bolivia, colonies which (currently) have little contact to SG. Here, raising and scrambling do not seem to be independent factors anymore. Scrambling seems to be restricted by high raising values. The question why raising does not combine with scrambling in these cases cannot yet be answered.

(iii) Only once there is a substantial number of raising-friendly speakers in a colony, i.e. only when the share of raised cluster variants reaches a critical mass, some of these speakers start to combine raising with scrambling. These informants (Pattern 2 in Figure 4-1) put their new scrambling ability to functional use. Not all raising-friendly informants start scrambling though. Therefore, raising and scrambling seem to be independent processes again.

(iv) Some speakers approaching a situation of language attrition return to stage (b) preferring a combination of a high raising value and a low scrambling value (especially the 8 English- or Spanish-dominant US-American informants in Pattern 3 in Figure 4-1). Here again, the two phenomena seem to be interrelated. As all selected translations with the V2-VPR-variant could be reanalyzed as verb second, one might – unlike in stage (b) – think of the possibility of a syntactic simplification leveling the differences between clauses with and without an introducing element.

Especially looking at the first three stages, one could claim that the scrambled VR-variant is the most “natural” cluster variant, because it is preferred by the informants least influenced by SG norms. Table 4-20 supports the speculations hitherto propagated by offering statistical evidence that interdependency really exists between the raising and the scrambling behavior of some Mennonites. This interdependency only surfaces once we distinguish different raising-values and the more raising-friendly informants in North America from the less raising-friendly South American informants. As at least some Mennonites dominant in the majority languages showed a marked and deviant behavior (cf. stage (iv) in Summarizing Box 4-3), these informants were excluded. Likewise, the Paraguayan informants dominant in SG were excluded.

Table 4-20: Average scrambling value of competent speakers of MLG separated by their origin and their raising behavior

	North America	South America	North America	South America	North America	South America
	raising < -0.2		**-0.2 ≤ raising ≤ +0.3**		**raising > +0.3**	
n (informants)	4	55	53	35	57	5
scrambling	+0.067	-0.014	+0.039	-0.025	+0.067	-0.31
	ns		ns		F (1,60) = 13.1, p=0.001**	

Although the North American colonies show higher scrambling values in all raising categories, only the difference in the most raising-friendly category (values above +0.3) is significant. This confirms the deviant behavior of the raising-friendly North American informants. The partial exclusion and the separation of different speaker types used in the data of Table 4-20 may seem arbitrary at this point, but we will see in Section 8.2 that this is not the case. One simply has to take into consideration different types of Mennonite speakers, i.e. different types of MLG grammars. These different grammars exist in different colonies, but sometimes, they exist in one and the same colony.

4.5 Indications for the validity of the two approaches to scrambling

In this section, the comparability and validity of the two methods used for the formation of the scrambling index will be tested. Section 4.5.1 directly compares the behavior of informants whose scrambling index was formed with tokens from both methods. Section 4.5.2 will deal with sequences of adverbs and ObjNPs in three clauses.

4.5.1 Informants with at least two usable translations for each approach

The scrambling value of 39 informants is calculated exclusively by means of clauses with the V(P)R-variants (13.4% of the 291 informants). The value for 77 informants (26.4%) is exclusively based on clauses with unraised variants and adverbs. For 175 informants, tokens from both phenomena were used. This fact enables us to directly compare the two methods. If both methods measure the same thing and if we assume that scrambling-friendly (scrambling-unfriendly) informants will (not) scramble whenever possible, informants using the scrambled sequence *ObjNP-adverb* should also prefer the scrambled VR-variant. On the other hand, informants using the unscrambled sequence *adverb-ObjNP* should prefer the unscrambled V2-VPR-variant. Unfortunately, only 59 of the 175 informants produced at least two tokens for each method and this number was considered necessary for such an informant-based comparison.

In Table 4-21, the 59 informants are grouped into three groups (columns *no*, *medium*, and *strong scrambling*) according to their behavior with regard to the sequence of adverbs and ObjNPs in the three clauses used in the second approach (cf. Section 4.3.3). Informants were grouped in the *no scrambling*-group if they did not show a single scrambled sequence *ObjNP-adverb* in two or three tokens. Informants were grouped in the *medium scrambling*-group if they produced one token with the sequence *ObjNP-adverb* in two clauses or one or two tokens with this sequence in three clauses. Informants were grouped in the *strong scrambling*-group if they translated all tokens with the sequence *ObjNP-adverb*. Table 4-21 illustrates the frequency of the tokens of the unscrambled V2-VPR- and the scrambled VR-variant which the informants in these three groups produced in the nine clauses selected for the first approach (cf. Section 4.3.2).

Table 4-21: Distribution of the V(P)R-variants in the translations of 59 informants separated by their scrambling behavior in tokens with unraised variants and adverbs

	no scrambling	**medium scrambling**	**strong scrambling**	**Total**
n (informants)	8	33	18	59
n (ObjNP-adverb)	0 of 2-3	1 of 2/1-2 of 3	2 of 2/3 of 3	
sentence <2>	8 (50%)	32 (45.7%)	17 (45.9%)	57 (46.3%)
sentence <15>	0	7 (10%)	15 (40.5%)	22 (17.9%)
sentence <17>	8 (50%)	31 (44.3%)	5 (13.5%)	44 (35.8%)
n (tokens)	26	103	51	180
V2-VPR-variant	17	32	14	63
V1-Obj-V2	65.4%	31.1%	27.5%	35%
χ^2 (2, n=180) = 12.5, p=0.002** / Cramer's V: 0.26 / 0 cells with less than 5 expected tokens				
VR-variant	9	71	37	117
Obj-V1-V2	34.6%	68.9%	72.5%	65%

The distribution of the two raised V(P)R-variants is highly significant. The informants that do not exhibit a single case of scrambling the ObjNP in front of the adverb use the unscrambled V2-VPR-variant in 65.4% of the cases. The other two groups whose informants sometimes/always produce the scrambled sequence *ObjNP-adverb* use the unscrambled cluster variant in only 31.1% and 27.5% of the tokens, respectively. This is important evidence for the comparability of the two methods. Unexpectedly, the difference between the last two groups is smaller than expected. This could be the consequence of the fact that in the *medium scrambling*- and *no scrambling*-groups, roughly half of the translations with adverbs stem from the two scrambling-friendly clauses of sentences <2> and <15> (50% and 55.7%, respectively; cf. the lines *sentence <2>*, *sentence <15>*, and *sentence <17>*), while this share is 86.5% in the *strong scrambling*-group. This means that the chance of mis-grouping is higher in the case of the *strong scrambling*-group than in the other two groups since the lacking sentence in the first group is mostly a sentence with a high propensity for the unscrambled sequence *adverb-ObjNP*. One token with this sequence would be enough to re-group an informant from the *strong scrambling*- to the *medium scrambling*-group. In any case, although the results of Table 4-21 are not conclusive, they definitely support rather than contradict the comparability of the two approaches to scrambling.

4.5.2 Three clauses with ObjNPs and adverb(ial)s

4.5.2.1 Sentence <25> *He is crying, because he has to eat salad every day*

Another indication for the validity of the scrambling index comes from tokens of stimulus sentence <25>. In this context, we can again see that deviations from the expected translations can further our understanding of how MLG works. Sentence <25> could not be used in the basic distributions for verb projection raising and scrambling because of two facts: First, it is a causal clause, a clause type, which has been reanalyzed as verb second in the North American colonies (cf. Section 6.3 and KAUFMANN 2003a: 188–189) and second, it remains unclear whether *salad* is an ObjNP without an article or a bare noun incorporated into the verb *eat*. Due to the possible lack of an ObjNP, it is difficult to distinguish between the VPR-variants and the VR-variant. Twelve informants, however, did not only translate this clause with a NR-variant, i.e. did not reanalyze it as a dependent main clause, but also changed the structure of the stimulus sentence by translating *salad* as an unambiguously definite ObjNP *the salad*. Two tokens are given, one with *den Salot* following the adverbial *alle Tag* ('every day'; cf. (4-41a)), one with *den Salot* preceding it (cf. (4-41b)):

stimulus <25> Portuguese: **Ele está chorando porque ele tem que comer salada todos os dias**
English: He is crying, because he has to eat salad every day

no scrambling (***adverbial***-OBJNP)

(4-41) a. *hei rohrt wegens her alle Tag den Salot ete mut* (Bra-8; f/14/P>MLG-∅)
he cries because he all days ~~the~~ salad eat-VERB2 must-VERB1

scrambling (OBJNP-***adverbial***)

b. *hei hielt wiels hei de- den Salot alle Tag ete mut* (Bra-31; f/59/MLG)
he cries because he ~~the-~~ ~~the~~ salad all days eat-VERB2 must-VERB1

Granted, twelve tokens are by no means an impressive amount and, unfortunately, this number is reduced even further, because two of the twelve informants did not produce enough tokens to measure their scrambling index. In spite of this, we will present the results in Table 4-22. The columns *raising index* and *scrambling index* indicate the average index values for the informants producing the tokens in question. The columns *German I informants* and *German II informants* give the corresponding frequency information. Not one of the tokens was produced by North American informants and none by raising-friendly Flemish- and Dutch-type informants.

Table 4-22: Distribution of two sequences of ObjNP and adverbial in the causal clauses of sentence <25> separated by the informants' raising and scrambling behavior (definite ObjNPs; finite modal verb)

	raising index	**scrambling index**	**German I informants**	**German II informants**	**Total**
features			-raising -scrambling	-raising +scrambling	
n (tokens)	12	10	4	6	10
adverbial-ObjNP -scrambling	5	4	3	1	4
	-0.237	-0.299	75%	16.7%	40%
	ns	F (1,8) = 6 p=0.041*	χ^2 (1, n=10) = 3.4, p=0.065$^{(*)}$ / Phi: -0.58 / 4 cells (100%) with less than 5 expected tokens / Fisher's Exact: ns		
ObjNP-adverbial +scrambling	7	6	1	5	6
	-0.228	+0.007	25%	83.3%	60%

The frequency distribution in Table 4-22 is exactly as expected. Scrambling-unfriendly German I-type informants prefer the unscrambled sequence *adverbial-ObjNP*, while scrambling-friendly German-II-type informants prefer the scrambled sequence *ObjNP-adverbial*. This distribution shows a statistical tendency, but as all four cells have very low numbers of expected tokens, the more appropriate Fisher's Exact was calculated. This test does not produce a significant result. However, we do have a more reliable instrument for statistical testing, namely the index values of the informants producing the variants in question. In spite of the low number of tokens analyzed, the scrambling value of the informants producing the sequence *adverbial-ObjNP* is significantly lower than that of the informants producing the sequence *ObjNP-adverbial*. Unsurprisingly, there is no difference in the raising index. This coincides with our expectations since the differing characteristic between German I-type and German II-type informants is their scrambling behavior, not their raising behavior. Granted, as the scrambling index of the ten German-type informants was calculated predominantly by means of the sequence between ObjNP and adverb (24 tokens) and not by means of either the V2-VPR-variant or the VR-variant (4 tokens), this result does not prove that both methods used in forming the scrambling index measure the same thing. It does demonstrate, however, that the preference for either the sequence *adverb(ial)-ObjNP* or the sequence *ObjNP-adverb(ial)* is stable.

4.5.2.2 Sentence <13> *If he quits his job, I won't help his family anymore*

Clearer indications supporting the assumption that the two methods measure the same thing come from the analysis of the matrix clause of sentence <13>, the clause not used in the second approach to scrambling. The relevant variants are illustrated by Brazilian tokens:

stimulus <13> Portuguese: **Se ele largar o emprego dele, eu não vou ajudar mais à familia dele**
English: If he quits his job, I won't help his family anymore

no scrambling (***adverbial***-OBJNP)

(4-42) a. *wann hei sine Arbeit [0.4] lat dann wer ik nich mehr sine Familie helpe* (Bra-6; f/23/MLG)
if he his work […] let ~~then~~ will I not anymore his family help

scrambling (OBJNP-***adverbial***)

b. *wann hei die Arbeitsstet verlote dät wer ik sine Familie nich mehr helpe*
(Bra-22; m/37/MLG+P)
if he <u>the</u> <u>workplace</u> leave ~~does~~ will I his family not anymore help

The reason for the exclusion of sentence <13> was that it constitutes the only main clause with the finite verb in second position among the four clauses mentioned in Section 4.3.3. Besides this structural difference, one rather curious distributional fact raises additional suspicions about the usability of this sentence. Table 4-23 gives the frequency distribution of the two variants in the six colonies and – more importantly – according to the language used in the translation task:

Table 4-23: Distribution of two sequences of ObjNP and adverbial in the matrix clause of sentence <13> separated by the informants’ origin and by the language of the stimulus sentence (only definite ObjNPs; E=English; S=Spanish; P=Portuguese)

	USA	**Mexico**		**Bolivia**	**Brazil**	**Menno**		**Fernheim**		**Total**
stimulus version	E	S	E	S	P	S	E	S	E	
n (tokens)	49	74	3	6	48	18	9	13	4	224
adverbial-ObjNP	1	32	0	4	21	7	0	3	0	68
-scrambling	2%	43.2	0%	66.7%	43.8%	38.9	0	23.1	0%	30.4%
χ^2 (2, n=224) = 36.1, p=0*** / Cramer’s V: 0.4 / 0 cells with less than 5 expected tokens										
ObjNP-adverbial	48	42	3	2	27	11	9	10	3	156
+scrambling	98%	56.8	100	33.3%	56.3%	61.1	100	76.9	100	69.6%

The distribution between the three languages of the stimulus sentence given in Table 4-23 is highly significant and shows a medium level of association. The reason for this is the deviant behavior of the informants translating from English (without them the distribution is not significant). This difference is especially impressive in the three colonies where both Spanish and English were used (Mexico, Menno, and Fernheim). The question then is how we can explain the strong preference for the scrambling variant in the US-American colony. A look at the different stimulus versions of the four clauses with adverb(ial)s answers this question.

(4-43)	**stimulus <2>**	English	John doesn’t think that you know YOUR FRIENDS ***well***
		Spanish	Juan no cree que conozcas ***bien*** A TUS AMIGOS
		Portuguese	O João não acha que tu conheces ***bem*** OS TEUS AMIGOS
(4-44)	**stimulus <13>**	English	If he quits his job, I wo***n’t*** help HIS FAMILY ***anymore***
		Spanish	Si él deja el trabajo, ***ya no*** voy a ayudar A SU FAMILIA
		Portuguese	Se ele largar o emprego dele, eu ***não*** vou ajudar ***mais*** À FAMILIA DELE
(4-45)	**stimulus <15>**	English	If he has to sell THE HOUSE ***now***, he will be very sorry
		Spanish	Si tiene que vender LA CASA ***ahora***, se va a poner muy triste
		Portuguese	Se ele tiver que vender A CASA ***agora***, ele vai ficar muito triste
(4-46)	**stimulus <17>**	English	If he ***really*** killed THE MAN, nobody can help him
		Spanish	Si ***realmente*** mató aL HOMBRE, nadie lo puede ayudar
		Portuguese	Se ele ***realmente*** matou O HOMEM, ninguém pode ajudar ele

Stimulus sentences <15> and <17> do not pose any problems. The position of the adverb is identical in the three languages (clause-final in the conditional clause of sentence <15>; directly in front of the finite verb in the conditional clause of sentence <17>), i.e. we do not have to worry about possible priming effects in the translations. Sentence <2> is already somewhat problematic, because the adverb in English surfaces clause-finally, while the Romance stimulus sentences linearize the adverb before the ObjNP. Sentence <13> is particularly problematic because it contains a complex adverbial, which includes the negation particle. In English, this particle is incorporated into the future marker *will*; in Spanish and Portuguese, it appears before the finite auxiliary verbs *voy* and *vou*, respectively. Aside from this, the dependencies of the two elements are not identical. In English and Portuguese (like in MLG), the negation particle (*not*, *não*, and *nich*) has scope over the adverb (*anymore*, *mais*, and *mehr*), while in Spanish the adverb *ya* seems to have scope over the negation particle *no*. Additionally, the position of the complex adverbial is not only different between English on the one hand and the two Romance languages on the other hand, but every language has a different serialization pattern. In English and Portuguese, the two basic elements are discontinuous (the adverbial part occurring clause-finally in English and before the ObjNP in Portuguese), whereas in Spanish the two elements are adjacent and – as already mentioned – appear in the opposite order. These structural differences may explain the deviant behavior of the US-American informants, because in the US-American colony the MLG complex adverbial *nich mehr* occupies the same position as English *anymore* almost exclusively (cf. KAUFMANN (2005: 77–87) for other priming effects in the data set).

Table 4-24 shows the distribution of the two variants depending on the raising and scrambling behavior of the informants that translated the Spanish stimulus sentence. Besides excluding the informants translating from English, we also excluded the Brazilian informants translating from Portuguese in order to avoid any priming-related problems.

Table 4-24: Distribution of two sequences of ObjNP and adverbial in the matrix clause of sentence <13> separated by the informants' raising and scrambling behavior (definite ObjNPs; only translations from Spanish; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	107	101	12	47	14	25	98
adverbial-ObjNP -scrambling	46	41	6	11	13	11	41
	+0.168	-0.08	50%	23.4%	92.9%	44%	41.8%
	F (1,105) = 12.3 p=0.001**	F (1,99) = 16 p=0***	χ^2 (3, n=98) = 21.9, p=0*** / Cramer's V: 0.47 / 0 cells with less than 5 expected tokens				
ObjNP-adverbial +scrambling	61	60	6	36	1	14	57
	-0.036	+0.116	50%	76.6%	7.1%	56%	58.2%

As the reader will encounter this kind of complex table quite often in this study, we will explain its structure step by step. Concentrating first on the columns, one sees the grouping of the informants in four CLUSTERS (German I-type, German II-type, Flemish-type, and Dutch-type informants; cf. columns 4 through 7 and the total of these informants in column 8 *Total*). In the line *features*, the general raising and scrambling characteristics of the CLUSTERS are indicated. Beneath this, the line *n (tokens)* indicates the number of tokens available for the analysis. The lines *adverbial-ObjNP* and *ObjNP-adverbial* detail the absolute and relative frequency per CLUSTER (for example, the share for the unscrambled sequence *adverbial-ObjNP* among the German II-type informants is 23.4%). The columns *raising index* and *scrambl. index* detail the average index values of the informants producing the two variants. One first finds the total number of informants who produce these tokens. These numbers are higher (123 and 116, respectively) than in the column *Total* (n=113), because in order to be included in the CLUSTER distribution, an informant needs to have a value for both indexes. In the second and third columns, one of the two index values is sufficient for inclusion. Beneath the number of tokens, the average raising and scrambling values of the informants who produced the unscrambled sequence *adverbial-ObjNP* (+0.168 and -0.08, respectively) and the scrambled sequence *ObjNP-adverbial* (-0.036 and +0.116, respectively) are given.

The frequency distribution in Table 4-24 is highly significant with a medium level of association showing that the scrambling variant (*SINE FAMILIE* ***nich mehr***) is used more often in the two scrambling-friendly CLUSTERS (German II-type and Dutch-type informants) than in the two scrambling-unfriendly CLUSTERS (German I-type and Flemish-type informants). Furthermore, both the values of the raising and the scrambling index show highly significant differences.[72] This expected state of affairs, however, is only a necessary condition with which to show that both phenomena used to form the scrambling index measure the same thing. As the scrambling index of most informants was formed by means of both methods, we have to detail the real share of each method for the informants of each CLUSTER. Only in this way can we show that even informants whose scrambling index was predominantly calculated with the V(P)R-variants exhibit the expected behavior with regard to the sequence of ObjNP and adverbial in sentence <13>. Table 4-25 details the share of both methods for the informants of Table 4-24:

Table 4-25: Distribution of the two methods used for the formation of the scrambling index of the informants of Table 4-24 separated by their raising and scrambling behavior

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	39	148	66	129	382
Method 1	10	51	52	107	220
V(P)R-variants	25.6%	34.5%	78.8%	82.9	57.6%
Method 2	29	97	14	22	162
adverb + ObjNP	74.4%	65.5%	21.2%	17.1%	42.4%

The sufficient evidence for the comparability of the two methods comes from the Flemish- and Dutch-type informants. The scrambling index of these informants is formed in 78.8% and 82.9% of the cases with the distinction between the V2-VPR- and the VR-variant, i.e. with the method possibly not comparable to the sequence of sentence <13>. In spite of this, the scrambling-friendly Dutch-type informants use the scrambled variant *ObjNP-adverb* eight times as often as the scrambling-unfriendly Flemish-type informants (56% and 7.1%; the

[72] Even including the English- and Portuguese-based tokens, all facts mentioned are still valid, i.e. the attested differences are still (highly) significant.

distribution of these two CLUSTERS alone is also highly significant and shows a medium level of association). It is hardly imaginable that the method using the sequence between ObjNP and adverb, which only accounts for 21.2% and 17.1% of the index formation of these informants, could cause such a huge difference on its own.

4.5.2.3 Sentence <2> *John doesn't think that you know your friends well*

Sentence <2> was used in the second approach of the formation of the scrambling index. In spite of this, there are two variants with one verbal element which have not yet been used. The first context concerns eleven tokens (8 featuring an adverb) where the verbal element does not appear in last position, but before the ObjNP it is governed by. We will not analyze this peculiar verb position here – this will be done in Section 5.5 – but the sequence between ObjNP and adverbial can be investigated:

stimulus <2> English: **John doesn't think that you know your friends well**
Spanish: **Juan no cree que conozcas bien a tus amigos**

(4-47) a. *Johann gleuft nich daut dü kenns dine Frend [1.1] gut* (USA-72; f/35/E>MLG-64%)
John thinks not that you know your friends […] well

b. *Johann gleuft daut dü ke- du kenns nich fein dine Frend* (Mex-97; m/22/MLG)
John thinks ∅ that ~~you~~ ~~kn-~~ you know ~~not~~ fine your friends

Six of the eight tokens in question exhibit the scrambled sequence *ObjNP-adverb*, their average value for scrambling is -0.064. The other two tokens show the unscrambled sequence *adverb-ObjNP* and as expected, their scrambling value is lower; it is -0.167 (the raising values are +0.413 and +0.493, respectively). This difference is not significant though. Obviously, the negation particle *nich* ('not') of the matrix clause has contaminated the dependent clause in (4-47b) joining the adverb, a case of negative lowering. Furthermore, one may suspect that the restart in (4-47b) turns this introduced complement clause into a dependent main clause. In view of these problems, it is fortunate that there is a second context we can look at, namely complement clauses without the introducing element *daut* ('that') (cf. Section 7.1 for an exhaustive discussion of this phenomenon). This context is represented by examples (4-48a+b) from Fernheim:

stimulus <2> Spanish: **Juan no cree que conozcas bien a tus amigos**
English: John doesn't think that you know your friends well

(4-48) a. *Hans meint [0.4] dü kenns nich gut dine Fami- dine Frend* (Fern-22; f/61/MLG)
John thinks ∅ ∅ […] you know ~~not~~ well ~~your~~ ~~fami-~~ your friends

b. *Hans gleuft ik [0.6] kenn mine Frend nich gut* (Fern-26; f/39/SG>MLG-64%)
John thinks ∅ ∅ I […] know my friends ~~not~~ well

There are 49 tokens following this pattern. None of them features a negated matrix clause, a fact which is not surprising since negated matrix clauses normally do not permit dependent main clauses as complements (cf. AUER 1998: 291–292 and Table 7-3). In five tokens, neither the matrix nor the dependent clause exhibit negation, but this fact does not influence the results. Table 4-26 shows the distribution of the two sequences *adverbial-ObjNP* and *ObjNP-adverbial* and the average index values of the informants producing these tokens.

Table 4-26: Distribution of the two adjacent sequences of ObjNP and adverbial in unintroduced complement clauses of sentence <2> separated by the informants' raising and scrambling behavior (definite ObjNPs; scrambl. = scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	48	40	7	11	8	14	40
adverbial-ObjNP -scrambling	23	19	5	2	6	6	19
	+0.128	-0.172	71.4%	18.2%	75%	42.9%	47.5%
	ns	F (1,38) = 6.9 p=0.012*	χ^2 (3, n=40) = 7.9, p=0.047* / Cramer's V: 0.45 / 4 cells (50%) with less than 5 expected tokens				
ObjNP-adverbial +scrambling	25	21	2	9	2	8	21
	+0.086	+0.066	28.6%	81.8%	25%	57.1%	52.5%

The two scrambling-unfriendly German I- and Flemish-type CLUSTERS only scramble in four out of fifteen tokens (26.7%), while the two scrambling-friendly German II- and Dutch-type CLUSTERS do so in seventeen out of 25 tokens (68%). The distribution between the four CLUSTERS is significant and shows a medium level of association. Even more importantly, the scrambling index shows the expected significant difference (the raising index does not show a difference). Certainly, the reader may object that the difference in the share of the scrambled sequence *ObjNP-adverb* between the German-type CLUSTERS is much bigger (81.8% versus 28.6%) than the one between the Flemish- and Dutch-type CLUSTERS (57.1% versus 25%). Continuing in such a skeptical mood, one may add that the index of the German-type CLUSTERS is primarily based on their behavior with regard to adverbs and ObjNPs. This method is comparable to the linearization of ObjNP and adverbial in sentence <2>. With this, one could then explain the significant difference in Table 4-26. The scrambling index of the Flemish- and the Dutch-type informants on the other hand is predominantly based on their preference for one of the V(P)R-variants. The lack of comparability between this method and the sequence between ObjNP and adverbial in sentence <2> would then explain the smaller difference. However, one glance at the data of Table 4-27 makes it clear that these objections are unfounded. Table 4-27 details the share of each formation method in each CLUSTER:

Table 4-27: Distribution of the two methods used for the formation of the scrambling index of the informants of Table 4-26 separated by their raising and scrambling behavior

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	15	28	29	65	137
Method 1	5	16	27	62	110
V(P)R-variants	33.3%	57.1%	93.1%	95.4%	80.3%
Method 2	10	12	2	3	27
adverb + ObjNP	66.7%	42.9%	6.9%	4.6%	19.7%

The first piece of counter-evidence refers to the two German-type CLUSTERS. Although the index of the German I-type informants uses the second method (sequence of adverb and ObjNP) more frequently than the German II-type informants (the share is 23.8% higher), the difference in the share of the scrambled sequence of adverb and ObjNP in the dependent main clause in sentence <2> is more than twice as big (53.2%; 81.8% - 28.6%).[73] This could already be interpreted as a sign of independence between the process of index formation and its application to this particular case. Even more impressive is the fact that only 6.9% and 4.6% of the tokens used for the formation of the scrambling index of the two raising-friendly Flemish- and Dutch-type CLUSTERS can be assigned to the second method. This minuscule fraction can't possibly be responsible for a difference of 32.1% (57.1% - 25%) in the production of the scrambled sequence *ObjNP-adverbial*.[74] The fact that two groups of informants, whose scrambling index was calculated by means of the preference for either the V2-VPR-variant or the VR-variant in over 90% of the cases show such a big difference in the production of either the sequence *adverbial-ObjNP* or *ObjNP-adverbial* constitutes independent evidence for the assumption that both methods are valid measurements for one and the same phenomenon; a phenomenon we call scrambling. In view of these results, the first two of the following four implicational statements in the Summarizing Box 4-4 seem justified. The other two statements will be backed by Excursus 5.1.2 and 5.2.

---

73 The distribution in Table 4-26 for just these two CLUSTERS is significant and shows a strong association. This result is not very trustworthy however, since only a few tokens are compared (χ^2 (1, n=18) = 5.1, p=0.024* / Phi: -0.53 / 3 cells (75%) with less than 5 expected tokens / Fisher's Exact: p=0.049*). The difference in the scrambling index is significant (F (1,16) = 4.9, p=0.042*). The values of the raising index are not significant.

74 The distribution in Table 4-26 for just the two raising-friendly CLUSTERS is not significant; the more important scrambling index, however, shows a statistical tendency (F (1,20) = 3.3, p=0.086$^{(*)}$). The raising index is again not significant.

Summarizing Box 4-4: Different consequences of scrambling in MLG and their interrelationship (part I)

(i) Informants predominantly producing the unscrambled V2-VPR-variant also predominantly produce the unscrambled sequence *adverb(ial)-ObjNP*.

(ii) Informants predominantly producing the scrambled VR-variant also predominantly produce the scrambled sequence *ObjNP-adverb(ial)*.

(iii) Informants predominantly producing the unscrambled sequence *adverb(ial)-ObjNP* also predominantly produce the unscrambled V2-VPR-variant.

(iv) Informants predominantly producing the scrambled sequence *ObjNP-adverb(ial)* also predominantly produce the scrambled VR-variant.

4.6 The syntactic behavior of indirect object pronouns in MLG

Some of the 46 stimulus sentences offer interesting insights, not only with regard to their dependent clause, but also with regard to their matrix clause. Aside from sentence <13>, this holds true for sentences <17> *If he really killed the man, nobody can help him* and <18> *If he stole the book, I won't trust him anymore*. The preposed conditional clauses of these sentence compounds were used for index formation, one aspect of their matrix clauses will be analyzed now, namely the sequence of indirect object pronouns and the subject indefinite pronoun *keiner* ('nobody') and the adverbial construction *nich mehr* ('not anymore'), respectively. As one of the influences on the position of the pronoun turns out to be the informants' scrambling behavior, we will offer a thorough analysis of the two sentences. After all, this relationship suggests that the same mechanism governs the position of full ObjNPs with regard to both verbal elements and adverbs and the position of pronominal indirect objects, a theoretically rather challenging fact.

4.6.1 Sentence <17> *If he really killed the man, nobody can help him*

Examples (4-49a+b) illustrate two translations of stimulus sentence <17>:[75]

stimulus <17> English: **If he really killed the man, nobody can help him**

(4-49) a. *wann her ap iernst haft den Mensch todgemeakt dann [0.8] kann keiner den helpen* (USA-43; m/42/E>MLG-∅)
if he in earnest has the person killed ~~then~~ […] can nobody him.ACC[76] help

b. *wann hei wirklich den Mann- Mann totgemeakt haf kann ihm keiner helpen* (USA-1; f/29/MLG)
if he really the ~~man~~- man killed has can him.DAT nobody help

[75] When one's central interest are verb clusters, one's view sometimes becomes very focused on dependent clauses. I would, therefore, like to thank WIEBKE ANDRES, who drew my attention to the variation of *keiner* ('nobody') and *ihm* ('him') in the matrix clause of sentence <17>.

[76] In this section, the morphologically expressed case of the object personal pronoun of the third person singular is always given in the glosses. In the rest of the book, this information is only given if the ObjNP deviates from the case expected in SG (and also expected in at least some of the MLG varieties). This means that DATIVE is indicated when an accusative is expected, and ACCUSATIVE is indicated when a dative is expected.

Three dimensions of variation can be found in the two translations: First, the indirect object pronoun appears either as anadeictic *den* as in (4-49a), the intransitive cousin of the mostly homophonous definite article, or as non-anadeictic *ihm* as in (4-49b). Second, both types of pronouns can appear in an unexpected accusative form, i.e. *den* as in (4-49a) and *ihn*, instead of the expected dative form of indirect objects. Third, the indirect object pronoun either appears after the negated indefinite subject pronoun *keiner* ('nobody') as in (4-49a) or in front of it as in (4-49b). We will see that – in addition to the informants' scrambling behavior – both the type and the case of the pronouns influence their position. The variation in MLG thus also sheds some light on assumptions made by LENERZ (1993). As previously mentioned in Section 3.2, LENERZ (1993: 139–144) claims in his article (i) that pronouns in German varieties are phrases and not just heads, (ii) that pronouns move, and (iii) that this movement is a case of scrambling. We agree with all these assumptions.

A total of 291 informants translated the matrix clause of stimulus sentence <17> in a way that can be used for the following analyses. There are some minor deviations from the intended translations, but it is again these deviations which allow for new insights into the grammar of MLG. The deviations are:

(a) 271 informants (93.1%) translated the subject as *keiner* ('nobody'); the second most frequent form with eleven tokens (3.7%) are personal pronouns like *wi* ('we'), *sie* ('they'), *her*/*hei* ('he'), and *ik* ('I'). The other occurring forms like the generalized indefinite pronoun *man* ('one'), *nich einer* ('not anybody'), or unexpected oblique forms like *keinen* or *keinem* (cf. (3-33b)) are infrequent.

(b) With regard to the object pronouns, the most frequent form is the weak personal pronoun *ihm* with 213 tokens (73.2%, 'him'). In most of these tokens, it is the dative form which occurs; only in eighteen cases did the informants translate the sentence with the "accusative" form *ihn* (8.5% of the 213 tokens; 17 tokens in the North American colonies). Aside from *ihm* (and *ihn*), the anadeictic personal pronoun *dem* occurred 59 times (20.3%; also 'him'). With regard to this pronoun, the "accusative" form *den* is more frequent (34 tokens equaling 57.6% of the 59 tokens; all in the North American colonies) than the "dative" form *dem* (2 tokens show a reduced case-neutral form *de*). The last translation that occurs rather frequently is the oblique form of the first or second person singular *mi* or *di* ('me' and singular oblique 'you'; 18 cases, i.e. 6.2%). In these cases, the informants also substituted the intended third person singular in the preposed conditional clause for first or second person singular (cf. examples (4-53a+b) below). The variation between the two most frequent pronoun types, i.e. *ihm*/*ihn* and *dem*/*den*, is especially interesting. DUDEN (2006: 260) classifies the forms *der*, *die*, *das* without a following noun (phrase) (and thus also the oblique forms *dem* and *den*) as demonstrative pronouns. LARREW (2005: 159) calls these forms relational pronouns (*Bezugspronomen*) claiming that they are used in clauses which function as comments to other clauses to which they are bound. The conditional sentence compound *If he really killed the man, nobody can help him* is such a case and this may be the reason for the rather frequent appearance of *dem*/*den* (cf. also the thorough discussion following tokens (7-55a+b)).

(c) With regard to the positioning of the two pronominal arguments, 227 tokens feature them adjacently in the midfield (78%; cf. examples (4-49a+b) above). In 63 tokens (21.6%; 49 in the North American colonies), the matrix clause starts with a pronoun instead of the finite verb or the resumptive element *dann* (‘then’), probably the consequence of a disintegrated conditional clause (cf. Section 7.3 for a thorough analysis). Mostly, this is the subject pronoun *keiner* as in (4-50a) (61 tokens; 5 times together with *dann*; cf. (4-19h) and (4-34e)); only in two cases is it the object pronoun as in (4-50b):

stimulus <17> English: **If he really killed the man, nobody can help him**
Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**

(4-50) a. *wann her ap iernst den Mensch haft todgemeakt keiner kann ihm helpen* (USA-33; m/42/MLG)
if he in earnest the <u>person</u> has killed nobody can him.DAT help

b. *wann einer würd han en Mensch todgemeak den kann keiner helpen* (Mex-66; m/24/MLG)
if <u>someone</u> ~~would~~ have <u>a</u> <u>person</u> killed him.ACC can nobody help
‘If somebody would have killed a person, nobody could help him’

As expected, the only object pronoun found in the prefield of the matrix clause in the two tokens represented by (4-50b) is the anadeictic form *dem*/*den*. *Ihm*/*ihn* does not appear in this position, although it was translated more than three times as often as *dem*/*den* (but cf. (7-55b) for a counterexample in sentence <15>). Finally, one token shows both arguments in the midfield, but this time they are separated by a verbal element.

stimulus <17> English: **If he really killed the man, nobody can help him**

(4-51) *wann her ap iernst dem Mann haft todgemeakt [0.5] dann wird keiner können ihm helpen* (USA-7; f/16/E>MLG-∅)
if he in earnest the.DAT man has killed […] ~~then~~ ~~will~~ nobody can him.DAT help
‘If he really killed the man, then nobody will be able to help him’

Informant USA-7 scrambles the full-fledged direct ObjNP *dem Mann* (‘the man’) in the VR-variant of the conditional clause, but she does not scramble the even more fronting-friendly personal pronoun *ihm* (‘him’) in the matrix clause. This is a clear display of the variation potential MLG speakers possess. One other point of variation in (4-51) is the “confusion” between dative and accusative forms, which does not only affect pronominal *dem* and *den* or *ihm* and *ihn*, but also the definite article in a full-fledged direct ObjNP like *dem Mann* (cf. Excursus 4.6.1 below).

We will first analyze two pronominal combinations which did not occur very often. (i) In eight tokens, the subject of the matrix clause is a personal pronoun such as *sie* (‘they’) or *her*/*hei* (‘he’) and the indirect object is either the personal pronoun *ihm* or the anadeictic personal pronoun *dem* or *den* as in (4-52).

stimulus <17> English: **If he really killed the man, nobody can help him**

(4-52) *wenn her wirklich de Mensch haf [äh] todgemeak dann kann her ihm nich helpen* (USA-84; f/50/MLG)
if he really the.REDUCED person has [eh] killed ~~then~~ can he him.DAT not help

As expected, the only extant sequence when both arguments are pronouns is pronominal SubjNP before pronominal ObjNP (cf. EISENBERG 2013b: 381 – tendency (1a)). (ii) In thirteen tokens, we find the combination of the indefinite pronoun *keiner* as the subject ('nobody') and adjacent to either *di* (singular oblique 'you') or *mi* ('me') as indirect objects. In this combination, there is a clear and unsurprising preference for the definite object pronoun appearing in front of the indefinite subject pronoun as in (4-53a) (cf. EISENBERG 2013b: 382 – tendency (1e)). Ten of the thirteen tokens exhibit this sequence. The marked opposite sequence appears only three times as in (4-53b):

stimulus <17> Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: If he really killed the man, nobody can help him

(4-53) a. *wann dü wirklich den Mann [1.5] getöt hast [äh] kann di keiner helpe* (Fern-9; f/22/MLG)
if you really the man […] killed have [eh] can you nobody help

b. *wann dü wirklich den Mensch umgebracht hast kann keiner di helpe* (Fern-4; f/17/SG>MLG-68%)
if you really the person killed have can nobody you help

In spite of the fact that only three informants produced the sequence of (4-53b), there is a statistical tendency in the difference of the scrambling index. The informants who place the object pronoun in front of the subject pronoun have an average scrambling value of +0.023, while the informants who produce the marked sequence in (4-53b) have a lower value of -0.177 (F (1,9) = 4.3, $p=0.069^{(*)}$; the raising index does not show a significant difference). This is a first hint that the sequence of the two pronouns is controlled by the same preferences as the two phenomena used in the formation of the scrambling index (cf. Sections 4.3.2 and 4.3.3).

We will now focus on the two frequent contexts, i.e. the indefinite subject pronoun *keiner* ('nobody') in combination with either *ihm*/*ihn* or *dem*/*den* (all 'him'). However, before we can concentrate on the central question of whether the sequential variation depends on the informants' raising and scrambling behavior, the variation with regard to the other two factors mentioned, the type of personal pronoun and its morphological case will have to be analyzed. Table 4-28 presents the distribution of dative and accusative case. The analyzed data are not restricted to matrix clauses with *keiner* as the subject.

Table 4-28: Distribution of morphological case of the ObjNP *ihm*/*ihn* and *dem*/*den* in the matrix clause of sentence <17> separated by the informants' continental origin

	North American colonies	**South American colonies**	**Total**
n (tokens)	119	94	213
ihm (Dative)	102 (85.7%)	93 (98.9%)	195 (91.5%)
ihn (Accusative)	17 (14.3%)	1 (1.1%)	18 (8.5%)
n (token)	38	21	59
dem (Dative)	3 (7.9%)	20 (95.2%)	23 (39%)
den (Accusative)	34 (89.5%)	0 (0%)	34 (57.6%)
de (case-neutral)	1 (2.6%)	1 (4.8%)	2 (3.4%)

It is a well-known fact that the four case-system of SG has been reduced to a system with either three (no genitive) or two cases (only subject and object case) in many Low German varieties. For MLG, Table 4-28 and many other pieces of evidence in the translations of the stimulus sentences show that we can distinguish a rather stable South American system with three cases (with some dative forms infringing on original accusative contexts) and a North American system with a strong tendency towards two cases. The last resort for dative forms in North America seems to be non-deictic personal pronouns like *ihm*, while its deictic cousin *dem* is disappearing just like *dem* as a definite article (cf. KAUFMANN (2008: 94–95 – Footnote 4) for some relic forms in the US-American colony). The age distribution confirms this interpretation. The average age of the informants who produce the three North American tokens with *dem* in Table 4-28 is 44.7 years. The informants who produce the 34 tokens with *den* are on average 28.7 years old. On the whole, this situation is reminiscent of modern English, where the erstwhile case-marked article system has been reduced to the unmarked form *the*, while original dative forms like *him*, *her*, or *them* have survived in the system of personal pronouns, provided they refer to human beings (as opposed to "accusative" *it* for non-human entities).

The reader might wonder why we dwell on the topic of case marking for such a long time – after all, this is not the central topic of the research presented here. The reason is that a relationship exists between the case marking of the object pronoun and its position relative to *keiner*. Table 4-29 presents the information about the distribution of the sequence of the two pronouns with regard to case in the North American colonies. Table 4-30 does the same with regard to the two pronouns *dem* and *ihm* in South America. In these colonies, there was hardly any case variation. Unlike in Table 4-28, the analyzed tokens are now reduced to matrix clauses with *keiner* and the adjacent appearance of the two pronoun types in question as in (4-49a+b). The two case-neutral forms *de* were also excluded.

Table 4-29: Distribution of two adjacent sequences of the SubjNP *keiner* and the ObjNP *ihm*/*ihn* and *dem*/*den* in the matrix clause of sentence <17> in the North American colonies separated by the deictic quality and the morphological case of the object pronoun

	-deictic			**+deictic**		
	ihm	*ihn*	Total	*dem*	*den*	Total
n (tokens)	67	10	77	2	19	21
SubjNP-ObjNP -scrambling	22	0	22	2	15	17
	32.8%	0%	28.6%	100%	78.9%	81%
χ^2 (1, n=98) = 18.9, p=0*** / Phi: -0.44 / 0 cell with less than 5 expected tokens						
	χ^2 (1, n=77) = 4.6, p=0.032* / Phi: -0.24 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: $p=0.054^{(*)}$			ns		
ObjNP-SubjNP +scrambling	45	10	55	0	4	4
	67.2%	100%	71.4%	0%	21.1%	19%

Table 4-30: Distribution of two adjacent sequences of the SubjNP *keiner* and the ObjNP *ihm* and *dem* in the matrix clause of sentence <17> in the South American colonies separated by the deictic quality of the personal pronoun

	***ihm* (-deictic)**	***dem* (+deictic)**
n (tokens)	81	16
SubjNP-ObjNP -scrambling	30	4
	37%	25%
ns		
ObjNP-SubjNP +scrambling	51	12
	63%	75%

Both distinguishing factors, i.e. type of pronoun and case, influence the positioning of the object pronoun relative to the subject pronoun in the North American colonies: 55 of the 77 forms of *ihm*/*ihn* (71.4%) appear in front of *keiner* ('nobody'), probably in the so-called WACKERNAGEL-position.[77] This is only true for four of the 21 tokens with *dem*/*den* (19%). This difference remains significant if we separate the tokens in accusative and dative forms opposing *ihm* and *dem* and *ihn* and *den*, respectively. The South American colonies do not show any significant difference *with regard to this dimension. Morphological marking only infl*uences the pronominal sequence significantly with regard to *ihm* and *ihn* in the North American colonies (as already mentioned, the South American colonies hardly produced accusative forms). Here, all ten accusative forms *ihn* have to appear in front of *keiner*, while this is only true for 67.2% of the tokens with the dative form *ihm*. With regard to *den* and *dem*, the result is not significant, but the four forms preceding *keiner* are all accusative.

A comparison with LENERZ' (1993) assumptions may explain these differences (cf. also the discussion following tokens (7-55a+b)). With regard to the type of pronoun, LENERZ (1993: 127–129) explains the difference between *ihm* and *dem* by means of a referential *d*-operator. He says that the *d*-operator in ***d**em* is situated in the head position of a DP, autonomously conveying the DP's referring potential. Lacking such an element in D^0, *ihm*

[77] The WACKERNAGEL-position is the position directly following the head position of CP, i.e. the finite verb in a main clause or the complementizer in a dependent clause, respectively. Unstressed elements such as pronouns or particles display a strong tendency to occupy this position.

cannot autonomously refer to individuals in the discourse unless it is stressed. Lenerz (1993: 130) writes that unstressed pronouns without the *d*-operator have to move in order to search for their referents. If we transfer this description to our case, *ihm* may be said to move further than *dem* because it needs to be closer to its referent in the preposed conditional clause even though this referent is itself a personal pronoun, in our case *her*/*hei* (‘he’). It is difficult to explain at this point why there is no difference in the surface position of *dem* and *ihm* in the South American colonies (cf. Table 4-30). One should not forget however that the superficial coincidence of the sequences *ihm-keiner* and *dem-keiner* do not necessarily indicate the same structural positions. *Dem* like *ihm* could appear in front of *keiner* and still be in a lower structural position. The slightly deviating translation (4-54) of sentence <18> demonstrates that this is probably the right analysis. It contains one pronoun with the *d*-operator, *daut* (‘that’), and one without it, *ihm* (‘him’).

stimulus <18> Portuguese: **Se ele roubou o livro, eu não vou mais confiar nele**
English: If he stole the book, I won’t trust him anymore

(4-54) *wann hei det Buuk- den Buuk- daut Buuk gestohle haft dann wer ik ihm daut nich mehr- nich mehr gleuwe* (Bra-36; f/31/P>MLG-∅)
if he ~~the~~.NEUTER ~~book-~~ ~~the~~.MASC ~~book-~~ the.NEUTER book stolen has ~~then~~ will I him.DAT that.ACC ~~not anymore-~~ not anymore believe
‘If he has stolen the book, I will not believe him anymore (that this is true)’

The translation produced by informant Bra-36 is somewhat problematic. In particular, it is difficult to discern whether *daut* in the matrix clause is an anadeictic personal pronoun or a resumptive element.[78] The translation we offer shows that the reference of *daut* is rather unclear. In spite of this, the example demonstrates the relevant point. Regardless of whether *daut* is a personal pronoun or a resumptive element, its positional behavior is comparable to that of SG *das*. *Daut* displays the *d*-operator and, therefore, behaves more like a full-fledged definite DP. If it were a pronoun like *ihm*, we would expect it to surface before *ihm*, since the unmarked sequence for pronouns in German varieties is accusative before dative. SG, for example, shows a clear difference between the positions of *es* and *das*. The unmarked sequences in the clausal midfield are *ihm* ***das*** (‘him that’) and ***es*** *ihm* (‘it him’). Before we move on to the second influencing factor, the question of whether the personal pronoun appears as dative or accusative, there is one more linguistic aspect we would like to talk about, namely the apparent gender confusion of informant Bra-36 with regard to *Buuk* (‘book’) in (4-54). The following excursus will deal both with this seemingly gender-related variation and with the variation between dative and accusative forms of articles mentioned with regard to token (4-51).

[78] MLG does not have a pendant to SG *es* (‘it’), neither as personal pronoun nor as resumptive element or correlate. This means that the SG contrast between *es* (‘it’) and *das* (‘that’) does not exist. When *et* or its SG cognate *es* appear in MLG, it has to be qualified as SG loan (cf. Footnotes 254 and 255 in Chapter 7).

Excursus 4.6.1: The form of the definite article in MLG

(a) Definite article and gender: Informant Bra-36 oscillates between different forms of the definite article in (4-54). She first assigns the reduced neuter article *det* to *Buuk* ('book'), then changes to the masculine article *den*, and finally comes back to the full neuter article *daut*. This oscillation is somewhat surprising because *Buuk* belongs to the core lexicon. In this part of the lexicon, we do not expect any gender confusion, not even from a multilingual person who says that she speaks Portuguese better than MLG. As we will come across such conflicting assignments at several points (cf., e.g., (5-2b) and (5-3b)) and as they occur in the judgment test as well, we will dedicate the first part of the present excursus to this phenomenon. In the judgment test (cf. the discussion of Figures 2-7 and 2-8 for coding conventions), there are two items where US-American informants change the gender of nouns of the core lexicon, namely *Laund* ('country') and *Coa* ('car'):

Figure 4-3: Judgment test: USA-'27' (f/16/E>MLG) replacing *daut Launt* by *die Launt* in sentence {15}

15. Henrik weit, daut hei daut Launt kaun feloten (*Henry knows that he can leave the country*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong*? Henrik weit.hei Kaun die launt feloten.

☐ Ich sage das so / *I speak this way*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it*? Henrik weit hei kaun die launt feloten.

Figure 4-4: Judgment test: USA-'22' (f/17/E>MLG) replacing *die Coa* by *dot Coa* in sentence {14}

14. Wan hei hod könnt die Coa fixen, wuud hei daut jedon han (*If he could have repaired the car, he would have done it*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong*? __________

☐ Ich sage das so / *I speak this way*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it*? Wan hehod dotCoa Könntfixen, dan . . .

Both examples support the conclusions drawn in KAUFMANN (2008). In said article, the basic argument is that the etymologically correct form of the definite article can be replaced by lighter forms (*daut* > *den*; *daut* > *de*; *den* > *de*, etc.) if the ObjNP is not scrambled. On the other hand, scrambled ObjNPs could be shown to display a tendency towards heavier forms (*de* > *den*; *de* > *daut*; *den* > *daut*, etc.). The change from heavy *daut* to light *die* happens in a clause where informant USA-'27' puts the ObjNP in a context where it is not necessarily scrambled anymore. She changes the scrambled VR-variant in the complement clause…

(4-55) **sentence {15}** *Henrik weit, daut hei daut Launt kaun feloten*
Henry knows that he the.NEUTER country can-VERB1 leave-VERB2
'Henry knows that he can leave the country'

…into a dependent main clause without introductory *daut* ('that'; cf. Section 7.1 for this strategy). In this clause, the ObjNP appears adjacent (and possibly unscrambled) to its governing verb *feloten* ('leave'). According to KAUFMANN (2008), it may now appear with a lighter form of the definite article:

(4-56) **sentence {15}** *Henrik weit hei kaun die Launt feloten* (USA-'27'; f/16/E>MLG)
Henry knows ∅ he can-VERB1 the.FEM country leave-VERB2

We still use the original grammatical terms *neuter* and *feminine*, although the terms *heavy* and *light* may be more adequate. In the second example, exactly the opposite development can be found. Informant USA-'22' changes the light definite article *die* into a heavier form *dot* and this change is accompanied by a clear indication for scrambling. In (4-57), *die Coa* ('the car') is not only adjacent to its governing verb *fixen* ('repair'), but it is also inside the verb phrase headed by this verb:

(4-57) **sentence {14}** *Wan hei hod könnt die Coa fixen, wuud hei daut jedon han*
if he had-VERB1 could-VERB2 the.FEM car repair-VERB3 would he it done have
'If he could have repaired the car, he would have done it'

In the corrected version (4-58), however, the ObjNP is scrambled out of its verb phrase and thus moved away from its governing verb:

(4-58) **sentence {14}** *Wan he hod dot Coa könnt fixen, dan…* (USA-'22'; f/17/E>MLG)
if he had-VERB1 the.NEUTER car could-VERB2 repair-VERB3 ~~then~~

Granted, both girls who produce these changes do not consider MLG their dominant language just like informant Bra-36, who translated (4-54). This, however, does not necessarily mean that their competence in MLG is low. Furthermore, there are quite a lot of informants in KAUFMANN (2008) that are still dominant in MLG and nevertheless produce the same changes. It is, therefore, noteworthy that there are only two "gender"-corrections in the judgment test and that both of them are accompanied by expected changes in the serializations of the verb clusters. KAUFMANN's (2008) hypothesis, therefore, does not seem to be completely off target (cf., however, the counterexamples in (5-35) and (6-23b)).

(b) Definite article and case: WARKENTIN GÖRZEN (1952: 139 – Footnote 1) writes about the MLG personal pronouns in Canada that "[i]n many cases the dative and accusative have fallen together or are used interchangeably." With regard to definite articles and personal pronouns in the MLG data set, the informants in North America normally expand the use of accusative forms into former dative domains (cf. the pronominal form *den* in (4-49a)). The opposite phenomenon could be found in (4-51). Instead of expected *den Mann* ('the.ACC man'), the

US-American informant produces *dem Mann* ('the.DAT man'). This is a very rare phenomenon in North America, but quite a frequent one in Paraguay and Brazil (cf. KAUFMANN 2011: 204 – Table 2).[79] Figures 4-3 and 4-4 present excerpts from these colonies obtained from the judgment test.

Figure 4-5: Judgment test: Fern-'11' (f/18/SG>MLG) replacing *den Maun* by *dem Maun* in sentence {3}

3. Wan hei den Maun doutjemoakt haft, dan kaun ahm kjeena halpe (*Si mató al hombre nadie lo puede ayudar*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*

☐ richtig / *correcto* ☒ nicht ganz richtig / *más o menos* ☐ falsch / *errado*

Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* Die Räposition: dem Maun

☐ Ich sage das so / *Uso esta forma*

☒ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No lo uso pero otros Menonitas usan esta forma*

☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*

Wie sagst Du das? / *¿Qué forma usas tú?* __________

Figure 4-6 Judgment test: Bra-'18' (m/20/Ø) replacing *den Boum* by *dem Boum* in sentence {16}

16. Hei bruckt ne Brell, wejens hei nich kaun den Boum seene (Ele precisa de óculos porque ele não consegue enxergar a árvore)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *Na minha opinião esta frase soa em nosso Baixo Alemão*

☐ richtig / *correto* ☒ nicht ganz richtig / *mais ou menos* ☐ falsch / *errado*

Warum nicht ganz richtig oder falsch? / *Por que mais ou menos ou errado?* NICHT D[illegible] KAUN

☐ Ich sage das so / *Eu uso esta forma*

☐ Ich sage das nicht, aber andere Mennoniten hier sagen das / *Não uso esta forma, mas outros Menonitas aqui usam*

☒ Das sagt hier unter den Mennoniten niemand so / *Ninguém, entre os Menonitas aqui, usa esta forma*

Wie sagst Du das? / *Que forma tu usas?* WEJENS HAI DEM BOUM NICHT SEINA KAUN

The explicit correction in Figure 4-5 is especially telling. Although informant Fern-'11' refers erroneously to a preposition writing *Die Präposition:* <u>*dem*</u> *Maun* ('the preposition: the.DAT man'), her underlining makes it clear that she is referring to the definite article. Importantly, this phenomenon does not only happen in front of words starting with the bilabial nasal /m/, i.e. we are not just dealing with a phonological process of assimilation. The still readable lower part of Figure 4-6, for example, shows *dem* in front of *Baum* ('tree'). Granted, the initial segment /b/ of *Baum* is homorganic, i.e. it shares its point of articulation with /m/, but not its manner of articulation. Nevertheless, one could still argue that this may be a case of partial assimilation. There are examples in the translation data though, where expected *den* turns into *dem* before other consonants:

---

[79] In the SG language course book SCHNITZSPAHN and RUDOLPH (1995) wrote for Paraguayan speaker of MLG, many pages are dedicated to case requirements of verbs and prepositions. SCHNITZSPAHN and RUDOLPH (1995: 83–89) particularly stress the problem of dative and accusative. Interestingly though, their listings suggest that errors in SG committed by Paraguayan Mennonites are due to the fact that they do not know the case certain verbs and prepositions assign. In our view at least part of the problem is, however, that there are strong converging tendencies of dative and accusative forms in this MLG variety.

stimulus <45> English: **Yesterday I could have sold the ring**

(4-59) *jestere hat ik könnt dem Ring verköpe* (Fern-3; f/17/MLG)
yesterday had I could the.DAT ring sell

If this variation were really caused by a phonological process, we would have to talk of dissimilation in (4-59), because the /r/ in this token is an apico-alveolar drill closer to /n/ than to /m/. We can, therefore, assume that the variation between *den* to *dem* is a morphological phenomenon, not a phonological one. Aside from the nature of the phenomenon, it is important to see how engrained *dem* in direct ObjNPs is. The informants in Paraguay and Brazil do not only produce it, they even correct *den* as incorrect. This is an astonishing fact because especially in the Paraguayan colonies, the competence in SG is high (cf. Table 2-2) and MLG is strongly influenced by SG (cf. KAUFMANN 2011). We may, therefore, have to reckon with a kind of hypercorrection, i.e. *dem* may have entered MLG in these colonies as an innovative element from SG, but was applied in more contexts than in SG (cf. KAUFMANN 2004: 292–297 for a detailed analysis).[80]

THIESSEN (2003: xviii-xix) even goes a step further. Assuming a two-case-system, he puts the original accusative forms of the definite article *den* (masculine) and *daut* (neuter) in brackets in his column *Acc./Dat.* offering *dem* as the default form for both genders. For pronouns, he does not even give alternative forms anymore. His masculine forms are *disem* ('this one'), *dem*, *janem* (both 'that one'), and *wem* ('who') both for the "dative" and the "accusative" case. Neither the dominance of dative forms in the definite article, nor the absolute setting of the etymological dative forms for pronouns represent the situation in South America; much less are they correct for the colonies in the United States and Mexico.

End of Excursus

Let us come back to the question why *ihn* in the matrix clause of sentence <17> appears in front of the subject pronoun more often than *ihm*. LENERZ (1993: 133; cf. also GREWENDORF 2002: 37) discusses the theory that all structural cases, not just the nominative case, are assigned by functional heads, i.e. outside VP. If the North American Mennonites really converge on a two case-system, we have to assume that both these cases are structural. The fact that *den* has almost entirely replaced *dem* as an indirect object pronoun and that *ihn* is beginning to do the same with *ihm* (cf. Table 4-29) is clear evidence for this. After all, *ihm* as a dative pronoun is the last stronghold of the original three case-system. Obviously, one must not forget that *ihm* – like *ihn* – appears in front of the subject pronoun in the majority of the cases both in North and South America. However as we have seen above, this positioning is significantly more frequent with *ihn* than with *ihm*. The reason for this may be the necessity

[80] This kind of extension is, by no means, a rare phenomenon in language contact. KING (2005), for example, reports the case of preposition stranding in Prince Edward Island French. In this Canadian variety, preposition stranding entered with prepositions borrowed from English. The application of this rule was then extended to contexts where the originally English prepositions do not allow stranding and even to etymological French prepositions.

for pronouns that bear a structural case to leave their VP. The motivation for the sequence *ihm-keiner* may then be different from the motivation for the sequence *ihn-keiner*. *Ihn* would have two reasons to move, first it has to move in order to “find” or get closer to its referent, a necessity it shares with *ihm*, and second, it also has to move in order to get into a position where structural case can be assigned, a necessity it does not share with *ihm*.

Obviously, this cannot be the whole story because one would suspect that *keiner* also has to move into a functional phrase where it can be assigned nominative case, a case which will most probably be assigned in a higher position than accusative case. Therefore, *keiner* would still be expected to appear before *ihn*. A possible answer to this riddle may again come from slightly deviant translations. The deviation this time consists in the insertion of *bald* (‘soon’) in (4-60a) and of *ook* (SG *auch*; hardly translatable into English) in (4-60b):

stimulus <17> Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: If he really killed the man, nobody can help him

(4-60) a. *wann der wirklich dem Mann umgebracht haft dann kann dem bald keiner mehr helpe* (Fern-34; m/25/SG>MLG-91%)
if he really the.DAT man killed has ~~then~~ can him.DAT ~~soon~~ nobody ~~anymore~~ help

b. *wann hei den wirklich haft todgemeak dann kann ihm ook keiner helpen* (Mex-8; f/14/MLG)
if he him really has killed ~~then~~ can him.DAT ~~PARTICLE~~ nobody help
‘If he really killed him, then nobody can help him, as you well know’

Bald (‘soon’) in (4-60a) is a temporal adverb. Therefore, its position should be comparable to that of *nu* (‘now’) in the conditional clause of sentence <15>, i.e. it probably adjoins one of the verb phrases. *Ook* is a polysemous particle. In a declarative clause, it can either be a focus particle (Thurmair (1989: 155) and Zifonun et al. (1997: 872) speak of a grade particle) putting the focus on a specific part of the clause or it functions as a modal/connective particle. In spite of Thurmair’s (1989: 155; cf. also Diewald 2008: 141) well-founded conviction that it is frequently difficult to distinguish between these two readings, the clausal propositions in sentence <17> make it clear that *ook* in (4-60b) is a modal/connective particle. Granted, *ook* appears in front of *keiner*, so one might think that it is a focus particle, since this is the normal position for such a particle. Nevertheless, in spite of *keiner* being stressed, a necessary condition for a focus reading (cf. Zifonun et al. 1997: 868 and 872), it is an indefinite pronoun and thus cannot possibly be focused.[81] One could still insist on a focus reading because of the fact that at least in spoken discourse it is possible to separate the focus particle from the focused unit. Thus *ihm*, which appears in front of *ook*, could be the focused constituent. A focus reading of an element outside the scope of *ook* is only possible though, when the focused unit exhibits strong stress (cf. Zifonun et al. 1997: 1637). This is not the case with *ihm* in (4-60b).

[81] Unlike *keiner*, *ook* is not stressed in (4-60b) and stress on *ook* would be the second necessary condition for the reading of *ook* as a focus particle. The semantic incompatibility of a focus reading becomes even clearer when one tries to stress both *ook* and *keiner*. In this case, one is immediately reminded of Polyphemus’ infamous shouting *Nobody has blinded me!* because after stressing both elements, one is forced to interpret *keiner* as a proper name.

The important point is that modal/connective particles and temporal adverbs are supposed to indicate the left limit of the verb phrase (cf. LENERZ 1993: 118 and 143). If this is so, we can draw some conclusions with regard to the position of *keiner* and the object pronouns in (4-60a+b). In these examples, *keiner* surfaces to the right of *bald* ('soon') and *ook*, i.e. it appears either within the VP or in a low functional phrase. With regard to its referential power, it is no problem if *keiner* remained within VP, because *keiner* is neither definite nor is it phoric like *ihm* or *dem*, i.e. it has much less reason to move. The object pronoun *ihm* in (4-60a+b) has left its VP, because it appears to the left of *bald* and *ook*. The low position of *ihm* in all tokens with the sequence *keiner-ihm* is no real problem either since *ihm* can receive its lexical case within the VP. LENERZ (1993: 123) writes that pronouns like *ihm* may stay within VP provided they move to the subject. This movement is possible for all sequences *keiner-ihm* in the MLG data set.

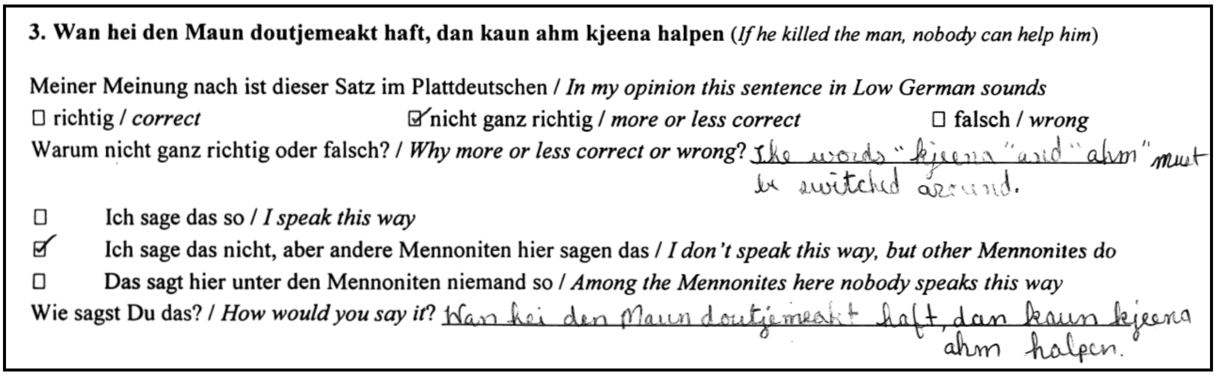
Having exposed the structural necessities of movement for the different types and cases of pronouns, a possible influence of the informants' raising and scrambling behavior can now be analyzed. In order to control origin, type and case of the pronouns, we will separate the tokens along these dimensions. We will first analyze the North American tokens. In these colonies, *ihn* does not show any variation and *dem* hardly ever appears. Because of this, we will concentrate on the combinations *keiner*/*ihm* (cf. Table 4-31) and *keiner*/*den* (cf. Table 4-32). Aside from the two sequences *keiner-ihm* and *ihm-keiner*, Table 4-31 includes the variant in which the matrix clause starts with the subject indefinite pronoun *keiner* as in (4-50a). This variant is too frequent in the North American colonies to be neglected.

Table 4-31: Distribution of three sequences of the SubjNP *keiner* and the ObjNP *ihm* in the matrix clause of sentence <17> in the North American colonies separated by the informants' raising and scrambling behavior (scrambl. = scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	88	88	7	31	12	34	84
SubjNP-ObjNP -scrambling	21	21	0	8	3	9	20
	+0.288	+0.08	0%	25.8%	25%	26.5%	23.8%
	ns	F (2,85) = 2.6 p=0.083$^{(*)}$	ns				
ObjNP-SubjNP +scrambling	43	43	3	18	3	17	41
	+0.162	+0.102	42.9%	58.1%	25%	50%	48.8%
SubjNP-[…]-ObjNP	24	24	4	5	6	8	23
	+0.218	-0.02	57.1%	16.1%	50%	23.5%	27.4%

It is rather difficult to analyze the data of Table 4-31 in a meaningful way, because the variant with initial *keiner* is caused by factors not connected to scrambling (cf. Section 7.3 for a detailed analysis). In any case, the frequency distribution in Table 4-31 is not significant. In spite of this, there is a statistical tendency with regard to the scrambling index. The raising index does not show a significant difference. This tendency, however, is caused by the low value of the scrambling index of those informants that produced the disintegrated variant with initial *keiner* (line *SubjNP-[…]-ObjNP*). The scrambling-unfriendly German I- and Flemish-type CLUSTERS produced ten tokens of this variant; a share of 52.6% of their nineteen tokens, while the scrambling-friendly German II- and Dutch-type CLUSTERS only have a share of 20% (13 out of 65 tokens). Therefore, if we compare this variant with the other two variants taken together, the frequency distribution and the values of the scrambling index become significant and show a medium level of association (χ^2 (3, n=84) = 8.4, p=0.038* / Cramer's V: 0.32 / 2 cells (25%) with less than 5 expected tokens; scrambling index: F (1,86) = 5, p=0.027*; the raising index is still not significant). If we exclude the disintegrated tokens with initial *keiner*, neither the frequency distribution nor the differences in the two indexes show any significant difference. However, this lack of significant results does not mean that informants are not sensitive to the sequence of *keiner* and *ihm* as Figure 4-7 shows:

Figure 4-7: Judgment test: USA-'5' (f/14/E>MLG) changing the pronominal word order in sentence {3}


3. Wan hei den Maun doutjemeakt haft, dan kaun ahm kjeena halpen (*If he killed the man, nobody can help him*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong?* The words "kjeena" and "ahm" must be switched around.

☐ Ich sage das so / *I speak this way*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it?* Wan hei den Maun doutjemeakt haft, dan kaun kjeena ahm halpen.

Two US-American informants prefer the sequence *kjeena ahm* (*keiner ihm*) in judgement sentence {3} to the sequence *ahm kjeena* (*ihm keiner*) presented. Informant USA-'5' does not leave any doubt. He writes: "The words "kjeena" and "ahm" must be switched around." Table 4-32 presents the distribution of the North American tokens with *keiner* and *den*:

Table 4-32: Distribution of three sequences of the SubjNP *keiner* and the ObjNP *den* in the matrix clause of sentence <17> in the North American colonies separated by the informants' raising and scrambling behavior (scrambl. = scrambling)

	raising index	scrambl. index	German II informants	Flemish informants	Dutch informants	Total
features			-raising +scrambling	-raising -scrambling	+raising +scrambling	
n (tokens)	30	29	4	8	17	29
SubjNP-ObjNP	15	14	1	6	7	14
-scrambling	+0.48	-0.031	25%	75,0%	41,2%	48,3%
	ns	ns	χ^2 (4, n=29) = 8.9, p=0.063(*) / Cramer's V: 0.39 / 7 cells (77.8%) with less than 5 expected tokens			
ObjNP-SubjNP	4	4	2	1	1	4
+scrambling	+0.217	+0.086	50%	12,5%	5,9%	13,8%
SubjNP-[…]-ObjNP	11	11	1	1	9	11
	+0.381	+0.178	25%	12,5%	52.9%	37,9%

Again, none of the three statistical tests applied provide significant results. There is, however, a statistical tendency with regard to the frequency distribution. This time, the reason for this is the concentration of the non-adjacent variant with initial *keiner* among the Dutch-type informants, quite unlike in Table 4-31. However, the number of cells with less than five expected tokens is too high to call this result reliable. Excluding the disintegrated variant, the distribution of the adjacent sequences *keiner-den* and *den-keiner* is not sensitive to the raising and scrambling characteristics of the informants. If we combine these two adjacent variants and compare the resulting category with the disintegrated variant with initial *keiner*, the picture changes a little bit. There is a weak statistical tendency with regard to the scrambling index ($F\ (1,27) = 3.1$, $p=0.089^{(*)}$). However, it is the scrambling-friendly and not the scrambling-unfriendly informants as in Table 4-31 who prefer the non-adjacent variant. We do not manage to make rhyme or reason out of this state of affairs, because no meaningful explanation seems to exist as to why scrambling-friendly informants who produce *den* in sentence <17> use subject-initial matrix clauses, whereas in translations with *ihm* the same is true for scrambling-unfriendly informants. In any case, there are too few tokens available to draw any sound conclusion.

Fortunately, the South American tokens are more coherent and more expressive. We did not include the variant with initial *keiner* in these analyses, because there are only seven tokens with this characteristic (8% of all tokens as opposed to 28% of the North American tokens). Table 4-33 presents the distribution of the tokens with *keiner* and *ihm*:

Table 4-33: Distribution of two adjacent sequences of the SubjNP *keiner* and the ObjNP *ihm* in the matrix clause of sentence <17> in the South American colonies separated by the informants' raising and scrambling behavior (scrambl. = scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	81	75	19	46	5	5	75
SubjNP-ObjNP -scrambling	30	27	12	10	4	1	27
	-0.096	-0.13	63.2%	21.7%	80%	20%	36%
	F (1,79) = 3.8 $p=0.056^{(*)}$	F (1,73) = 5.3 p=0.024*	χ^2 (3, n=75) = 14.9, p=0.002** / Cramer's V: 0.45 / 4 cells (50%) with less than 5 expected tokens				
ObjNP-SubjNP +scrambling	51	48	7	36	1	4	48
	-0.192	+0.022	36.8%	78.3%	20%	80%	64%

The scrambling-unfriendly German I- and Flemish-type CLUSTERS produce a share of 33.3% of the sequence *ihm-keiner* (8 of 24 tokens). Among the scrambling-friendly German II- and Dutch-type informants, this share is more than twice as high; it is 78.4% (40 of 51 tokens). The CLUSTER distribution is highly significant and shows a medium level of association.[82] The raising index shows a statistical tendency, but more importantly, the

[82] For readers feeling uneasy about the four cells with less than five expected tokens, we have calculated the significance only for the two German-type CLUSTERS since they show a sufficiently high number of

scrambling index shows a significant difference between the informants producing the sequence *ihm-keiner* and those producing the sequence *keiner-ihm*. The informants producing the first sequence have a scrambling index 0.152 points higher than the informants producing the latter one (+0.022-(-0.13)). Scrambling-friendly informants indeed prefer the sequence *ihm-keiner*. Table 4-34 shows the results for the combination of *keiner* and *dem* in South America:

Table 4-34: Distribution of two adjacent sequences of the SubjNP *keiner* and the ObjNP *dem* in the matrix clause of sentence <17> in the South American colonies separated by the informants' raising and scrambling behavior (scrambl. = scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	
n (tokens)	16	15	6	8	1	15
SubjNP-ObjNP -scrambling	4	4	3	0	1	4
	-0.179	-0.323	50%	0%	100%	26.7%
	ns	F (1,13) = 3.3 p=0.091(*)	χ^2 (2, n=15) = 7.3, p=0.026* / Cramer's V: 0.7 / 5 cells (83.3%) with less than 5 expected tokens			
ObjNP-SubjNP +scrambling	12	11	3	8	0	11
	-0.271	-0.027	50%	100%	0%	73.3%

In spite of the fact that the sequence *dem-keiner* is the more frequent variant in Table 4-34 – in Table 4-33, the more frequent variant is the sequence *keiner-ihm* – the results of both analyses are complementary. All four tokens of the sequence *keiner-dem* are produced by scrambling-unfriendly informants, a share of 57.1% of their seven tokens, while the scrambling-friendly German II-type CLUSTER only produces the sequence *dem-keiner* (no tokens from Dutch-type informants in this analysis). The distribution is significant with a very strong association, but is not very trustworthy due to the low number of compared tokens (cf. the share of cells with less than five expected tokens). The raising index does not show a significant difference, while the scrambling index of the informants who produce the sequence *dem-keiner* is again higher than that of the producers of the unscrambled sequence. Due to the low number of tokens, the difference only achieves a weak statistical tendency.

The constant issue with rather low numbers of analyzable tokens in Section 4.6.1 is also the reason for not carrying out binary logistic regression analyses. The reader may have waited for such a multifactorial analysis, which we will apply frequently in Section 5.5, Chapter 6, and Chapter 7, since the binary nature of the ordering of *keiner* and pronominal ObjNPs makes this phenomenon an ideal candidate. Aside from the low number of tokens (and the necessary high number of independent variables), we are faced with other obstacles for such an analysis. On the one hand, there is a strong relationship in North America between two independent variables, the type of pronoun and the case in which it appears, and on the

observations. The result is highly significant as well and also shows a medium level of association (χ^2 (1, n=65) = 10.3, p=0.001** / Phi: +0.4 / 0 cells with less than 5 expected tokens).

other hand, one important possible predictor, the case of the ObjNP, virtually does not show any variation at all in the South American data (cf. Table 4-28). Obviously, several regression analyses were executed, but the margin of error for certain predictors were frequently very high. Scrambling, however, was almost always the first and most important predictor selected.

The question we still have to answer is why the scrambling behavior of the South American colonies affects the position of pronominal ObjNPs, while this is not the case in the North American colonies. There may again be a connection to the fact that the North American colonies have basically a two case-system, i.e. for many speakers *ihm* – etymologically a dative case like English *him* – may already have been reanalyzed as a structural case. Movement could then be caused not only by the lack of referential power of weak pronouns like *ihm*, but also by problems of structural case assignment which according to LENERZ (1993: 133) is not possible within the verb phrase. Granted, we would then expect the share of scrambled *ihm* in North America to be higher than in South America, which is not the case, but we do not know in which position *ihm* actually emerges in North American disintegrated conditional sentence compounds such as (4-50a). *Ihm* in this frequent variant may actually be in the same position as in the sequence *ihm-keiner* in (4-49b) augmenting the number of tokens with fronted *ihm*.

It is nevertheless difficult to say whether the more expressive South American result is connected to the fact that the morphological form *ihm* there is still perceived as lexical case. If this were so, the actual distinguishing factor between South and North America would be the North American necessity of moving *ihm* for structural case assignment. Due to the lack of this syntactic necessity, South American informants may be free to follow their general scrambling preferences.

Let us summarize the results we have gained so far: The scrambling index was calculated by two methods, (a) by the preference for either the V2-VPR-variant or the VR-variant (cf. Section 4.3.2) and (b) by the position of ObjNPs in relation to adverbs in tokens with unraised variants (cf. Section 4.3.3). We now see that this index successfully discriminates the South American informants' behavior with regard to pronominal ObjNPs. The conclusions presented in the Summarizing Box 4-4 can thus be further specified, at least for South American informants:

Summarizing Box 4-5: Different consequences of scrambling in MLG and their interrelationship (part II)

South American informants who predominantly produce the unscrambled V2-VPR-variant and the unscrambled sequence *adverb-ObjNP* also predominantly produce the sequence *indefinite subject pronoun-definite object pronoun* (*keiner-ihm/dem*). Therefore, we will call this sequence unscrambled as well.

South American informants who predominantly produce the scrambled VR-variant and the scrambled sequence *ObjNP-adverb* also predominantly produce the sequence *definite object pronoun-indefinite subject pronoun* (*ihm/dem-keiner*). Therefore, we will call this sequence scrambled as well.

In spite of these results, many researchers will probably adhere to the concept of pronominal fronting instead of subsuming this phenomenon under a broad concept of scrambling. LENERZ

(1993: 143), for example, makes a certain distinction between the movement of pronouns and the movement of full-fledged NPs in spite of his (1993: 144) conclusion presented in Chapter 3.2:

> […] sehe ich in den Daten lediglich, daß das temporale Adverb offenbar (ebenso wie Modalpartikel oder Satzadverb) die linke Grenze der VP markiert und daß Pronomina aus den entsprechenden DP-Positionen herausbewegt werden *müssen*, während Scrambling für volle DPs fakultativ ist, wenn die entsprechenden Bedingungen (Spezifizitätseffekt) gegeben sind.[83]

Importantly, however, LENERZ continues like this:

> Pronomenbewegung könnte also durchaus als eine Art von Scrambling angesehen werden, wenn sich eine zusätzliche Bedingung dafür namhaft machen ließe, die die Obligatorik der Bewegung von Pronomina erklärte. Zudem haben schon die Daten in (9) gezeigt, daß Pronomina keineswegs immer aus der VP herausbewegt werden müssen, sondern sich offenbar lediglich mindestens bis zum Subjekt bewegen müssen, also auch VP-intern stehen können.[84]

The Mennonite informants have produced many tokens which follow the second part of LENERZ' argument. In these tokens, *ihm* only moves as far as *keiner*, still surfacing to the right of this SubjNP.[85] Aside from this, however, some South American informants treat full-fledged and pronominal ObjNPs in a comparable way. With this insight, one may speculate whether HAEGEMAN (1991: 543–544) may have been right after all claiming that NPs, PPs, and pronouns in Dutch (and perhaps in MLG) can scramble.

4.6.2 Sentence <18> *If he stole the book, I won't trust him anymore*

The last analysis of Chapter 4 concerns stimulus sentence <18>. Seven translations for this sentence are given in (4-61a-g):

stimulus <18> English: **If he stole the book, I won't trust him anymore**
Spanish: **Si él robó el libro, no voy a confiar más en él**
Portuguese: **Se ele roubou o livro, eu não vou mais confiar nele**

(4-61) a. *wann her daut Bük haft gestohlen dann wer ik den nich mehr gleuwen*
(USA-8; f/14/E>MLG-∅)
if he the book has stolen ~~then~~ will I him.ACC not anymore believe

b. *wann hei det Bük gestohlen haf wer ik nich mehr ihm vertrüen* (Mex-64; f/39/MLG)
if he the book stolen has will I not anymore him.DAT trust

---

[83] Translation by G.K.: […] I only see in the data that the temporal adverb (just like modal particles and sentential adverbs) apparently marks the left edge of the VP and that pronouns *must* be moved out of the respective DP-positions, whereas scrambling of full DPs is optional, if the relevant conditions (specificity effects) are satisfied.

[84] Translation by G.K.: Pronominal movement may indeed be regarded as a kind of scrambling if one could find an additional condition that explained the obligatory nature of the movement of pronouns. Moreover, the data in (9) has already shown that pronouns do not have to be moved out of VP in all cases. It seems to be enough if they move as far as the subject remaining within VP.

[85] Importantly, the *ihm* ('him') in those tokens is normally not stressed, i.e. it is different from the pronouns KEMPEN and HARBUSCH (2005: 344) talk about: "Second, we propose to follow Müller (1999; endnote 11) in the treatment of "strong" pronominal arguments, that is, those carrying sentence accent or preceded by adverbs [better: focus particles; G.K.] such as *auch* 'also', *selbst* 'even', *nur* 'only', etc. They function as full NPs and can occupy positions in the post-Wackernagel region of the midfield and be subject to scrambling."

(4-61) c. *wann hei det Buuk geklammt haft [0.4] dann wer ik nich mehr an ihm- an ihm gleuwe* (Fern-7; f/17/MLG)
if he the book stolen has […] ~~then~~ will I not anymore ~~in him-~~ in him.DAT believe

d. *wann hei daut Buuk gesteh- gestohle haft wer ik an ihm nich mehr gleuwe* (Bra-52; m/30/MLG)
if he the book ~~steal-~~ stolen has will I in him.DAT not anymore believe

e. *wann dü daut Bük gestohlen has dann [0.6] werd ik di nich mehr vertrüen* (USA-33; m/42/MLG)
if you the book stolen have ~~then~~ […] will I you not anymore trust

f. *wann her daut Bük gestohlen haf da wer ik nich mehr Vertrüen han op ihn* (Mex-48; m/34/MLG)
if he the book stolen has ~~then~~ will I not anymore trust have on him.ACC

g. *wann her haf de Bük gestohlen ik wer ihm nich mehr trüen* (Mex-50; f/22/MLG)
if he has the.REDUCED book stolen I will him.DAT not anymore trust

An advantage of sentences <13> and <18> in comparison with sentence <17> is that matrix clauses starting with the subject pronoun *ik* (‘I’) as in (4-61g) do not have to be separated. Disintegration in this case does not lead to non-adjacency of the relevant pronoun and the adverbial construction. This was different in sentence <17>, where one of the crucial elements, *keiner* (‘nobody’), was the subject of the matrix clause. Nevertheless, the tokens with deviating pronouns like *di* in (4-61e) or (extraposed) nominal constructions like *Vertrüen op ihn* (‘trust in him’) as in (4-61f) were excluded from all following analyses. Another difference to sentence <17> is that there is no significant difference between the behavior of the anadeictic pronouns *dem*/*den* as in (4-61a) and the non-anadeictic pronouns *ihm*/*ihn* as in (4-61b). Neither is there a difference between the different case forms like *dem*.DAT, *den*.ACC, and *de*.REDUCED. One must not forget however that there are so few tokens with the unscrambled sequence *adverbial-ObjNP* in sentence <18> that these results are far from conclusive.

The last conspicuous phenomena – besides the type, the case, and the position of the object pronoun – are the ObjPPs in (4-61c+d). These ObjPPs are probably due to a priming effect in the Spanish and Portuguese stimulus sentences (cf. Table 4-35 and KAUFMANN (2005: 81–84) for a detailed analysis as for priming in this sentence). In Spanish and Portuguese, the verb *confiar* (‘trust’) is constructed with an ObjPP governed by the preposition *en* or *em* (‘in’; in Portuguese, this preposition normally contracts with a following pronoun, i.e. *em ele* becomes *nele*). The three versions of stimulus sentence <18> are given below:

(4-62)	**stimulus <18>**	English	If he stole the book, I wo***n’t*** trust HIM ***anymore***
		Spanish	Si él robó el libro ***no*** voy a confiar ***más*** EN ÉL
		Portuguese	Se ele robou o livro eu ***não*** vou ***mais*** confiar NELE

Table 4-35 shows the distribution of pronominal ObjNPs and ObjPPs in sentence <18> according to the colony and to the language used in the translation task:

Table 4-35: Morphological expression of the indirect object in the matrix clause of sentence <18> in six Mennonite colonies (E=English; S=Spanish; P=Portuguese)

	USA	**Mexico**		**Bolivia**	**Brazil**	**Menno**		**Fernheim**		**Total**
stimulus	E	S	E	S	P	S	E	S	E	
n (tokens)	58	59	4	4	49	23	10	29	5	241
ObjNP	58	31	4	2	20	13	10	14	5	157
	100%	52.5	100	50%	40.8%	56.5	100	48.3	100	65.1%
χ^2 (2, n=241) = 62.5, p=0*** / Cramer's V: 0.51 / 0 cells with less than 5 expected tokens										
ObjPP	0	28	0	2	29	10	0	15	0	84
	0%	47.5	0%	50%	59.2%	43.5	0%	51.7	0%	34.9%

The distribution between the three stimulus languages is highly significant and shows a rather high level of association. In the 77 translations from English, not a single ObjPP can be found, while both the translations from Spanish and from Portuguese show such complements in roughly half of the cases (47.8% and 59.2%, respectively; mostly *op* and *an*, sometimes also *in*, which is probably directly primed by Spanish *en* and Portuguese *n(ele)*). This strong priming effect has also a strong, but not unexpected effect on the sequence of the pronoun and the adverbial construction (cf. the discussion on scrambling-unfriendly ObjPPs in Table 4-8). Table 4-36 only considers the translations from Spanish and Portuguese:

Table 4-36: Distribution of the two sequences between ObjNP and adverbial in the matrix clause of sentence <18> separated by the type of complement (all English-based translations excluded)

	ObjNP	**ObjPP**	**Total**
n (tokens)	80	84	164
adverbial-ObjNP/PP	17	81	98
	21.3%	96.4%	59.8%
χ^2 (1, n=183) = 96.3, p=0*** / Phi: +0.77 / 0 cells with less than 5 expected tokens			
ObjNP/PP-adverbial	63	3	66
	78.8%	3.6%	40.2%

The distribution is highly significant with an impressive association strength. This shows once again that ObjPPs in MLG are averse to scrambling. It does not mean though that they cannot scramble at all and it is obviously interesting to see who the few informants are who use the marked sequence *ObjPP-adverbial* (cf. 4-61d). As expected, the three tokens are produced by scrambling-friendly informants of the German II- and Dutch-type CLUSTERS (6.8% of their 44 tokens); their scrambling index is +0.091. The scrambling index of the informants who produced the 81 tokens with the unmarked sequence as in (4-61c) is -0.053, but the difference is not significant.

In stimulus sentence <13> *If he quits his job, I won't help his family anymore* (cf. Section 4.5.2.2), there was also a priming effect. This effect was not connected to the presence of the preposition *a* though,[86] but instead to a sequential difference in the three stimulus versions. As

[86] The preposition *a* ('to') in the Romance stimulus versions of sentence <13> does not influence the translations. This lack of priming could either be caused by the fact that *a* – unlike *en*/*em* in sentence <18> – is a

sentences <13> and <18> both contain the complex negative adverbial *not anymore*, a short comparison is in need. For the reader's convenience, the three stimulus versions of sentence <13> are repeated as (4-63):

(4-63)	**stimulus <13>**	English	If he quits his job, I wo***n't*** help HIS FAMILY ***anymore***
		Spanish	Si él deja el trabajo, ***ya no*** voy a ayudar A SU FAMILIA
		Portuguese	Se ele largar o emprego dele, eu ***não*** vou ajudar ***mais*** À FAMILIA DELE

In the English stimulus version of sentence <13>, the second part of the adverbial follows the ObjNP, whereas in the two Romance versions both parts precede it. This difference was probably the reason for the conspicuous and almost complete lack of tokens with the unscrambled sequence *adverbial-ObjNP* in the translations from English (cf. Table 4-23). Table 4-37 shows that the same effect can be detected for sentence <18>. All tokens with prepositional ObjPPs were excluded.

Table 4-37: Distribution of two sequences of ObjNP and adverbial in the matrix clause of sentence <18> separated by the informants' origin and by the language of the stimulus sentence (only ObjNPs; E=English; S=Spanish; P=Portuguese)

	USA	**Mexico**		**Bolivia**	**Brazil**	**Menno**		**Fernheim**		**Total**
stimulus	E	S	E	S	P	S	E	S	E	
n (tokens)	58	31	4	2	20	13	10	14	5	157
adverbial-ObjNP	1	8	0	1	4	1	0	3	0	18
	1.7%	25.8	0%	50%	20%	7.7	0%	21.4	0%	11.5%
χ^2 (2, n=157) = 15.4, p=0*** / Cramer's V: 0.31 / 1 cell (16.7%) with less than 5 expected tokens										
ObjNP-adverbial	57	23	4	1	16	12	10	11	5	139
	98.3%	74.2	100	50%	80%	92.3	100	78.6	100	88.5%

With regard to the language of the stimulus sentence, the distribution in Table 4-37 is highly significant (excluding the translations from English, there is no significant difference between Spanish and Portuguese). The English-based translations are again the most scrambling-friendly, producing just one unscrambled sequence in 77 tokens. This is an interesting result because it shows once again that MLG bare pronouns (*dem*/*den*/*de* and *ihm* in sentence <18>) behave in a comparable fashion to MLG full-fledged NPs as in sentence <13>.

Due to the significant result in Table 4-37, we will again exclude English-based tokens. We will not exclude the Brazilian tokens though. The reason for this is twofold: Firstly, we would not like to lose another four of the few unscrambled tokens and secondly, the difference in the Portuguese and Spanish stimulus versions of sentence <13>, which was the reason for the exclusion of the Brazilian tokens there, does not exist here. While the Spanish stimulus sentence <13> features the adverbial construct *ya no*, sentence <18> uses *no más*, almost identical to Portuguese *não mais* (the precise position of *más* and *mais* in relation to

preposition which marks the status of the indirect ObjNP and is not selected by the verb or that the semantically empty preposition *a* is phonetically too weak to prime (cf. KAUFMANN (2005: 77–81) for this argument).

the verbal elements, however, still distinguishes the two Romance versions). Table 4-38 presents the crucial distributional information for the different types of informants:

Table 4-38: Distribution of the adjacent sequences of the ObjNP *ihm*/*dem*/*den* and the adverbial *nich mehr* in the matrix clause of sentence <18> separated by the informants' raising and scrambling behavior (all English-based tokens excluded; scrambl. = scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	80	71	15	40	3	13	71
adverbial-ObjNP -scrambling	17	13	4	3	1	5	13
	+0.003	-0.122	26.7%	7.5%	33.3%	38.5%	18.3%
	ns	F (1,69) = 2.9 $p=0.092^{(*)}$	χ^2 (3, n=71) = 7.8, $p=0.05^{(*)}$ / Cramer's V: 0.33 / 4 cells (50%) with less than 5 expected tokens				
ObjNP-adverbial +scrambling	63	58	11	37	2	8	58
	-0.102	+0.014	73.3%	92.5%	66.7%	61.5%	81.7%

Although the frequency distribution in Table 4-38 is almost significant ($p=0.05^{(*)}$), the distribution is not exactly as we would have expected it. Three of the four CLUSTERS behave as expected, but the scrambling-friendly Dutch-type informants show the highest share of the unscrambled sequence *adverbial-ObjNP*. The more fine-grained and more reliable scrambling index, however, shows the expected difference of 0.136 index points (+0.014-(-0.122)), but the difference only reaches a weak statistical tendency. Informants producing the scrambled sequence *ObjNP-adverbial* have a higher scrambling value than informants producing the unscrambled sequence *adverbial-ObjNP*.[87] The raising index does not show a significant difference.

We can now once again compare the behavior of full ObjNPs in relation to the adverbial construction *not anymore* in sentence <13> with pronominal ObjNPs in relation to the same construction in sentence <18>. Without the English-based tokens, 42.1% of the tokens of sentence <13> show the unscrambled sequence *adverbial-ObjNP* (67 of 159 tokens; cf. Table 4-23; excluding the Portuguese-based tokens too, the share is 41.4%). This share drops to 21.3% with the pronoun in sentence <18> (17 of 80 tokens; without the Portuguese-based tokens 21.7%). As pronouns are known to have a high propensity for fronting (cf. EISENBERG 2013b: 382 – tendency (1d)), this is exactly the result we would expect. Nevertheless, the result for the scrambling index in Table 4-38 shows that a strong drive for scrambling does not only play a role in full-fledged ObjNPs, but also in pronominal ones.

Like in sentence <17> analyzed in Section 4.6.1, the modal/connective particle *ook* (SG *auch*; hardly translatable into English) appears in some of the translations. Example (4-64a)

[87] Including the US-American tokens, the difference in the important scrambling index would show a strong statistical tendency (F (1,145) = 3.9, $p=0.51^{(*)}$) pointing into the expected direction. Both the frequency distribution and the raising index would not show a significant difference.

shows a token with a scrambled ObjNP not entering the analyses due to the non-adjacency of the pronoun and the adverbial. Example (4-64b) shows a token with an unscrambled ObjPP:

stimulus <18> English: **If he stole the book, I won't trust him anymore**
Spanish: **Si él robó el libro, no voy a confiar más en él**

(4-64) a. *wann hei daut Bük gestohlen haf dann wer ik ihm ook nich mehr trüen* (USA-82; m/35/MLG)
if he the book stolen has ~~then~~ will I him.DAT ~~PARTICLE~~ not anymore trust

b. *wann hei det Buuk gestohle haf dann wer ik ook nich mehr op ihn gleuwe* (Bol-8; m/20/MLG)
if he the book stolen has ~~then~~ will I ~~PARTICLE~~ not anymore on him.ACC believe

The particle *ook* occupies a higher structural position than the following negated adverbial *nich mehr*. As before, we therefore assume that the position of *ihm* left to *ook* (and to *nich mehr*) in (4-64a) shows that this pronoun has been scrambled out of both VPs. Unlike this, the prepositional object *op ihn* in (4-64b) can be assumed to be located within VP2. The fact that pronominal ObjPPs do not move is probably not only connected to the general scrambling-unfriendliness of MLG ObjPPs, but also to the fact that the pronoun receives its case directly from its prepositional head. It, therefore, does not have to look for a case assigner outside VP. The lack of such an internal case assigner could then be the very reason why bare *ihm* in the US-American token (4-64a) has to move. Remember that in Section 4.6.1 we have mentioned the possibility that in the North American colonies, *ihm* is not recognized any longer as a lexical dative case, but may be considered by some informants as a structural case. This case may then have to be assigned in a functional phrase outside the VPs. If this is so, priming may not be the only reason for the high occurrence of the scrambled sequence *ObjNP-adverbial* in the United States (cf. Table 4-37).

In Chapter 4, we have created the central tool of analysis, the indexes for raising and scrambling (cf. Sections 4.2 and 4.3). With the help of these indexes we then grouped the informants into four CLUSTERS (cf. Section 4.4). Summarizing the facts presented in Sections 4.3, 4.5, and 4.6, we feel justified in saying that the two methods used in the formation of the scrambling index do indeed measure the same thing (cf. also Excursus 5.1.2 and 5.2). On the one hand, this is important with regard to methodology because we can now analyze other linguistic phenomena by means of one reliable and homogenous index, that of verb projection raising, and one heterogeneous, but nevertheless reliable index, that of scrambling. On the other hand, the fact that the two phenomena behave in a comparable way stochastically elicits the question of why this should be the case. Why do speakers who prefer the VR-variant with the sequence *ObjNP/PP-V1-V2* also prefer the sequence *ObjNP/PP-adverb(ial)*. At least for the South American informants we can add to this that these speakers also prefer the sequences *pronominal ObjNP/PP-pronominal SubjNP* and *pronominal ObjNP/PP-adverbial*. Obviously, the fact that these phenomena exhibit stochastic relationships does not automatically mean that we are dealing with scrambling. All these mechanisms could be independently connected to a common third factor possibly unrelated to scrambling. Such a conclusion, however, seems to be counter-intuitive in view of the fact that in all these cases, it looks as if the ObjNP/PP is moved from its verb-adjacent base position towards a position closer to the beginning of the clause.

With this, we return to one of the basic questions of this book. What influence do structural factors play and what influence do superficial facts of linearization play (cf. In-Depth Analysis 5.2 and Section 8.1)? For the time being, we claim – at least for MLG – that full-fledged ObjNPs/ObjPPs in front of two verbal elements in the VR-variant (cf. Section 4.3.2) and in front of adverb(ial)s (cf. Section 4.3.3) and pronominal ObjNPs/PPs in front of certain subject pronouns (cf. Section 4.6.1) and adverbials (cf. Section 4.6.2) are the result of scrambling. Having found these correlations, Chapter 5 will now investigate how much of the variation in other verbal complexes can be explained by means of the raising and the scrambling index.

5. Applying the Indexes to Other Verbal Complexes

In this chapter, we will primarily test the reliability of the two indexes developed in Chapter 4. Assuming that an informant with a strong propensity for raising and/or scrambling will raise and/or scramble across-the-board, the indexes should correctly predict at least part of the variation in other verbal complexes. We will verify this hypothesis in successive steps. In Section 5.1, dependent clauses with two verbal elements that were not used in index formation will be analyzed. This application is the most basic one since the indexes were formed by means of two-verb-clusters in dependent clauses and they will be applied to two-verb-clusters in dependent clauses. However, Section 5.1 also offers insights into other cluster-related phenomena of MLG, two of which will be mentioned here: (i) Section 5.1.3 carries out a thorough analysis of the insertion of *dune* in MLG concentrating not only on semantic functions like marking conditionality and aspect, but also on syntactic ones. Related to the syntactic function of *dune*, Section 5.1.3.3 will provide a partial, but detailed description of two MLG grammars. (ii) The second part of In-Depth Analysis 5.1.4 will deal with three phenomena that offer further support for the assumption that the VR-variant in MLG is the consequence of scrambling. The three phenomena are floating quantifiers, preposition stranding, and the syntactic behavior of indefinite *waut* ('something'). Section 5.2 will review whether the two indexes can explain part of the variation in a main clause with three verbal elements. As the finite verb in this clause always surfaces in second position, we are still dealing with clause-final two-verb-clusters. These clusters, however, differ in one important aspect; they do not contain a finite verb (cf. (3-6a+b)). In Sections 5.3 and 5.4, dependent clauses with three and four verbal elements, respectively, will be studied. Section 5.5, finally, will shift the focus away from verb clusters. In that section, we will concentrate on dependent clauses with just one verbal element and analyze whether the appearance of a low, but robust number of non-verb-final tokens can be accounted for by the informants' raising and scrambling behavior.

5.1 Testing ground I: Other dependent clauses with two verbal elements

5.1.1 Sentence <37> *I have found the book that I have given to the children*

The relative clause of sentence <37> was not included in index formation because many informants did not use the present perfect tense with *han* ('have') and a past participle but the simple past. Moreover, some informants produced prepositionally marked indirect objects. As Table 4-8 has shown that ObjPPs and ObjNPs lead to different cluster preferences, these tokens are problematic. After excluding tokens in the simple past and/or with ObjPPs, 115 tokens with two verbal elements and an ObjNP remain. This seems to be a reasonable number, but sentence <37> illustrates a basic problem of empirical research in linguistics, the existence of (too) many potentially influencing factors. A new factor appearing in this sentence is the (lack of) adjacency of the relative clause and its head noun. In the following in-depth analysis, possible syntactic effects of this factor will be investigated. This analysis offers preliminary insights into different degrees of syntactic integration of MLG dependent clauses, the central topic of Chapters 6 and 7.

In-Depth Analysis 5.1.1: Extraposed relative clauses

In sentence <37>, the informants did not only vary in the tense used in the relative clause, but also in the tense used in the matrix clause. This latter variation leads to two different types of sentence compounds:

stimulus <37> English: **I have found the book that I have given to the children**

(5-1) a. *ik funk daut Bük waut ik de Kinder gegeft ha* (USA-15; f/35/MLG)
I found-VERB the book that I the children given have

b. *ik hat daut Bo- Bük gefungen waut ik [0.4] de Kinder gegeft ha* (USA-4; m/14/E>MLG-∅)
I had-VERB1 the ~~bo~~- book found-VERB2 that I […] the children given have

In (5-1b), the relative clause is visibly separated from its head noun *Bük* (‘book’), while the relative clause in (5-1a) and its head noun are superficially adjacent. Structurally, both relative clauses are probably extraposed – STERNEFELD (2008: 379) assumes that all restrictive relative clauses are extraposed –, but extraposition is only visible in (5-1b). The question now arises whether (the lack of) superficial adjacency influences the informants’ choice of cluster variants in the relative clause. We assume that non-adjacent relative clauses are less integrated and may thus constitute a suitable context for dependent V2-clauses containing the V2-VPR-variant.

Table 5-1 shows the distribution of the different cluster variants in sentence <37> depending on the (lack of) adjacency of the relative clause. Additionally, the distribution of sentence <38> *The man who caused the accident has disappeared* is provided. This sentence was used for index formation and can – to a certain degree – be compared to sentence <37>. The cluster variants found in sentence <38> are represented by Mexican tokens:

stimulus <38> Spanish: **El hombre que provocó el accidente desapareció**
English: **The man who caused the accident has disappeared**

(5-2) a. *de Mann waut det accident gemeakt haf is furt* (Mex-54; f/19/MLG)
the man that the accident made-VERB2 has-VERB1 is away

b. *dei Mensch waut da hat daut- de- [0.4] daut Unglück ver- [0.5] verürsaakt der is verschwungen* (Mex-69; f/36/MLG)
the person that ‘there’ had-VERB1 ~~the~~.NEUTER- ~~the~~.REDUCED- […] the.NEUTER misfortune ~~cau~~- […] caused-VERB2 ~~he~~ has disappeared

c. *der Ohmtje waut det accident haf gemeakt der is furt* (Mex-5; m/16/MLG)
the man that the accident has-VERB1 made-VERB2 ~~he~~ is away

Table 5-1: Distribution of basic cluster variants in the relative clauses of sentences <37> and <38> in all colonies separated by the superficial adjacency between the relative clause and its head noun (only definite ObjNPs; finite verb *han*)

	sentence <37> simple past	**sentence <37>** present/past perfect	**sentence <38>**
feature	+adjacent	-adjacent	+adjacent
n (tokens)	29	86	167
raising (n)	+0.019 (28)	+0.008 (84)	+0.013 (166)
scrambling (n)	+0.014 (27)	+0.033 (84)	-0.007 (158)
NR-variants	26	75	140
ObjNP-V2-V1	89.7%	87.2%	83.8%
		ns	
V2-VPR-variant	1	7	11
V1-ObjNP-V2	3.4%	8.1%	6.6%
VR-variant	2	4	16
ObjNP-V1-V2	6.9%	4.7%	9.6%

The distribution of the three samples shows no significant difference. Partly responsible for this is the finite auxiliary *han* (‘have’), which is a raising-unfriendly verb and, therefore, only allows a reduced number of tokens with raised variants. Nevertheless, there are some noteworthy points in Table 5-1. In spite of the different function of the relative marker as subject in sentence <38> and direct object in sentence <37> and in spite of the fact that the relative clause in sentence <38> modifies the SubjNP *the man* and contains the direct ObjNP *the accident,* while the relative clause in sentence <37> modifies the ObjNP *the book* and contains the indirect ObjPP *to the children*, the percentage of the NR-variants in all three samples is virtually identical. With regard to the raised variants, there is however a certain difference. The extraposed relative clause of sentence <37> (*-adjacent*; cf. (5-1b)) shows more tokens of the V2-VPR-variant than of the VR-variant, while the latter variant is more frequent in both (superficially) adjacent relative clauses. As the finite verb of the V2-VPR-variant occupies the superficial position of finite verbs of main clauses, one is tempted to see the consequence of reduced syntactic integration in the (non-significantly) higher frequency of the V2-VPR-variant in the extraposed relative clause of sentence <37>.

Granted, our conclusion is problematic since it is based on a non-significant result. Because of this, we will offer some further theoretical and empirical arguments supporting the assumption that extraposition in MLG does lead to syntactic disintegration and thus to more tokens with the V2-VPR-variant. With regard to theoretical considerations, LANGACKER (2009: 335 – example (3d)) mentions the disintegrating effect of non-adjacent relative clauses discussing the sentence *I read a book last night which makes some outrageous claims*. He writes: “In (3)d, the relative is still more independent, as it is not even adjacent to the noun it modifies.” Aside from this, LEHMANN (1984: 205) argues:

> Aus dem bisher Gesagten folgt, daß Extraposition die Einbettung des RSes [relative clause; G.K.] aufhebt und ihn zu einem angeschlossenen macht […]. Tatsächlich ist der extraponierte RS strukturell kaum vom nachgestellten unterscheidbar.[88]

As LEHMANN continues writing that “[t]he postposed relative clause is a weakly subordinated, almost independent clause,”[89] the disintegrating nature of clausal extraposition becomes clear. Another difference between extraposed and non-extraposed relative clauses is mentioned by HULSEY and SAUERLAND (2006: 114), who state that “extraposed relative clauses only allow the matching structure and not the raising one,” while non-extraposed relative clauses allow both. HULSEY and SAUERLAND (2006: 119) explain this difference with the possibility of a late merger of matched, but not of raised relative clauses. Both the impossibility of a raising analysis – the impossible movement of the head noun from the relative to the matrix clause would create a strong linkage between these clauses –, and the possibility of a late merger could be seen as a correlation of a higher degree of disintegration of extraposed relative clauses.

With regard to distributional details, two further relevant facts exist in the MLG data set: On the one hand, the three relative clauses used for index formation show more tokens of the VR-variant than of the V2-VPR-variant regardless of whether they feature a finite modal verb or the finite temporal auxiliary *han* (‘have’; cf. Table 4-7). As all these relative clauses are (superficially) adjacent to their head noun, the predominance of the V2-VPR-variant in the extraposed relative clause of sentence <37> turns out to be a curious exception. On the other hand, the relative clause of sentence <38> is not only superficially, but also structurally adjacent to its head noun. Unlike in the tokens of sentence <37> with the matrix verb appearing in the simple past, string-vacuous extraposition cannot possibly have occurred in sentence <38> (cf. (5-2a-c)). Due to this, the predominance of the VR-variant for this integrated relative clause is expected. One must not forget however that three previously mentioned structural features of sentence <38> may actually favor the V2-VPR-variant.

(i) The relative clause of sentence <38> is less deeply embedded than that in sentence <37> since it modifies the SubjNP *the man* and not the ObjNP *the book*. SubjNPs are higher up in the tree structure than ObjNPs. (ii) The ObjPP *to the children* in the relative clause of sentence <37> is an indirect object, whereas sentence <38> features the direct object *the accident*. Direct objects are generally thought to be more closely related to their governing verb than indirect objects. DE HOOP and KOSMEIJER (1995: 147), for example, write that “[t]he direct object is thematically closer to the verb than the indirect object […].” This could make it more difficult for direct objects to scramble.[90] (iii) There is a non-significant

[88] Translation by G.K.: From the things said up to now, it follows that extraposition nullifies the embedding of the relative clause turning it into a conjoined clause […]. In fact, the extraposed relative clause is hardly distinguishable from the postposed one.

[89] Translation by G.K.; the original reads: *Der nachgestellte RS ist ein nur schwach subordinierter, fast selbstständiger Satz*.

[90] The distributional facts of the tokens (4-22b+c) of sentence <46> *I should have shown the little dog to the kids* support this view. The indirect ObjNP *de Kinder* (‘to the kids’) appears three times more frequently in the first

difference of 0.04 points (0.033-(-0.007)) in the values of the informants' scrambling index. The informants who produce the non-adjacent tokens of sentence <37> are slightly more scrambling-friendly than the informants who produce the adjacent tokens of sentence <38>. The difference is not very big,[91] but it again suggests a favoring effect of the unscrambled V2-VPR-variant in sentence <38>.

Summarizing these points, one can say that with regard to sentence <38> somewhat more scrambling-unfriendly informants are faced with a not very deeply embedded and thus scrambling-unfriendly relative clause modifying a SubjNP, which contains a scrambling-unfriendly direct ObjNP. All these features should favor tokens with the unscrambled V2-VPR-variant. In spite of this, sentence <38> shows a ratio of 1.45 (16:11) between the scrambled VR-variant and the unscrambled V2-VPR-variant, while the ratio of the superficially and structurally extraposed relative clause of sentence <37> is 0.57 (4:7). The predominance of the unscrambled V2-VPR-variant in this clause may therefore be read as a sign of the disintegrating effect of extraposition. After all, the responsible informants are somewhat more scrambling-friendly and the relative clause contains a scrambling-friendly indirect object. The fact that the relative clause of sentence <37> modifies a deeply embedded ObjNP obviously loses its importance after extraposition.[92]

End of In-Depth Analysis

Coming back to the primary goal of this section, i.e. checking the reliability of the indexes by means of sentence <37> *I have found the book that I have given to the children*, the following expectations should be met: The frequency distribution of the three basic cluster variants should be in alliance with the CLUSTERS' raising and scrambling behavior. The basic variants found in the translations of sentence <37> are shown in (5-3a-c):

stimulus <37> Portuguese: **Eu encontrei o livro que eu dei para as crianças**
English: **I have found the book that I have given to the children**

(5-3) a. *ik hat daut Buk gefunge waut ik de Kinder gegeft hat* (Bra-22; m/37/MLG+P)
I <u>had</u> the book found that I the children given-VERB2 <u>had</u>-VERB1

b. *ik hat daut Buk gefunge- [äh] de Buuk gefunge waut ik hat de Kinder gegeft*
(Bra-5; f/22/MLG+P)
I <u>had</u> ~~the~~.NEUTER ~~book found-~~ [eh] the.REDUCED book found that I <u>had</u>-VERB1 the children given-VERB2

c. *ik ha daut Bük gefungen waut ik* de Kinder *ha gegef* (USA-71; f/33/E>MLG-64%)
I have the book found that I the children have-VERB1 given-VERB2

---

position of the clause-final sequence ***ObjNP**-V2-ObjNP-V3* than the direct ObjNP *det Hundje* ('the little dog'; 31 and 11 tokens, respectively).

[91] The difference of 0.04 points represents 3.3% of the maximum span of the scrambling index of 1.224 points. LIND (2014: 15), who writes about effect strengths of non-significant differences, calls a difference of 5% considerable and one of 10% very considerable.

[92] Unfortunately, there are too few tokens with raised cluster variants in the superficially adjacent version of sentence <37>. If there were more such tokens and if the ratio of 2 (2:1) turned out to be stable, it would be possible to carry out a direct comparison of two sentence compounds differing only in adjacency.

The relative clause in token (5-3a) features a NR-variant, while the relative clauses in tokens (5-3b) and (5-3c) feature the unscrambled V2-VPR-variant and the scrambled VR-variant, respectively. In spite of the possible, albeit not measurable influence of superficial adjacency, tokens with the matrix clause in the simple past and tokens with the matrix clause in the present/past perfect will be used in Table 5-2. This approach alone guarantees a robust number of tokens with raised cluster variants.

Table 5-2: Distribution of the basic cluster variants in the relative clause of sentence <37> in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han*; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	112	111	17	56	12	23	108
NR-variants	98	98	16	56	7	16	95
ObjNP-V2-V1	-0.06	+0.037	94.1%	100%	58.3%	69.6%	88%
	F (2,109) = 27.1 p=0***	F (2,108) = 3 p=0.055$^{(*)}$	χ^2 (6, n=108) = 35.3, p=0*** / Cramer's V: 0.4 / 8 cells (66.7%) with less than 5 expected tokens				
VPR-variant	8	7	1	0	4	2	7
V1-ObjNP-V2	+0.463	-0.193	5.9%	0%	33.3%	8.7%	6.5%
VR-variant	6	6	0	0	1	5	6
ObjNP-V1-V2	+0.562	+0.139	0%	0%	8.3%	21.7%	5.6%

With regard to the structure in Table 5-2, we refer the reader to the explanations following Table 4-24. The frequency distribution is highly significant with a medium-size level of association. The high number of cells with less than five tokens is obviously a problem, but there are no more tokens with raised cluster variants available. The raising-friendly Flemish- and Dutch-type CLUSTERS do not raise in 23 out of 35 tokens (65.7%). This seems to be a rather high percentage for raising-friendly informants, but it is actually rather low compared to the two non-raising German-type CLUSTERS which do not raise in 98.6% of their 73 tokens. With regard to scrambling, we can only compare the raised variants since we do not know whether the unraised tokens feature string-vacuous scrambling of the ObjNP. The two scrambling-unfriendly German I- and Flemish-type CLUSTERS scramble just once (16.7%; 5 tokens of the V2-VPR-variant, 1 token of the VR-variant), while the scrambling-friendly German II- and Dutch-type CLUSTERS do so in five out of seven tokens (71.4%; 2 tokens of the V2-VPR-variant, 5 tokens of the VR-variant).

As already mentioned, the frequency data are mainly shown for illustrative purposes. The decisive figures are found in the second and third column of Table 5-2. The average value for the raising index for the informants producing the NR-variants is -0.06, while the informants producing the raised variants have highly significant higher figures of +0.463 and +0.562, respectively. The scrambling index shows a strong statistical tendency. The informants producing the scrambled VR-variant have an index value of +0.139, while those producing the unscrambled V2-VPR-variant have a much lower value of -0.193. The informants producing the NR-variants, for which we do not know whether scrambling has occurred, show an expected intermediate value of +0.037. These results make it possible to say that the two indexes work for sentence <37>.

5.1.2 Conditional clauses with *woare*

The reader may think that sentence <37> is too similar to the sentences used for index formation in order to provide independent evidence for their reliability. After all, the relative clause of sentence <37> shares its central characteristics, namely the type of dependent clause and the type of finite verb, with some clauses used in Chapter 4. In order to dispel these doubts, Sections 5.1.2 through 5.1.4 will analyze clauses which are characterized by features not present in the clauses used for index formation. The first example are conditional clauses with one verbal element in the stimulus sentence, for which many informants used two verbal elements in their translations, namely *woare* (SG *werden*; comparable to the English future marker 'will') plus a bare infinitive. Grouping together the four stimulus sentences with one verbal element in the dependent clause and concentrating on Mexican translations with resumptive elements like *dann* or *da* (both 'then') in the matrix clause, ninety tokens can be analyzed.[93] The four stimulus sentences are provided in (5-4) through (5-7):

(5-4) **stimulus <11>** *If* he **signs** this contract, he will lose a lot of money

(5-5) **stimulus <12>** *If* he **does** his homework, he can have some ice-cream

(5-6) **stimulus <13>** *If* he **quits** his job, I won't help his family anymore

(5-7) **stimulus <14>** *If* he **opens** the door, he will be very surprised

The basic cluster variants found in translations of sentence <11> are presented in (5-8a-c):

stimulus <11> Spanish: **Si él firma ese contrato, va a perder mucho dinero**
English: **If he signs this contract, he will lose a lot of money**

(5-8) a. *wann hei diese [0.4] contract unterschriewen würd da würd her viel Geld verspielen* (Mex-40; f/33/SG>MLG-86%)
if he this.FEM […] contract sign-VERB2 ~~would~~-VERB1 ~~then~~ <u>would</u> he much money <u>gamble-away</u>

b. *wann der würd diesen Kontrakt unterschriewen dann [0.5] wird her viel Geld verlieren* (Mex-91; f/61/MLG)
if he ~~would~~-VERB1 this contract sign-VERB2 ~~then~~ […] will he much money lose

---

[93] Two aspects explain the focus on Mexican clauses: First, the Mexican colony showed the highest number of tokens with *woare* ('will'). Second, the number of tokens for each clause featuring both *woare* and a resumptive element was so different in the six colonies that it was thought best not to add yet another factor. The sentences with a resumptive element were chosen because there are more translations available with them than without them. As there is a strong influence of this variable on the verb cluster variant (cf. Table 4-1 and especially Section 7.3), this restriction is necessary. A further possible grammatical restriction against two adjacent identical finite auxiliaries was analyzed in order to make sure that resumptive elements are not inserted to prevent such twin forms. An example is the translation of sentence <11> by Mex-15 (m/40/MLG) *wann hei den contract unterschriewen* ***wird wird*** *her viel Geld verlieren* (gloss: if he <u>the</u> contract sign will will he much money lose). The analyses showed that resumptive pronouns do not have this function in MLG.

(5-8) c. *wann hei diesen [0.7] contrato wird unterschriewen da wird her viel Geld verlieren* (Mex-47; f/36/MLG)
if he this […] contract ~~will~~-VERB1 sign-VERB2 ~~then~~ will he much money lose

The conditional clause in token (5-8a) features a NR-variant, the one in token (5-8b) the unscrambled V2-VPR-variant, and the one in token (5-8c) the scrambled VR-variant. The difference in mood between *würd* in (5-8a+b) on the one hand and *wird* in (5-8c) on the other hand does not influence the distribution. This difference will nevertheless be discussed in Section 5.1.3.1. Table 5-3 presents the distribution of the three variants for the Mexican translations of sentences <11> through <14>:

Table 5-3: Distribution of the basic cluster variants in the conditional clauses of sentences <11> through <14> in Mexico separated by the informants' raising and scrambling behavior (resumptive sentence compounds; definite ObjNPs; finite verb *woare*; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	80	87	7	29	17	26	79
NR-variants	18	17	4	8	2	3	17
ObjNP-V2-V1	-0.037	+0.046	57.1%	27.6%	11.8%	11.5%	21.5%
	F (2,77) = 11.5 p=0***	F (2,84) = 9.6 p=0***	χ^2 (6, n=79) = 20.3, p=0.002** / Cramer's V: 0.36 / 5 cells (41.7%) with less than five expected tokens				
VPR-variant	21	24	3	4	9	5	21
V1-ObjNP-V2	+0.303	-0.072	42.9%	13.8%	52.9%	19.2%	26.6%
VR-variant	41	46	0	17	6	18	41
ObjNP-V1-V2	+0.275	+0.141	0%	58.6%	35.3%	69.2%	51.9%

Unlike Table 5-2, Table 5-3 represents the results for several clauses. This means that some informants contribute more than one token to the index values and to the frequency distribution (the average is 1.6 tokens per informant). Despite the fact that the observations are thus not entirely independent, we do not consider this too big of a problem, because we are focusing on structural, not sociolinguistic factors. This means that informants are seen as representatives for certain value combinations of the raising index and the scrambling index rather than as individuals.

Table 5-3 shows many more tokens of the raised variants than the relative clause of sentence <37> in Section 5.1.1. The reason for this is that *woare* behaves more like a raising-friendly modal verb than a raising-unfriendly temporal auxiliary. Importantly, however, the relative facts presented in Table 5-3 are comparable to those of Table 5-2. The raising-friendly Flemish- and Dutch-type CLUSTERS do not raise in only five out of 43 tokens (11.6%), while the raising-unfriendly German-type CLUSTERS do so in 33.3% (12 out of 36 tokens). As for scrambling, the two scrambling-unfriendly German I- and Flemish-type CLUSTERS only scramble in six out of eighteen tokens (33.3%; 12 tokens of the V2-VPR-variant, 6 tokens of the VR-variant). The scrambling-friendly German II- and Dutch-type

CLUSTERS do so in 35 out of 44 tokens (79.5%; 9 tokens of the V2-VPR-variant, 35 tokens of the VR-variant).

With regard to the index figures, the average value for the raising index for the informants producing the NR-variants is -0.037, while the informants producing the raised variants have figures of +0.303 and +0.275, respectively. As for the scrambling index, the informants producing the scrambled VR-variant have a value of +0.141, while that of the informants producing the unscrambled V2-VPR-variants is -0.072. The informants producing the scrambling-unclear NR-variants again show an intermediate value of +0.046. Both the distribution and the differences in the index values are highly significant.

Two facts should be kept in mind: (a) We have just tested conditional clauses with a finite verb not used for index formation and (b) unlike the relative clause of sentence <37>, in which one clause was tested for all colonies, Table 5-3 presents the data of four clauses tested for one colony. In spite of these differences, the results are comparable heightening our confidence in the reliability of the two indexes. Furthermore, the data in Table 5-3 offers another possibility to verify the validity of the scrambling index.

Excursus 5.1.2: The validity of the scrambling index (part I)

In Sections 4.5.2.2 and 4.5.2.3, first pieces of evidence for the validity of the scrambling index were provided. As the scrambling index of the Flemish- and Dutch-type CLUSTERS is predominantly based on their preference for either the V2-VPR- or the VR-variant, the question was whether these CLUSTERS would behave as expected with regard to the linearization of ObjNPs and adverb(ial)s in sentences <13> *If he quits his job, I won't help his family anymore* and <2> *John doesn't think that you know your friends well*. The results left no room for doubt. The raising- and scrambling-friendly informants preferred both the scrambled VR-variant and the scrambled sequence *ObjNP-adverb(ial)*, while the raising-friendly, but scrambling-unfriendly informants preferred both the unscrambled V2-VPR-variant and the unscrambled sequence *adverb(ial)-ObjNP*.

With regard to the conditional clauses in this section, the opportunity to go in the opposite direction arises. In these clauses, the raising-unfriendly German-type CLUSTERS show – like the raising-friendly CLUSTERS – a marked difference in their preference for either the V2-VPR- or the VR-variant. Abstracting from the tokens of the NR-variants, the scrambling-friendly German II-type informants use the VR-variant in 81% of the cases (17 out of 21 tokens with the V(P)R-variants; cf. Table 5-3). The scrambling-unfriendly German I-type informants do not use this variant a single time. This is a rather dramatic difference even if we consider the fact that the seven tokens in the German I-type CLUSTER come from just two informants and that there are only three tokens with the raised V2-VPR-variant. Table 5-4 shows the share of the two methods used for the scrambling index for those Mexican informants that produced tokens for the four conditional clauses in Table 5-3:

Table 5-4: Distribution of the two methods used for the formation of the scrambling index of the Mexican informants of Table 5-3 separated by their raising and scrambling behavior

	German I informants	German II informants	Flemish informants	Dutch informants	Total
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	7	56	55	93	211
V(P)R-variants	2	30	46	80	158
	28.6%	54.5%	83.6%	85.1%	74.9%
adverb + ObjNP	5	26	9	13	53
	71.4%	45.5%	16.4%	14.9%	25.1%

The scrambling index of the German I-type informants was calculated by means of the sequence between ObjNP and adverb in 71.4% of the cases, and in 45.5% for the German II-type informants. Although it would have been more conclusive if the shares between the two German-type informants were more similar, the difference of 25.9% is rather small in comparison to the difference in the preference of the scrambled VR-variant in Table 5-3, which is 81% for the two raised variants (81% (17:21) - 0% (0:3)). If the preference for either the V2-VPR- or the VR-variant in the tokens used for calculating the scrambling index were exclusively responsible for the difference with regard to conditional clauses, a smaller difference would have appeared in Table 5-3.

Obviously, the low number of informants in the German I-type CLUSTER constitutes a problem that threatens conclusions based on Table 5-4. Luckily, however, there is a second possibility to check the validity of the scrambling index. The two scrambling-friendly German II- and Dutch-type CLUSTERS comprise more informants and consequently produce more tokens. Excluding the tokens of the NR-variants, these CLUSTERS show a comparable share of the scrambled VR-variant among the tokens with the V(P)R-variants (81% of 21 tokens and 78.3% of 23 tokens, respectively; cf. Table 5-3). In spite of this, the scrambling index of the Dutch-type informants was calculated in 85.1% of the cases with the distribution between the V2-VPR- and the VR-variant, while the scrambling index of the German II-type informants used this method in only 54.5% of the cases. If just one of the two methods described the appearance of the VR-variant in the four conditional clauses correctly, we would expect a comparable difference of 30.6% in the share of the two scrambling-friendly CLUSTERS. However, the observed difference of 2.7% for the raised variants is much smaller (81% (17:21) - 78.3% (18:23)).

5.1.3 Dependent clauses with *dune*

In this section, another hitherto undiscussed verb will be investigated. Innumerable informants use *dune* (‘do’) plus the bare infinitive of the main verb in clauses whose stimulus versions just feature one verbal element.[94] Analyzing these tokens it becomes clear that not only Early New High German *tun* is a polyfunctional auxiliary (cf. LANGER 2000: 295), but also MLG *dune* (cf. KAUFMANN 2011 for a sociolinguistic analysis). NIEUWEBOER (1999: 166) summarizes some of the functions of 'to do' in European varieties of Low German:

> In many Low German dialects, the verb 'to do' can be used as an auxiliary. Constructions with a finite form of 'to do' and an infinitive of a semantically meaningful verb exist alongside constructions without the auxiliary. In some cases the construction with 'to do' appears to have a semantic function that is different from that of the verb without auxiliary, in other cases the choice between the two constructions seems to be made on morphological, phonotactic or prosodic grounds.

In order to do justice to the comparable polyfunctionality of *dune* in MLG, we will pursue two goals in this section. Besides offering further support for the reliability of the raising and scrambling index (cf. Tables 5-7 and 5-8), we will illustrate some of the functions of *dune*. Section 5.1.3.1 focusses on *dune* as a marker of conditionality, Section 5.1.3.2 deals with the aspectual function of *dune*, and Section 5.1.3.3 introduces the reader to two groups of informants that use *dune* not only for semantic, but also for syntactic purposes, the one area not mentioned by NIEUWEBOER (1999: 166).

5.1.3.1 *Dune* as marker of conditionality

With regard to conditionality, we will again focus on sentences <11> through <14>. These sentences have already been analyzed in Section 5.1.2 with regard to the auxiliary *woare* ('will'). Unlike in non-conditional clauses, *dune* in conditional clauses functions as a marker of conditionality. With regard to this function, it is important to know that *dune* – like almost all MLG verbs – does not exhibit a mood difference anymore.[95] SIEMENS (2012: 181; cf. SALTVEIT (1983: 298–299) for other European varieties of Low German) writes:

> Als einziges Verb hat *woare* 'werden' noch einen Konjunktiv (*wuddsd*, *wudd*, *wudde*), der zur Bildung des analytischen Konjunktivs aller übrigen Verben Verwendung findet.[96]

Conditionality in SG is either expressed by an analytic construction using the subjunctive form of the verb *werden*, i.e. *würde*, *würdest*, etc. ('would'), plus the bare infinitive of the main verb or by the synthetic second subjunctive (*Konjunktiv II*; e.g., *er gäbe* for *geben*; 'he would give' and 'give'). The construction with subjunctive forms of *woare* also exists in MLG varieties of the Americas as tokens (5-8a+b) show. The fact that two of the three tokens

---

[94] It does not come as a surprise that SCHNITZSPAHN and RUDOLPH (1995: 64) write in their SG language course book for Paraguayan speakers of MLG: "*[…] tun in Verbindung mit anderen Hauptverben nicht zulässig, es wird nur das Hauptverb benutzt!*" [Translation by G.K.: […] do not allowed in combination with other main verbs, only the main verb is to be used!]

[95] What makes things for a speaker of German difficult is the fact that the present tense forms of the 2nd and 3rd person singular for *dune* resemble the SG forms of the second subjunctive (*Konjunktiv II*). SIEMENS (2012: 180), THIESSEN (2003: 352), and WARKENTIN GÖRZEN (1952: 121) give these forms as *deist* and *deit*. These forms are much closer to SG subjunctive *du tätest*/*er täte* ('you/he would do') than to the present indicative *du tust*/*er tut* ('you/he do(es)').

[96] Translation by G.K.: *Woare* 'werden' ('will') is the only verb, which still has a subjunctive form (*wuddsd*, *wudd*, *wudde*). This form is used to form the analytic subjunctive of all other verbs.

in (5-8a-c) feature the subjunctive *woare* is misleading though. Tokens with the indicative form, as in (5-8c), represent the majority in sentences <11> through <14>. Most informants in North America, but also many in South America, however, use *dune* in this context. SIEMENS (2012: 184) does not mention *dune* as a marker of conditionality for European MLG. In contrast, NIEUWEBOER (1999: 177) states that the auxiliary "*döune* renders a subjunctive meaning" for MLG in the Altai region. He, does however, qualify this statement:

> This use of *döune* is restricted to a few speakers. The meanings of potentialis and irrealis are normally expressed with the help of *wurd*/*wud* 'would', *zene* 'should, would', the preterite (*wie* 'was, were', *haud* 'had', *kun* 'could' etcetera), or a combination of any of these with the Russian loan *be* (a special potentialis/irrealis marker)[.]

In the Americas, the use of *dune* is more wide-spread in conditional contexts.[97] This is clearest for the US-American colony, which uses both *woare* and *dune* frequently in sentences <11> through <14>. Of their 103 tokens with *woare*, only nine (8.7%) appear in the subjunctive. *Dune*, which no longer distinguishes mood, appears in 67 tokens. The question now is why Mennonites should use two different auxiliaries for the same purpose. One possible hypothesis is that Mennonites in the Americas either stress the conditional nature of the clauses in question by means of an analytic construction with *dune* (67 of 266 US-American tokens)[98] or they stress the future time reference of non-counterfactual conditional clauses by means of an analytic construction with the indicative form of *woare* (94 tokens). The nine tokens with *woare* in the subjunctive offer a second possibility to stress conditionality. For the reader's convenience, the four conditional sentence compounds analyzed here are repeated:

(5-9)	**stimulus <11>**	*If* he **signs** this contract, he will lose a lot of money
(5-10)	**stimulus <12>**	*If* he **does** his homework, he can have some ice-cream
(5-11)	**stimulus <13>**	*If* he **quits** his job, I won't help his family anymore
(5-12)	**stimulus <14>**	*If* he **opens** the door, he will be very surprised

In all colonies, 128 tokens in these conditional clauses feature *dune* (67 tokens in the USA). Table 5-5 presents the distribution of tokens with single verbs and tokens with either *dune* or *woare*:

[97] NIEUWEBOER (1999: 180–183) also analyzes Mennonite writers from Canada. As he works with written texts, a quantitative comparison is difficult though. Importantly, he finds examples for both the aspectual and the conditional use of *dune*. Aside from this, *dune* as a marker of conditionality is by no means surprising. Many German dialects use – unlike SG – the subjunctive form of *tun* ('do') and not of *werden* ('will') for this purpose.

[98] SALTVEIT (1983: 300) denies the use of *doon* ('do') in this function for European varieties of Low German. He thus opposes KESELING (1970), whose position is suppored by the MLG data set: "*Dies widerspricht der Behauptung bei Keseling, 361 f.: „Der Konjunktiv wird jetzt [in den meisten nordnd. Ma.] vielfach durch modale Hilfsverben umschrieben, während sich für den Irrealis eine zusammengesetzte Verbform mit* doon *herausgebildet hat (*as wenn sei em dat glöben dee*)". Auch im letzteren Fall ist wohl die Vergangenheitsform entscheidend, und die Umschreibung mit* doon *hat andere Gründe*." [Translation by G.K.: This contradicts Keseling's claim, 361 f.: "The subjunctive is now [in most Northern Low German dialects] frequently paraphrased by modal auxiliaries, while the irrealis is being formed by a verbal complex with *doon* (*as wenn sei em dat glöben dee*)." In the latter case, it is probably also the past tense form which is decisive. The paraphrasis with *doon* is caused by other factors.]

Table 5-5: Distribution of tokens with single verbs or with two-verb-clusters with *dune* or *woare* in the conditional clauses of sentences <11> through <14>

	sentence <11>	**sentence <12>**	**sentence <13>**	**sentence <14>**	**Total**
n (tokens)	305	280	301	310	1196
single verb	86	228	171	141	626
	28.2%	81.4%	56.8%	45.5%	52.3%
χ^2 (6, n=1196) = 195.9, p=0*** / Cramer's V: 0.29 / 0 cells with less than 5 expected tokens					
***woare* + infinitive**	157	36	99	150	442
	51.5%	12.9%	32.9%	48.4%	37%
***dune* + infinitive**	62	16	31	19	128
	20.3%	5.7%	10.3%	6.1%	10.7%

Two facts about the distribution in Table 5-5 are telling: (i) Sentence <12> shows the lowest number of analytic constructions. (ii) The ratio between tokens with *woare* and tokens with *dune* is biggest in sentence <14> (7.9 as compared to 3.2 in sentence <13>, and 2.5 in sentences <11> and <12>). (i) The low number of 52 tokens with analytic constructions in sentence <12> is caused by the fact that its stimulus versions feature the verbs *does*, *hacer*, and *fazer*. In the North American colonies, the main verb was predominantly translated with *dune* ('do').[99] Only two of these tokens combine auxiliary *dune* with *dune* as the main verb. The other seven North American tokens with *dune* are combined five times with *meaken*, and twice with other verbs like *arbeiten* ('work'). Due to their rarity, we present the two combinations of *dune* and *dune* in (5-13a+b). Token (5-13b) was already presented as (1-2):

stimulus <12> Spanish: **Si hace sus deberes, puede tomar helado**
English: **If he does his homework, he can have some ice-cream**

(5-13) a. *wann hei dät sine Schularbeit dun kannst dü Seida trinken* (Mex-6; m/16/MLG)
if he ~~does~~-VERB1 his homework do-VERB2 can you juice drink

b. *if der dät sein [1.0] homework dun dann kann her waut [0.3] ice-cream han* (USA-17; f/14/E>MLG-Ø)
if he ~~does~~-VERB1 his […] homework do-VERB2 ~~then~~ can he ~~some~~ […] ice-cream have

NIEUWEBOER (1999: 175) confirms the existence of such doublings for European MLG by stating that "the auxiliary *döune* can in some cases be combined with the lexical *döune*." He adds, however, that this doubling "must be considered marginal and may not be allowed by all speakers."[100] As for the translations in (5-13a+b), it is interesting that both feature the

[99] In this case, priming does not play a role. The Mexican Mennonites also prefer *dune* ('do') to *meaken* ('make') although the Spanish stimulus version with *hacer* could be assumed to prime *meaken* since Spanish – unlike English – does not have a verb formally related to *dune*.

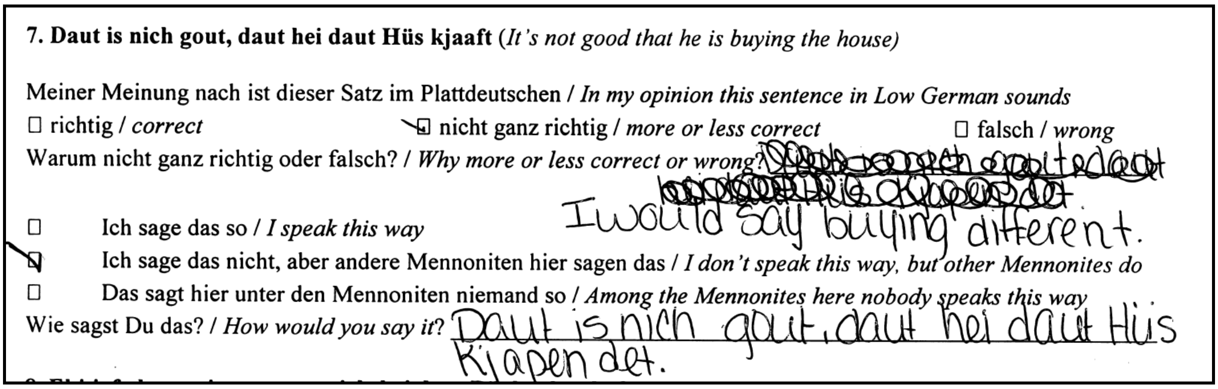
[100] WEBER (2015: 235) corroborates the dispreference for doubled *done* ('do') for North Lower Saxon (*Nordniedersächsisch*) referring to cases where *done* occurs twice as auxiliary embedding a third verb. DUDEN (2006: 545) claims that there is a euphonic dispreference in SG for the doubling of identical auxiliaries in the same clause: "*Schließlich wird aus Gründen des Wohlklangs meistens die Wiederholung* werden werde[n] *vermieden*." [Translation by G.K.: Finally, the repetition of *werden werde[n]* is normally avoided due to euphonic reasons.] ABRAHAM and FISCHER (1998: 37–38) also allege euphonic reasons for the impossibility of the combination of auxiliary *tun* and main verb *tun* in indirect speech in Bavarian. As for the hypothetical-

raised and unscrambled V2-VPR-variant although *dune* is a raising-unfriendly verb and although the unmarked variant for preposed conditional clauses is the scrambled VR-variant (cf. Section 6.2). We will see in Section 5.1.3.3 that this unexpected combination is no coincidence.

(ii) The marked preference of the auxiliary *woare* over the auxiliary *dune* in the conditional clause of sentence <14> is the decisive point for our assumption that *dune* serves as a marker of conditionality. In the sentence compounds <11> through <13>, the apodosis in the matrix clause is indeed the consequence of the protasis expressed in the preposed conditional clause. This is different in sentence <14> *If he opens the door, he will be very surprised*. The surprise of the subject in the matrix clause is not the consequence of his opening the door, but of the person(s) or thing(s) he faces after having opened the door. As the opening is not the condition for the surprise, a combination with the marker of conditionality *dune* seems to be less preferred. As the action has not yet taken place however, marking future time reference is semantically congruous.[101] The other three sentences also refer to future time, but they are prototypical cause-effect non-counterfactual conditional sentence compounds thus allowing for the foregrounding of conditionality. Aside from subtly exemplifying one function of the auxiliary *dune*, this difference shows again how well the Mennonite informants did their job. They reacted instantly to the slightest propositional differences in the stimulus sentences.

In the judgment test, there are also indications for the productivity of *dune* as a marker of conditionality. It is again three US-American informants that insert *dune* in the complement clause of sentence {7}. Not a single judge in the five colonies investigated introduced a form of *woare* ('will') in this sentence. Figure 5-1 presents one of the three examples:

Figure 5-1: Judgment test: USA-'24' (f/18/E>MLG) adding the auxiliary *dune* in sentence {7}



7. Daut is nich gout, daut hei daut Hüs kjaaft (*It's not good that he is buying the house)*

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*
☐ richtig / *correct* ☑ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*
Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong?*

I would say buying different.

☐ Ich sage das so / *I speak this way*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*
☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*
Wie sagst Du das? / *How would you say it?* Daut is nich gout, daut hei daut Hüs kjapen det.

The young woman's comment "I would say buying different" is explained by her own version; she prefers *kjapen* ***det*** with the auxiliary *dune* to simple *kjaaft*. The reader may

subjunctive function, the one relevant here, ABRAHAM and FISCHER (1998: 38) do not see such a restriction though.

[101] The preference for *woare* ('will') in sentence <14> is not connected to the ambiguous semantics of MLG *wann* (both 'if' and 'when'), which can introduce either a conditional or a temporal clause. All stimulus sentences use *if*, *si*, or *se*, three non-ambiguous markers of conditional clauses (the temporal counterparts would be *when*, *cuando*, and *quando*). This fact does not leave any interpretational space for the informants.

wonder why these three judges insert the MLG marker of conditionality as – at least at first glance – the complement clause in sentence {7} seems to refer to future time. According to our hypothesis, we would therefore expect a form of *woare*. Conditionality, however, seems to be a strong trait of sentence {7}. This can be seen by the judgment from a Mexican girl that also evaluated sentence {7} as not completely correct:

Figure 5-2: Judgment test: Mex-'33' (f/16/MLG) replacing the complementizer *daut* by *wan* in sentence {7}

7. Daut is nich gout, daut hei daut Hüs kjaaft (*No es bueno que compre la casa*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☑ nicht ganz richtig / *más o menos* ☐ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* Uso unos otras palabras

☐ Ich sage das so / *Uso esta forma*
☑ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*
☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Daut is nich gout, wan he daut Hüs kjaaft

This informant does not change the verb, but the introducing element. She prefers *wann* ('if'; written as *wan*) to *daut* ('that'). The effect she achieves is the same; she stresses the conditionality of the sentence compound. Luckily, there are many tokens from the translation task illustrating these two processes in the comparable stimulus sentence <1>.

stimulus <1> English: **It is not good that he is buying the car**
Spanish: **No es bueno que compre ese coche**
Portuguese: **Não é bom que ele compre o carro**

(5-14) a. *daut's nich gut daut der die Coa kaaft* (USA-16; m/15/E>MLG-Ø)
it-s not good that he the car buys-VERB

b. *daut's nich fein daut der die Coa köpen dät* (USA-10; f/24/MLG+E)
it-s not fine that he the car buy-VERB2 ~~does~~-VERB1

c. *daut is nich gut daut hei wudd det Fahrtieg köpen* (Mex-2; f/52/MLG)
it is not good that he ~~would~~-VERB1 the vehicle buy-VERB2

d. *daut is nich gut [0.8] wann hei daut Auto kaaft* (Bra-3; f/52/MLG)
it is not good […] if he the car buys-VERB

e. *daut's nich gut wann dei daut [0.3] Auto köpe dät* (Bra-11; f/39/P>MLG-64%)
it-s not good if he the […] car buy-VERB2 ~~does~~-VERB1

f. *daut is nich gut wann hei det: Auto wird köpe* (Bra-31; f/59/MLG)
it is not good if he the car ~~will~~-VERB1 buy-VERB2

Tokens (5-14a-c) feature the expected complementizer *daut* ('that'). Many informants, however, use *wann* ('if') instead stressing the conditionality of sentence <1>.[102] This can be seen in the translations (5-14d-f). In addition to this dimension of variation, there are two translations with a single verb in (5-14a+d), two with *dune* plus infinitive in (5-14b+e), and

[102] The use of *wenn* ('if'), the SG cognate of MLG *wann*, as an introducing element in complement clauses after preferential predicates is also attested for (cf. EISENBERG 2013b: 338–339 and REIS 1997: 124 – Footnote 5).

two with *woare* plus infinitive in (5-14c+f). What interests us now is the distribution between introducing elements and auxiliaries. Table 5-6 presents the result for the 58 tokens combining these two features:

Table 5-6: Distribution of two introducing elements and two auxiliaries in sentence <1> in all colonies

	daut	***wann***	**Total**
n (tokens)	35	23	58
woare	7	17	24
	20%	73.9%	41.4%
χ^2 (1, n=58) = 16.6, p=0*** / Phi: -0.54 / 0 cells with less than 5 expected tokens			
dune	28	6	34
	80%	26.1%	58.6%

The first point which attracts attention in this highly significant and strongly associated distribution is that there are more tokens with *dune* than with *woare*. If *dune* is indeed a marker of conditionality and *woare* one of future time reference, the predominance of *dune* stresses the implied conditionality of sentence <1>, a conditionality which unlike in sentences <11> through <14> is not overtly expressed by means of the introducing element *if*.

It is important to note that the frequent use of *dune* in sentence <1> is not related to the progressive form appearing exclusively in the English stimulus version. Conceptually, the complement clause *that he is buying the car* does not describe an action in progress. Nevertheless, one may suppose that the English progressive induces a more aspectual reading and thus a higher frequency of aspectual *dune* (cf. Section 5.1.3.2). This, however, is not the case. Although *dune* as opposed to *woare* is indeed especially predominant in the 23 English-based translations (91.3% vs. 26.9% in 26 Spanish-based translations and 66.7% in 9 Portuguese-based translations), this predominance can also be found in sentences <11> through <14>, where all stimulus versions feature the simple present tense (37.1% of 197 English-based tokens vs. 12.2% of 286 Spanish-based tokens vs. 23% of 87 Portuguese-based tokens). The rise in the share of *dune* is thus comparable for all stimulus versions (ratio English: 2.5 (91.3% : 37.1%); Spanish: 2.2 (26.9% : 12.2%); Portuguese: 2.9 (66.7% : 23%)).

Even more telling than the predominance of *dune* in Table 5-6 is the frequent co-occurrence of *daut* ('that') with *dune* ('do') and *wann* ('if') with *woare* ('will').[103] These concentrations do not depend on the language of the stimulus sentence either. Thus, we can conclude that the informants have two options if they choose to mark conditionality at all. They can either use conditional *wann* (23 tokens) or conditional *dune* (34 tokens). Due to the rarity of tokens combining conditional *wann* with conditional *dune* (only 6 of the 58 tokens), it seems that a redundant marking of conditionality is less preferred in such complement

[103] MLG in the Altai region also uses *döune* ('do') both in conditional clauses introduced by *wan* ('if') and in complement clauses introduced by *daut* ('that') that express conditionality (cf. NIEUWEBOER 1999: 177 – examples (30) through (32)). His example (32) is comparable to (5-14b): *Fleicht kaun öina daut moake, daut öina uk plautdiitsch liere döid* (our gloss; NIEUWEBOER's translation: perhaps can one this make that one too Low German learn-VERB2 does-VERB1; 'Maybe it would be possible to have people learn Plautdiitsch too').

clauses. Token (5-14c) shows the third possibility of marking conditionality. It combines non-conditional *daut* with the subjunctive form of the future auxiliary *woare*.[104] A word-by-word translation of this token into SG would sound markedly odd. SG *würde* ('would') would only be possible with *wenn* ('if') as an introducing element. Token (5-14c) may thus be an indication for a functional expansion of *daut*, which does not only allow co-occurrence with the auxiliary *dune*, but also with an auxiliary marking conditionality morphologically (cf. Excursus 7.2.2.1 for another new function of the complementizer *daut*). In any case, the distribution in Table 5-6 strongly supports the assumption that *dune* functions as a marker of conditionality in MLG.

Having shown this, we can return to the central question in Chapter 5. Does the informants' raising and scrambling behavior correctly predict their production in clauses not used for index formation? We will restrict our analysis of *dune* as a conditional auxiliary to US-American tokens since – as we have seen – the other colonies rarely produce *dune* in this context. The three basic variants are given for translations of sentence <13>:

stimulus <13> English: **If he quits his job, I won't help his family anymore**

(5-15) a. *wann [0.5] hei sinen [0.4] job quitten dät dann wer ik sine Fa- Familie nich mehr helpen* (USA-4; m/14/E>MLG-∅)
if […] he his […] job quit-VERB2 ~~does~~-VERB1 ~~then~~ will I his ~~fa~~- family not anymore help

b. *if hei dät sin job aphieren dann dun sie ihm nich mehr helpen* (USA-14; f/35/MLG)
if he ~~does~~-VERB1 his job finish-VERB2 ~~then~~ do they him Ø not anymore help

c. *wann hei sin job dät aphieren dann wer ik die- nich mehr die Familie helpen* (USA-8; f/14/E>MLG-∅)
if he his job ~~does~~-VERB1 finish-VERB2 ~~then~~ will I ~~the~~- not anymore the family help

The conditional clause in token (5-15a) features a NR-variant, the one in token (5-15b) the unscrambled V2-VPR-variant, and the one in token (5-15c) the scrambled VR-variant. One additional point should be mentioned with regard to the translation in (5-15c). Here, the informant first pronounces the definite article *die* ('the') in the matrix clause and then restarts by putting the adverbial construction *nich mehr* ('not anymore') in front of the ObjNP *die Familie* ('the family'). This is conclusive evidence for the assumption that the informants actually consider the sequence of constituents even in an unnatural translation context. Table 5-7 shows the distribution of the tokens. Again, only tokens with resumptive elements in the matrix clause are analyzed.

[104] In the MLG data set, the subjunctive form of *woare* is either *würde* as in (5-8a+b) or *wudd* as in (5-14c) (cf. SIEMENS (2012: 180) for this second form).

Table 5-7: Distribution of the basic cluster variants in the conditional clauses of sentences <11> through <14> in the USA separated by the informants' raising and scrambling behavior (resumptive sentence compounds; definite ObjNPs; finite verb *dune*)

	raising index	**scrambling index**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	40	40	8	4	26	38
NR-variants	33	32	8	1	22	31
ObjNP-V2-V1	+0.327	+0.155	100%	25%	84.6%	81.6%
	F (2,37) = 3.2 p=0.052(*)	F (2,37) = 25.9 p=0***	χ^2 (4, n=38) = 20.5, p=0*** / Cramer's V: 0.52 / 7 cells (77.8%) with less than 5 expected tokens			
V2-VPR-variant	2	3	0	2	0	2
V1-ObjNP-V2	+0.677	-0.611	0%	50%	0%	5.1%
VR-variant	5	5	0	1	4	5
ObjNP-V1-V2	+0.489	+0.074	0%	25%	15.4%	13.2%

The raising-unfriendly behavior of *dune* manifests itself in the fact that even in the most raising-friendly colony, there are only seven tokens of the raised variants (18.3% of 38 tokens; cf. also KAUFMANN 2003a: 184 – Table 2).[105] None of these tokens is found among the non-raising German II-type informants. The only German I-type informant in the United States did not use *dune* in these clauses. As the distribution only uses 38 tokens, the results are rather unreliable. Nevertheless, the distribution is highly significant showing a medium-size association. The Dutch-type informants use the scrambled VR-variant exclusively when they raise. The absolute share of this variant is even higher for the four Flemish-type informants, who raise very frequently (3 out of 4 tokens). But as expected, they produce more tokens of the V2-VPR-variant than of the VR-variant. If we take out the NR-variants, their share of the VR-variant is 33.3%, while the one of the Dutch-type informants is 100%.

The more reliable value for the raising index of the informants using the NR-variants is +0.327, while the informants using the raised variants have higher figures of +0.677 and +0.489, respectively. This difference shows a strong statistical tendency. For the scrambling index, the informants that use the scrambled VR-variant have a value of +0.074, while the informants using the unscrambled V2-VPR-variant have an extremely low value of -0.611. The difference is highly significant in spite of the low number of tokens. This time, the informants using the scrambling-unclear NR-variants unexpectedly show the highest value of +0.155. This value is due to the fact that only one of the 31 tokens with the NR-variants is produced by a scrambling-unfriendly Flemish-type informant. Table 5-7 is thus an additional piece of evidence for the reliability of the raising- and the scrambling index.

[105] That cognates of SG *tun* ('do') are indeed raising-unfriendly auxiliaries is corroborated by PENNER (1990: 175) for Bernese Swiss German and by WEBER (2015: 241), who does not find a single raised variant with *done* in the dialects of Northern Brandenburg in Germany in spite of the fact that these dialects allow raised variants. In this light, the few raised tokens in the US-American colony are telling proof of the raising-friendly behavior that is prevalent there.

5.1.3.2 *Dune* as a marker of aspectuality

LOUDEN (1992: 221–224) categorizes Pennsylvania German *due* as a marker of iterative/habitual aspect. This function also exists in MLG, both in the European varieties (cf. NIEUWEBOER 1999: 178–180) and in the American varieties. With regard to Canadian MLG, WARKENTIN GÖRZEN (1952: 125) writes that "[t]o express action going on the verb 'to do' is used." The following translations of sentences <41> and <42> show that this is also true for the MLG data set:

stimulus <41> Spanish: **Todos los domingos cocino un pastel**
English: Every Sunday I bake a cake

(5-16) a. *jeden Sunntag meak ik eine Tort* (Men-35; f/48/MLG)
every Sunday make I a cake

b. *jeden Sunntag du ik eine Tort meake* (Men-34; m/15/MLG+S)
every Sunday ~~do~~ I a cake make

stimulus <42> Spanish: **Antes de irme de casa siempre apago las luces**
English: **Before leaving the house I always turn off the lights**

(5-17) a. *ehe ik von Hüs weggo [äh] moak ik immer die Lichter üt* (Fern-17; m/64/MLG)
before I from home away-go [eh] make I always the lights out

b. *wann ik üt dem Hus go du ik immer alle Lichter utmoake* (Fern-16; f/70/SG>MLG-75%)
if I out the house go ~~do~~ I always all lights out-make

c. *ehe ik det Hüs verloten du du ik immer det Licht ütmeaken* (USA-33; m/42/MLG)
before I the house leave ~~do~~ ~~do~~ I always the light out-make

With the adverb(ial)s *every Sunday* in sentence <41> and *always* in sentence <42>, an iterative/habitual interpretation of these sentence compounds is guaranteed. A total of 46 informants translated sentence <41> with *dune* as in (5-16b) (14.7% of 312 tokens), while the share for the matrix clause of sentence <42> is markedly higher with 36.7% (115 of 313 tokens; cf. (5-17b+c)). In this sentence, the informants sometimes even produce *dune* in both the preposed temporal clause and the matrix clause as in (5-17c). In the United States alone, this happens fifteen times, a clear signal that the doubling of the auxiliary *dune* in adjacent clauses is no problem, quite unlike the doubling in the same clause as in (5-13a+b). Interestingly though, *dune* only appears 46 times in the temporal clause and again, the majority of these cases comes from the US-American colony (31 tokens; 67.4%). The US-American share in the more *dune*-friendly matrix clause of sentence <42> is markedly lower with 37.4% (43 of 115 tokens).

The exceptionally high share of the US-American informants in this temporal clause suggests a colony-based innovation. On the one hand, one could assume that speakers of MLG in other colonies do not allow doubling of *dune* in adjacent clauses. On the other hand, US-American Mennonites may use *dune* in novel contexts, for example, in clauses which gain their iterative/habitual reading only indirectly through an adverb(ial) in an adjacent clause. The role of the US-American informants as the cutting edge of such innovations is also supported by the fact that their share in the equally infrequent appearance of *dune* in sentence

<41> is also very high (54.5%). In order to evaluate these shares correctly, one must not forget that there are 313 informants in total and only 67 of them come from Seminole, Texas (21.4%).

Besides the iterative/habitual aspect in sentences <41> and <42>, *dune* also serves as a marker of a progressive aspect. This aspect is conceptually related to the iterative/habitual aspect as both can be subsumed under the heading of imperfective aspect. The progressive aspect is demonstrated with examples (5-18a+b) (tokens (5-19a-d) serve as contrast):

stimulus <32> Spanish: **Las historias que les está contando a los hombres son muy tristes**
English: The stories that he is telling the men are very sad

(5-18) a. *[äh] die Geschichte waut dei de Jungens vertahlt die sin sehr trürig* (Bol-6; m/32/MLG)
[eh] the stories that he the boys tells ~~they~~ are very sad

b. *die Geschichte waut der de Mensche vertahle dät die sin sehr trürig* (Bol-8; m/20/MLG)
the stories that he the people tell ~~does~~ ~~they~~ are very sad

stimulus <31> English: **I don’t like people who make a lot of noise**

(5-19) a. *ik gleich nich Menschen waut en doll Gelüts meaken* (USA-61; m/30/E>MLG-64%)
I like not people that a strong loudness make

b. *ik gleich nich Menschen waut en doll noise meaken dun* (USA-67; m/15/E>MLG-71%)
I like not people that a strong noise make ~~do~~

c. *ik gleich nich Menschen waut [0.5] dun viel Lüts meaken* (USA-6; m/20/E>MLG-79%)
I like not people that […] ~~do~~ much loudness make

d. *ik gleich nich Menschen waut dun en doll [äh] [1.2] Onrüh meaken*
(USA-43; m/42/E>MLG-Ø)
I like not people that ~~do~~ a heavy [eh] […] disturbance make

Translations without *dune* are represented by (5-18a) and (5-19a). *Dune* appears frequently when the stimulus sentence contains the present progressive as in sentence <32> (English *is telling*; Spanish and Portuguese *está contando*). In this sentence, 27.2% of the informants produced translations such as (5-18b) (82 of 302 tokens; 33 tokens from the USA (40.2%)). In sentence <31>, this share drops dramatically to 2.9% (9 of 310 tokens; cf. (5-19b-d); token (5-19c) was already presented as (1-3)). The reason for this is that the relative clause of sentence <31> expresses something one could call a general personality trait and is thus semantically incongruous with a progressive or iterative/habitual aspect.[106] The US-American informants are again at the top of the table in this unexpected and novel context. They produce eight of the nine tokens with *dune* (88.9%). Surprisingly, despite the fact that *dune* is a raising-unfriendly auxiliary, three of these tokens feature the unscrambled V2-VPR-variant as in (5-19c+d). Similar to tokens (5-13a+b), the V2-VPR-variant is unexpected since the unmarked raised variant in both conditional and relative clauses is the scrambled VR-variant (cf. Section 6.2). On second inspection, however, one realizes that the three raised tokens in sentence

[106] This is different for some European varieties of Low German, where the cognate of SG *tun* (‘do’) is almost used across-the-board regardless of aspectual differences of the main verb (cf. for *Nordniedersächsisch* WEBER 2015: 236).

<31> are either outright indefinite as (5-19d) featuring the indefinite article *en* ('a') or they describe a high, but unspecified, i.e. indefinite degree of loudness by means of *viel* ('much') as in (5-19c). As indefinite ObjNPs do not scramble easily (cf. Tables 4-9, 5-36, and 5-37), tokens (5-19c+d) are less of a riddle than tokens (5-13a+b). All these tokens will illustrate the syntactic function of *dune* in Section 5.1.3.3.

The function of marking a progressive aspect is underlined by the fact that the three dependent clauses with the highest shares of *dune* for all colonies are sentence <24> *He is not here, because he* ***is helping*** *your father out* with 49.8% of *dune* (156 of 313 tokens), sentence <23> *He can't listen to you, because he* ***is unpacking*** *his luggage* with 44.1% (134 of 304 tokens), and sentence <33> *This is the journey I* ***am inviting*** *my mother on* with 42.2% (127 of 301 tokens). All stimulus versions of these sentences appear with the progressive form. As two of these sentences contain causal clauses and the third one, sentence <33>, was translated very heterogeneously, we will refrain from analyzing their distributions for verb clusters with *dune*. Instead, we will offer the distribution for a complement clause that also features a progressive aspect. Tokens (5-20a-c) show translations for sentence <3>:

stimulus <3> Portuguese: **Não ves que eu estou acendendo a luz?**
English: Don't you see that I am turning on the light?

(5-20) a. *siehts dü nich daut ik det Licht anstelle du* (Bra-64; m/23/MLG+P)
see you not that I the light on-make-VERB2 ~~do~~-VERB1

b. *[äh] siehts du daut nich daut ich du: det Licht anmaake- anstelle* (Bra-33; f/39/P>MLG-43%)
[eh] see you ~~that~~ not that I ~~do~~-VERB1 the light ~~on-make~~- on-make-VERB2

c. *siehts du nich daut ik det Licht du anstecke* (Bra-52; m/30/MLG)
see you not that I the light ~~do~~-VERB1 on-make-VERB2

The complement clause in token (5-20a) features a NR-variant, the one in token (5-20b) the unscrambled V2-VPR-variant, and the one in token (5-20c) the scrambled VR-variant. Table 5-8 presents the distribution of these variants:

Table 5-8: Distribution of the basic cluster variants in the complement clause of sentence <3> in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *dune*; scrambl.=scrambling)

	raising index	scrambl. Index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	75	74	8	29	12	24	73
NR-variants	49	48	6	25	5	11	47
ObjNP-V2-V1	+0.076	+0.041	75%	86.2%	41.7%	45.8%	64.4%
	F (2,72) = 13.8 p=0***	F (2,71) = 2.7 p=0.071(*)	χ^2 (6, n=73) = 14.7, p=0.023* / Cramer's V: 0.32 / 6 cells (50%) with less than 5 expected tokens				
VPR-variant	18	18	1	2	6	9	18
V1-ObjNP-V2	+0.454	-0.118	12.5%	6.9%	50%	37.5%	24.7%
VR-variant	8	8	1	2	1	4	8
ObjNP-V1-V2	+0.36	+0.066	12.5%	6.9%	8.3%	16.7%	11%

The distribution for the four CLUSTERS does not seem to offer strong support for the reliability of the two indexes since both scrambling-unfriendly and scrambling-friendly informants prefer the V2-VPR-variant, the unmarked variant for complement clauses.[107] Granted, the ratio between the V2-VPR- and the VR-variant for scrambling-unfriendly German I- and Flemish-type informants is 3.5 (7:2) and thus higher than the ratio of 1.8 (11:6) of the scrambling-friendly German II- and Dutch-type informants, but this difference is not as big as one would wish. The overall significance of the distribution is predominantly caused by the extremely different shares of the NR-variants.

It is, therefore, not surprising that the difference of the values of the raising index is highly significant. Again, the constellation for the scrambling index is less clear, the difference only reaches a statistical tendency. Nevertheless, in absolute terms, the difference of 0.184 points between the informants who produce the V2-VPR-variant and the ones who produce the VR-variant is noteworthy and follows our expectations (+0.066-(-0.118); 15% of the maximum span of 1.224; cf. Footnote 91 in Chapter 5 for the meaning of such differences). In view of this, Table 5-8 can be taken as additional support for the reliability of the indexes. Furthermore, like in Sections 5.1.1 and 5.1.2, we have again found comparable results regardless of whether several sentences of one colony (cf. Table 5-7) or one sentence in several colonies were analyzed (cf. Table 5-8).

5.1.3.3 The syntactic function of *dune*

Finally, of the many things that he taught me, I still remember this:
always put the key funny word in a sentence at the end of it,
as this will give it maximum impact; any words
that follow it will soften its effect

John Cleese about Peter Titheradge

In the previous section, we saw that one function of MLG *dune* is the marking of aspect, either iterative/habitual or progressive. This cannot be the whole story though, since, in this case, one would expect a frequent use of *dune* in the matrix clause of sentence <25> *He is crying, because he has to eat salad every day*. All stimulus versions of this matrix clause feature the present progressive and the informants are likely to have visualized a scenario in which a boy is crying in an adjoining room, while they are explaining the reason for the weeping to another person. In spite of this, only few informants use *dune* in this case. Examples (5-21a-e) offer five translations, four from the Mennonite data set and one from the Brazilian data set of Hunsrückisch (cf. Footnote 9 in Section 2):

---

[107] The fact that the share of raised variants in sentence <3> (cf. Table 5-8) is higher than in sentences <11> through <14> (cf. Table 5-7), both for all colonies and for the US-American colony alone, does not necessarily mean that the behavior of *dune* (‘do’) depends on its function. What is responsible for this difference is the fact that complement clauses show a stronger tendency for raised variants than conditional clauses (cf. Section 6.2).

stimulus <25> English: **He is crying, because he has to eat salad every day**
Spanish: **Está llorando porque tiene que comer ensalada todos los días**
Portuguese: **Ele está chorando porque ele tem que comer salada todos os dias**

(5-21) a. *hei hielt wegens hei jeder Tag mut Salot ete* (Men-43; m/27/MLG)
he cries because he every.NOM day must salad eat

b. *hei dät rohre wegen hei jeder Tog mut Sa- Ensalada eten* (Mex-61; m/31/S>MLG-64%)
he ~~does~~ cry because he every.NOM day must ~~sa-~~ salad eat

c. *der is doll wegen hei mut [0.9] Ensalada alle Tag eten* (Mex-75; m/20/S>MLG-86%)
he <u>is</u> <u>angry</u> because he must […] salad all days eat

d. *hei is: hielend wegens hei: immer [äh] jeder Tag: Salot ete mut* (Men-44; m/15/MLG+SG)
he ~~is~~ crying because he ~~always~~ [eh] every.NOM day salad eat must

e. *der is am brille weil der muß: jede Tag Salat esse* (Brochier-2, f/19/HUNS+P)
he is at crying because he must every day salad eat

Hunsrückisch as in (5-21e) is based on a koiné of several Franconian varieties spoken in West Central Germany and uses both *due* (‘do’) and the construction *am INFINITIVE sin* (‘at INFINITIVE be’) in the sentences discussed in Section 5.1.3 (cf. Elspaß (2005: 83) for the historic relationship between these constructions). Fifteen of the 24 Hunsrückisch informants use *is am brille* (‘is crying’) in sentence <25> (62.5%); only one produces the auxiliary *due* (‘do’). Eight informants use a single verb form. As *am INFINITIVE sin* is a well-known progressive marker in colloquial varieties of present-day German, this distribution clearly supports the progressive interpretation of the matrix clause of sentence <25>.[108]

In spite of this, only eighteen Mennonite informants (5.8% of 313 tokens) insert *dune* in sentence <25> (cf. (5-21b)). What is important is that the construction *am INFINITIVE sene* does not exist in MLG. Even more unexpectedly, the heavy *dune*-users from the United States are not in the lead in conquering yet another context for this auxiliary (cf. their role in the temporal clause of sentence <42> and the relative clause of sentence <31>). Only three of the 67 US-American informants produce *dune* (4.5%) in sentence <25>, while seven of 56 Brazilian informants do so (12.5%). The remaining eight tokens are produced by Mexican informants (7.8% of 103 tokens). Translation (5-21-c) illustrates an alternative copula construction, which occurred eight times, and (5-21d) shows a unique token of a construction resembling a device for aspectual marking in older varieties of German (cf. Aron 1914: 3–12 and von Polenz 1994: 264). However, as (5-21d) comes from an English-based Paraguayan interview, priming based on the similar English construction seems a good explanation for this unique occurrence. In any case, the bulk of 286 tokens (91.4%) is represented by the translation in (5-21a), in which the matrix clause features a single verb. As we have already

[108] The function of Hunsrückisch *am INFINITIVE sin* (‘at infinitive be’) as a progressive marker is also stressed by the appearance in sentences which have to be interpreted progressively and where *dune* appeared frequently in MLG. The comparison always encompasses 24 translations. Sentence <24> *He is not here, because he* ***is helping*** *your father out*: 13 x *am helfe sin*; 1 x *helfe due*. Sentence <33> *This is the journey I* ***am inviting*** *my mother on*: 10 x *am inlode sin*; 3 x *inlode due*. Sentence <23> *He can’t listen to you, because he* ***is unpacking*** *his luggage*: 6 x *am raushole sin*; 7 x *raushole due*. *Due* seems to cover a progressive aspect sometimes, but it is predominantly used for conditional and habitual aspects, where *am INFINITIVE sin* never appears, e.g. sentence <42> *Before leaving the house I* ***always*** *turn off the lights*: 14 x *ausmache due*.

seen that *dune* is a marker of progressive aspects, its unexpectedly rare occurrence in the matrix clause of sentence <25> suggests a syntactic restriction against its insertion. This syntactic restriction cannot be related to the status of main or dependent clause though since we have seen that *dune* is not confined to either type (cf. the matrix clause of sentence <42> or the independent main clause in sentence <41>).

LOUDEN (1992: 221–224) mentions a possible syntactic function of *do*-support in Pennsylvania German, namely the speaker's desire to maintain the typical OV-structure of German varieties.[109] ABRAHAM and FISCHER (1998: 45) see a discursive-functional motive for this. By inserting *tun* ('do') in clauses with the finite verb in the head position of CP, the speaker is said to keep the main verb in the clause-final focus position thus enabling rhematic stress. This functional explanation is naturally restricted to main clauses, since introduced dependent clauses, at least in non-raising varieties, automatically feature the main verb clause-finally.

Wrapping up these introductory comments, one has to admit that we are faced with several contexts where *dune* does not behave as expected. In the matrix clause of sentence <25>, *dune* appears unexpectedly rarely and the highest share of tokens is produced by Brazilian informants. In addition, we have encountered two contexts where *dune* appears in North America although there are hampering factors, either a less preferred formal doubling as in (5-13a+b) or aspectual incongruity as in (5-19c+d). Separating the North American informants into three groups according to the presence or absence of strongly marked *dune* in sentences <12> *If he does his homework, he can have some ice-cream* and <31> *I don't like people who make a lot of noise* and according to the cluster variant with which *dune* appears in the dependent clauses, different MLG grammars can be isolated (cf. Section 8.2 for a comparable endeavor). Table 5-9 presents the information for the general syntactic behavior of these groups:

Table 5-9: Raising and scrambling behavior according to three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	**Total**
n (informants)	150-151	6	5	161-162
raising F (2,158) = 3.4; p=0.036*	+0.259	+0.312	+0.589	+0.271
scrambling F (2,159) = 2.4; p=0.095(*)	+0.05	-0.012	-0.184	+0.041

It immediately becomes clear that the behavior of the six informants using unexpected *dune* together with the NR-variants (column *+dune/NR-variants*) and the five informants using it together with the V2-VPR-variant (column *+dune/V2-VPR-variant*) is not restricted to the

[109] This is also one possible explanation mentioned by ELLEGÅRD (1953: 154) for early English *do*-support. A comment by BARBIERS (2013: 9 – Footnote 10), who does not see an interpretational difference in clauses with or without *do* in many Dutch dialects, may also point in the direction of a non-semantic motivation, possibly a syntactic one.

two sentences in question. Although these groups share their preference for *dune*, they definitely do not share their raising and scrambling behavior. The combination of *dune* plus V2-VPR-variant is produced by scrambling-unfriendly and extremely raising-friendly informants (3 of the 9 most raising-friendly informants are among these 5 informants). The six informants producing the combination *dune* plus NR-variants behave syntactically much more like the remaining majority of the North American informants (column -*dune*).[110] Table 5-10 represents the frequencies of *dune* and *woare* in main and dependent clauses where the stimulus sentence just features one verbal element and where *dune* appears at all.

Table 5-10: Distribution of tokens with single verbs or with two-verb-clusters with *dune* or *woare* in main and dependent clauses separated by three groups of North American *dune*-users

	-*dune*	**+*dune*** NR-variants	**+*dune*** V2-VPR-variant	**Total**
n (tokens)	2587	97	80	2764
single verb	1578	24	18	1620
	61%	24.7%	22.5%	58.6%
χ^2 (4, n=2764) = 123, p=0*** / Cramer's V: 0.15 / 0 cells with less than 5 expected tokens				
***woare* + infinitive**	306	7	13	326
	11.8%	7.2%	16.3%	11.8%
***dune* + infinitive**	703	66	49	818
	27.2%	68%	61.3%	29.6%

The highly significant distribution only shows a weak association. Table 5-10 nevertheless suggests that some informants are on the way to completely disallowing certain clauses with one verbal element. After all, the *dune*-users insert an auxiliary, mostly *dune*, in 75.3% and 77.5% of the cases, respectively. This share is 39% for the North American non-users (for the South American informants it is even lower with 20.9%; 478 (324 x *dune*; 154 x *woare*) of 2,285 tokens). Although the tokens analyzed mix different functions of auxiliary *dune*, a strong implicational relationship emerges. North American informants that insert *dune* in unexpected contexts insert it more frequently across-the-board. With regard to *woare*, the differences in Table 5-10 are small. The decisive exchange happens between clauses with single verbs and clauses with *dune*. In view of this, it does not come as a surprise that the only and thus highly marked occurrence of *dune* embedding another auxiliary instead of a main verb comes from one of the extremely raising-friendly *dune*-users (cf. WEBER (2015: 235) for the same restriction in *Nordniedersächsisch*):

[110] Even the exclusion of the raising-unfriendly German-type informants from this group (-*dune*) does not level the difference to the five extremely raising-friendly informants (+*dune*/*V2-VPR-variant*). The new raising value of +0.443 is still significantly lower than the one of +0.589 (F (1,98) = 4.1; p=0.045*).

stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: This is the journey I am inviting my mother on

(5-22) *det is die [1.0] journey det*[111] *i- [0.3] ik mine Mom [0.5] weiten loten du*
(USA-6; m/20/E>MLG-79%)
this is the […] journey that ~~I-~~ […] I my mother […] know-VERB3 ~~let-~~VERB2 ~~do-~~VERB1
'this is the journey about which I let my mother know'

Interestingly, although the informant has a high raising value of +0.478, he puts finite *dune* at the end of an entirely left-branching sequence *ObjNP-V3-V2-V1*. In MLG three-verb-clusters this sequence occurs very rarely and only in specific contexts. The reason for this apparent exception may be that not only *dune* is a raising-unfriendly verb, but also the embedded permissive verb *loten* ('let').[112]

Table 5-11 directly combines the question of *dune* with the question of raising. It presents the distribution of cluster variants in two-verb-clusters featuring finite *dune*. There are six tokens with the non-V2-VPR-variant in the line *VPR-variants* (2 in the 2nd, 4 in the 4th column). The appearance of these tokens does not cause a problem though (cf. In-Depth Analysis 5.1.4), since our focus is on raising and not on scrambling differences between raised variants. For the same reason, tokens with indefinite ObjNPs or with ObjPPs, but not with bare pronouns, were included. Still the vast majority of the tokens feature definite ObjNPs.

Table 5-11: Basic cluster variants with *dune* in dependent clauses with two verbal elements separated by three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	**Total**
n (tokens)	397	47	25	469
NR-variants	324	43	10	377
ObjNP-V2-V1	81.6%	91.5%	40%	80.4%
χ^2 (4, n=469) = 52.6, p=0*** / Cramer's V: 0.24 / 3 cells (33.3%) with less than 5 expected tokens				
VPR-variants	39	2	14	55
(adv-)V1-ObjNP-V2	9.8%	4.3%	56%	11.7%
VR-variant	34	2	1	37
ObjNP-V1-V2	8.6%	4.3%	4%	7.9%

[111] As the head noun *journey* is feminine, the reduced form *det* (full form *daut*) is a relative particle, not a relative pronoun. Excursus 7.2.2.1 will briefly deal with the few occurrences of the complementizer *daut* ('that') as a relative particle.

[112] There are nine two-verb-clusters featuring *loten* ('let') as finite verb (8 in sentence <13> *If he quits his job, I won't help his family anymore*). Eight of these clusters appear in the NR-variants, one in the VR-variant (11.1%). Although the average raising-value of the responsible informants is rather low with -0.15, they show a clear difference between raising-friendly modal verbs, for which they use raised variants in 32.3% of the 31 clauses selected for index formation, and the raising-unfriendly temporal auxiliary *han* ('have'), for which this share is only 2.7% (1 of 37 clauses). *Loten* thus groups with raising-unfriendly verbs. Furthermore, in spite of the restriction mentioned in Footnote 100 (this chapter), THILO WEBER (p.c.) has found twenty tokens in an older corpus of spontaneous Low German speech from Germany, where *dune* embeds auxiliaries, mostly in passive constructions. Like token (5-22), all of them surface with the sequence *verb3-verb2-verb1*, even when the responsible speaker is raising-friendly.

In main clauses, the strategy to insert *dune* automatically keeps the main verb in clause-final position. For the dependent clauses analyzed here, raising becomes decisive and raising is the discipline in which the five informants in the fourth column excel, not only in their general syntactic behavior, but also in clauses with *dune*. They produce raised variants in fifteen of 25 tokens (60%; 14 tokens with the VPR-variants; 1 token with the VR-variant). For the six less raising-friendly *dune*-users, the share for both the VPR-variants and the VR-variant is just 4.3% each (together 4 of 47 tokens). This behavior is again similar to the one of the non-users (8.6% for the VPR-variants; 9.8% for the VR-variant). Interestingly, the shares of this last group hardly change when we exclude the tokens produced by raising-unfriendly German-type informants. They are then 11.8% and 11.4%, respectively (29 and 28 of 246 tokens).

The dramatic difference between the two groups of *dune*-users cannot be explained satisfactorily by the difference of 0.277 points in their raising values (0.589-0.312; cf. Table 5-9). Obviously, the more raising-friendly *dune*-users produce more raised variants in the sentences selected for index formation than the less raising-friendly *dune*-users. The ratio of the shares of the two groups, however, is just 1.5 (88.5% : 57.6%)[113] and thus much lower than the one of seven with regard to dependent clauses with *dune* (60% : 8.6%). This can only mean that the less raising-friendly *dune*-users and all informants that did not insert *dune* in sentences <12> and <31> abide by the raising-unfriendly nature of this auxiliary. It is the extremely raising-friendly *dune*-users, who must have changed their grammar dramatically. It seems that they keep the main verb at the end of all clauses no matter the cost. Due to this, the question arises why they bother to insert *dune* in dependent clauses at all since single verbs would appear clause-finally automatically. In order to solve this conundrum, we will sketch possible grammars for the two groups of *dune*-users:

(i) At least in some contexts, the grammar of the six less raising-friendly *dune*-users (*+dune*/*NR-variants*) does not seem to allow main verbs to leave their VP.[114] Thus, these verbs are not able to pick up (or match) finiteness features. This then is the syntactic function of *dune*. As such a restriction is the major reason for English *do*-support in questions and negated sentences, this sounds like a reasonable explanation, especially when one learns that five of the six informants come from the United States and four of them claim to speak English better than MLG.[115] They still have a good command of MLG though (their average is 10.6 out of 14 points; English 11.2 points; SG 5.6 points). Aside from this, an explanation relying exclusively on language contact is problematic since the translations of negated declarative and interrogative matrix clauses in sentences <2> *John doesn't think that you know your friends well*, <5> *Henry doesn't know that he can leave the country*, and <6>

[113] In the 23 clauses used for index formation, the five raising-friendly *dune*-users show 42.3% of the V2-VPR-variant and 46.2% of the VR-variant. The shares for the six less raising-friendly *dune*-users are 21.2% and 36.4%, respectively (a total of 33 clauses).

[114] Perhaps this verbal inertness can also explain why these informants are less raising-friendly. After all, raising in our view implies the movement of the main verb.

[115] The sixth informant comes from Mexico. Three informants belong to the Dutch-type, two to the Flemish-type and one to the German II-type CLUSTER. Four are men (3 young men) and two are women. Their average age is 29.5 years (the group of non-users in Table 5-9 has an average age of 32.7 years).

Don't you know that he should learn English? do not feature *dune* a single time. This does not mean that the proposed scenario is wrong; it just means that the assumed mechanism constitutes a proper characteristic of one grammar of MLG.

In addition to the conspicuous absence of *dune* in the matrix clauses of sentences <2>, <5>, and <6>, there is another difference between MLG and Modern English, namely the massive appearance of *dune* in MLG non-negated declarative clauses, both in main and dependent clauses. Therefore, we may have to assume that unlike in Modern English, MLG finiteness features can never be lowered morphologically to VP. In any case, one should not forget that English *do*-support initially occurred in all clause modes, i.e. ±negated and ±question[116] (cf. KROCH 1989). ELLEGÅRD (1953: 174), for example, indicates a share of *do*-support of 64% in non-negated declarative clauses for individual writers. Only after 1560 did *do* disappear from affirmative declaratives. One might, therefore, guess that the six informants in question may have reached a level comparable to the one KROCH (1989: 160–161) describes for 16^{th}-century English:

> Having provided evidence that the increase in frequency of the use of *do* up to 1560 in all environments reflects an increase in the application of a single grammatical rule that introduces *do*, I will now briefly explore the consequences of this result for purposes of understanding the course of the change after 1560. Examination of Figure 1 shows that after 1560 the curves no longer move in tandem. While *do* in affirmative questions continues to increase in frequency along roughly the same path as before, in affirmative declaratives it begins a monotonic decline toward zero. The behavior of *do* in negatives, both declaratives and questions, is more complex, as the curves for these environments […] decline in tandem before rising toward 100 percent.

Obviously, the further development of English opposes the facts of the MLG variety under analysis and obviously, our reasoning is bound to sound rather speculative since we focus on the grammar of just six informants. In view of this, it is fortunate that we can offer further independent evidence for the supposed impossibility of verbs raising to IP in certain contexts. One of the problems with sentence <37> analyzed in Section 5.1.1 was that many informants used past tense forms in the matrix and the relative clause instead of the desired present perfect tense forms. This variation now turns out to be another blessing in disguise. Aside from the two clauses in sentence <37>, one more main clause (sentence <44>) and one more dependent clause (sentence <7>) exhibit variation between these tenses. All four clauses feature strong verbs, thus allowing the clear identification of different tense forms. Due to this, some translations with finite verbs in the present tense and more frequent translations with the finite verb in the past perfect tense could be excluded. In any case, there is a sufficiently high number of tokens we can analyze and we may thus be able to explain at least part of this tense variation by means of the same behavior we assume for the insertion of *dune*. If we want to maintain the hypothesis that some MLG speakers cannot raise the verb to

---

[116] The term *clause mode* is not exactly used like the traditional German term *Satzmodus*. It is rather used as a cover term for four configurations of clauses. These configurations can be distinguished by the presence or absence of negation and by the position of the finite verb (superficially 1^{st} or 2^{nd} position). This use of mode differs from, for example, DIEWALD's (2008: 131–132) use of *Satzmodus*. DIEWALD focusses more on illocutionary rather than on syntactic configurations (cf. also Footnote 6 in Chapter 1).

IP and thus need an auxiliary to head this functional phrase, this necessity should show up in other contexts as well. After all, such a profound structural change would – unlike a more superficial change like verb projection raising – hardly depend on the type of finite verb. This means that we expect the less raising-friendly *dune*-users to prefer present perfect tense to past tense because only in this way can they satisfy their assumed finiteness necessities. Table 5-12 presents the pertinent distribution:

Table 5-12: Past tense or present perfect tense in the main clauses of sentences <37> and <44> and the dependent clauses in sentences <7> and <38> separated by three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	**Total**
n (tokens)	496	16	13	525
past tense	241	2	5	248
1 verbal element	48.6%	12.5%	38.5%	47.2%
χ^2 (2, n=525) = 8.5, p=0.014* / Cramer's V: 0.13 / 0 cells with less than 5 expected tokens				
present perfect tense	255	14	8	277
2 verbal elements	51.4%	87.5%	61.5%	52.8%

Like in Table 5-10, the distribution is highly significant, the strength of association is weak, and the two groups of *dune*-users show a (markedly) lower share of single verbs (in this case past tense forms). Actually, the differences would be even larger if we added the 68 translations with finite verbs in the past perfect tense which the informants seem to use as an alternative to present perfect tense without a functional distinction. In this case, the shares for translations with past tense forms would drop to 43.3%, 10.5%, and 27.8%, respectively. Thus, the difference between non-users and extremely raising-friendly *dune*-users would be larger too. In any case, Table 5-12 strongly supports our assumption with regard to the six less raising-friendly *dune*-users and likewise shows a difference between the non-users and the extremely raising-friendly *dune*-users. In the clauses analyzed in Table 5-10, the heavy *dune*-users had to insert *dune* to satisfy finiteness necessities, now they have to insert the temporal auxiliary *han*. Their preference for present perfect tense instead of simple past tense thus seems to be more syntactically driven than semantically.

We now come back to the causal sentence compound <25> *He is crying, because he has to eat salad every day* from the beginning of this section. Judging from their behavior with regard to the clauses pooled together in Tables 5-10 and 5-12, the six informants analyzed here are strangely reluctant to use *dune* in the matrix clause of sentence <25>. They do not insert it a single time. The decisive difference between this matrix clause and the clauses analyzed in Tables 5-10 and 5-12 is that the main verb of sentence <25> features the unergative verb *cry,* while the other clauses all contain an internal argument. For the six informants, one may therefore sketch a grammar in which verbs with internal arguments must remain in their base-generated position within VP at least until after spell-out, possibly in order to properly assign case. If there is no internal argument as in the case of *cry* in sentence <25> or if the internal argument is clausal and thus does not need a case as in sentences <2>

John doesn't think that you know your friends well, <5> *Henry doesn't know that he can leave the country*, or <6> *Don't you know that he should learn English?*, the main verb may (still) move to IP and finally to CP.

Granted, the assumption that case assignment is somehow connected to the PF-level is technically puzzling, but for the time being it offers a possible explanation. Another and possibly less puzzling explanation is again connected to the history of periphrastic *do* in English. ARNOLD (1996: 1) writes that "from 1400-1700, the relative frequency of periphrastic *do* was higher with transitive verbs than with intransitives […]." This conviction is based on the early and impressively insightful study by ELLEGÅRD, who (1953: 190 and 195) draws the following conclusions for affirmative V2-clauses with a non-subject in topic position (he calls such clauses "sentences with inverted order") and negative declarative clauses:

> This implies that, as measured from the total number of inversions, the do-instances are a large and increasing proportion of the transitive group, but a fairly small proportion of the intransitive one.
>
> It appears that the transitive verbs have a small, but clear and above all consistent advantage with regard to the use of *do*. The consistency of the difference is a guarantee that it is not due to chance variations only.

Both ELLEGÅRD (1953) and ARNOLD (1996) consider as transitive all verbs with an internal argument, i.e. regardless of these arguments' case. Importantly, ARNOLD's explanation is not connected to case requirements, but to LF-incorporation of functional elements like certain prepositions and complementizers into the main verb. For such a process, PF-adjacency is a necessary precondition since there exists a constraint against incorporation into traces. This then may have impeded the movement of English transitive, but not of English intransitive verbs from VP to IP. Thus, the insertion of *do* saved clauses with transitive verbs. ARNOLD (1996: 13) explains this in the following way:

> […] since a transitive verb is more likely than an intransitive to have a complement containing an element which will incorporate into it, *do* was used more frequently with transitives than with intransitives.

This argument may easily explain the low number of tokens with *dune* in sentence <25> since *cry* is an intransitive verb. Does it also explain the lack of *dune* in sentences <2>, <5>, and <6> with *think* and *know* as matrix verbs? In our view, it does since the complement of both these verbs is clausal and thus extraposed, i.e. adjacency was relinquished by the argument liberating the verb from staying in its base-generated position.

ARNOLD links the rise of *do*-support in English to several other incorporating tendencies, thus nicely exemplifying a conviction held by LIGHTFOOT (2003: 7), who claims that "it is natural to try to interpret cascades of changes in terms of unitary changes in *grammars*, sometimes having a wide variety of surface effects and perhaps setting off a chain reaction." ARNOLD (1996: 2) details these tendencies in the following way:

> Furthermore, by viewing preposition stranding and ECM constructions [exceptional case marking; G.K.] as structures in which functional elements incorporate into verbs, it is possible to establish a theoretical account for the chronological parallel between the progress of *that*-deletion, the emergence of IOPs [indirect object passives; G.K.], and the spread of periphrastic *do*.

We can review two of these points, namely complementizer deletion and incorporation of stranded prepositions. Both these phenomena will be analyzed thoroughly in In-Depth Analysis 5.1.4 and in Section 7.1, respectively; here, we will only give some basic information and the relevant distribution. With regard to complementizer deletion, tokens like (5-23a+b) are relevant:

stimulus <10> English: **He didn't know that he should have fed the dogs this morning**

(5-23) a. *her wißt daut nich daut hei de Hung hat sollt foderen vondaag zu Morjens* (USA-63; f/35/MLG)
he knew ~~that~~ not that he the dogs has should feed today at morning

b. *der wißt nich der hat sollt [0.6] die Hung foderen [0.3] zu morjens* (USA-4; m/14/E>MLG-∅)
he knew not ∅ he had should […] the dogs feed […] at morning

Token (5-23b) shows the deletion of the complementizer *daut* after a negated declarative matrix clause. Such a deletion is hardly possible in SG and it is extremely rare in MLG too. In Section 7.1, we will see that the most important factors with regard to MLG complementizer deletion are the mode (±negated; ±question) and the verb of the matrix clause. Therefore, we have to compare the behavior of the three North American *dune*-groups along these lines. There are twelve combinations of the mentioned matrix clause features with at least thirty tokens in North America. Ten of them do not show any statistically significant difference, two of them do. Importantly, the two cases present features strongly restricting complementizer deletion (cf. Table 7-11). This is important since complementizer deletion after a non-negated declarative matrix clause is not surprising; neither in SG nor in MLG, especially if matrix verbs like *gleuwen* ('believe') or *denken* ('think') are involved. However, the two cases presenting a significant difference contain the deletion-unfriendly matrix verb *weiten* ('know') and one of them features a negated declarative clause as in (5-23a+b) (the other one is a non-negated interrogative matrix clause). Table 5-13 details the distribution in both cases.

Table 5-13: Complementizer deletion after two types of matrix clauses in complement sentence compounds separated by three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	***-dune***	***+dune*** NR-variants	***+dune*** V2-VPR-variant
context	negated declarative matrix clause matrix verb: *weiten*			non-negated interrogative matrix clause matrix verb: *weiten*		
n (tokens)	273	12	10	32	1	2
+daut	272	10	10	31	0	1
	99.6%	83.3%	100%	96.9%	0%	50%
	χ^2 (2, n=295) = 30.4, p=0*** / Cramer's V: 0.32 / 3 cells (50%) with less than 5 expected tokens			χ^2 (2, n=35) = 16.3, p=0*** / Cramer's V: 0.68 / 5 cells (83.3%) with less than 5 expected tokens		
-daut	1	2	0	1	1	1
	0.4%	16.7%	0%	3.1%	100%	50%

Despite the non-perfect conditions of these highly significant comparisons (many cells with less than 5 expected tokens), the strengths of association are definitely noteworthy. It becomes clear that the less raising-friendly *dune*-users are leading complementizer deletion in deleting-unfriendly contexts. These six informants thus seem to act like some speakers of English from the period 1400 to 1700. Nevertheless, there are some problems with this comparison. ARNOLD (1996: 7), for example, does not assume complementizer deletion, but a phonetically not realized and incorporated Ø-C-element. For this element to incorporate into the verb, one does not only need adjacency to this verb, but the verb also needs to remain in the VP until after spell-out. At least in (5-23b), neither of these necessities is satisfied because of the presence of the negation particle *nich* (‘not’). On the one hand, *nich* separates the matrix verb from the supposed Ø-C-element; on the other hand, it shows that the matrix verb has moved from VP to CP via IP.

One solution would be to assume that incorporation took place before verb movement. In this case, adjacency would have existed. The only question then is what happens with the incorporated Ø-C-element when the verb moves out of VP. Here, one may assume that the supposed MLG Ø-C-element does not participate in this movement just like elements which are incorporated on the left-hand side of the verb do not participate in this movement. They remain in situ and are thus separated from the verb in V2-clauses.[117] Aside from this, one must not forget that complementizer deletion in German may be the correct analysis after all, since in modern German varieties and in MLG, the finite verb in unintroduced clauses needs to move to the head position of CP. This would be impossible if this position were occupied by a Ø-C-element. In any case, this technical problem does not invalidate the empirical fact that some Mennonites and some speakers of Early Modern English show a striking parallelism in their behavior, a parallelism which does not end with complementizer deletion.

Preposition stranding is the other point in question. In order to show that there is indeed a special connection between the heavy use of *dune* and the use of prepositions, one look at sentence <46> *I should have shown the little dog to the kids* suffices. In Section 4.3.1, we have seen that particularly Brazilian and US-American informants mark the indirect object *para as crianças* and *to the kids* prepositionally, while this hardly occurs in Spanish-based translations. We will, therefore, only present the results for the English-based translations of the three North American groups in Table 5-14.

[117] Examples for this are former nouns like *Rad* (‘bicycle’) in *radfahren* (‘ride a bike’) or *Teil* (‘part’) in *teilnehmen* (‘take part’). In a declarative clause, they are separated by the verbal element, e.g., *Ich **nehme** morgen nicht an der Sitzung **teil*** (gloss: I take tomorrow not at the meeting part; ‘I will not come to the meeting tomorrow’).

Table 5-14: Prepositionally marked indirect objects in English-based translations of sentence <46> separated by three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	**Total**
n (tokens)	62	5	4	71
-preposition	36	1	0	37
	58.1%	20%	0%	52.1%
χ^2 (2, n=71) = 7.3, p=0.026* / Cramer's V: 0.32 / 4 cells (66.7%) with less than 5 expected tokens				
+preposition	26	4	4	34
	41.9%	80%	100%	47.9%

Table 5-14 shows that heavy *dune*-users prefer prepositionally marked indirect objects. The question now is why this is the case. If part of the story of heavy *dune*-users is that their main verbs cannot leave VP because there is a drive, possibly a necessity, to incorporate functional elements on LF, these speakers have to create strongly integrated internal arguments. In the case of sentence <46>, they do this most efficiently by producing prepositionally marked indirect objects. We have seen in Section 4.3.1 that all ObjPPs in this sentence appeared adjacent to the governing verb, i.e. there is no tendency whatsoever for these indirect objects to scramble. Even more importantly, by marking the indirect object prepositionally, these speakers bind the very object, which shows a tendency to leave its verb phrase as long as there is no (phonetically realized) preposition. One must not forget that tokens like (5-24a) with an indirect ObjNP outside the verb phrase governed by *wiesen* ('show') appeared three times more often than tokens such as (5-24b) with a direct ObjNP outside this verb phrase (these tokens were already presented as (4-22b+c)).

stimulus <46> Portuguese: **Eu deveria ter mostrado o cachorrinho para as crianças**
English: **I should have shown the little dog to the kids**

(5-24) a. *ik hat de Kinder sollt de Hund wiese* (Bra-8; f/14/P>MLG-∅)
I had-VERB1 the children-INDOBJ should-VERB2 the.REDUCED dog-DIROBJ show-VERB3

b. *ik hat det- [0.6] det Hundje sollt [0.3] die Kinder wiese* (Bra-31; f/59/MLG)
I had-VERB1 ~~the-~~ […] the doggy-DIROBJ should-VERB2 […] the children-INDOBJ show-VERB3

c. *ik hat sollt den Hundje für die Kinder wiese* (Bra-39; m/14/P>MLG-∅)
I had-VERB1 should-VERB2 the.MASC doggy-DIROBJ for the children-INDOBJ show-VERB3

d. *Ik hat den kline Hund sollt [0.7] to de Kinder wiesen* (USA-15; f/35/MLG)
I had-VERB1 the little dog-DIROBJ should-VERB2 […] to the children-INDOBJ show-VERB3

Aside from binding the indirect object by creating scrambling-unfriendly ObjPPs, the heavy *dune*-users also seem to bind the direct ObjNP more strongly. Seven of the eight US-American heavy *dune*-users who produce ObjPPs, translate sentence <46> like (5-24c), where both internal arguments appear inside the verb phrase governed by *wiesen*. Just one produces a token like (5-24d), where the direct ObjNP has left the verb phrase (12.5%; both tokens were also already presented as (4-26b+c)). Among the US-American non-users, these figures are fourteen and six, i.e. the share of (5-24d) is higher with 30%. This difference is not significant though. In ARNOLD's (1996) terms, one could say that the heavy *dune*-users set the stage for LF-incorporation in sentence <46> both morphologically by means of prepositionally marked indirect objects and syntactically by preferring (5-24c) to (5-24d).

That heavy *dune*-users do not only set the stage for the incorporation of functional elements, but partly already carry it out before spell-out can be seen in sentence <33> *This is the journey I am inviting my mother on*. The relative clause of this sentence compound differs from the other relative clauses in one important aspect; it is the only clause in which the relative marker is morphologically complex and contains a preposition. The tokens in (5-25a-f) show six translations of this sentence (cf. for a thorough analysis In-Depth Analysis 5.1.4):

stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: This is the journey I am inviting my mother on

(5-25) a. *daut is die Reis waut ik mine Mam einlode du* (Bol-3; m/31/MLG)
this is the journey Ø that I my mother invite-VERB2 ~~do-~~VERB1

b. *det's die Reis wo ik [0.3] mine Ma einlode du* (Men-31; m/55/MLG)
this-is the journey where Ø I […] my mother invite-VERB2 ~~do-~~VERB1

c. *det's die Reis wo i wotu ik mine Mutter einloden wer* (Mex-2; f/52/MLG)
this-is the journey ~~where I-~~ where-to-PREPOSITION I my mother invite-VERB2 ~~will-~~VERB1

d. *det is die Reis t- [äh] tu waut ik mine Ma einlode will* (Fern-21; f/33/MLG)
this is the journey ~~t-~~ [eh] to-PREPOSITION that I my mother invite-VERB2 ~~want-~~VERB1

e. *det is die Reis [äh] tu wo ik mine [0.9] Ma einlod* (Fern-5; m/17/MLG+SG)
this is the journey [eh] to-PREPOSITION where I my […] mother invite-VERB

f. *det is die Reis tu der ik mine Ma einlode wer* (Men-18; m/19/MLG)
this is the journey to-PREPOSITION which I my mother invite-VERB2 ~~will-~~VERB1

As in many languages, morphologically complex relative markers tend to be structurally simplified in MLG. This strategy can be seen in (5-25a), a variant which was produced 52 times in all colonies and in which the informants simply use the MLG default relative marker *waut* ('that'). Another frequently occurring strategy is the use of the locative relative adverb *wo* ('where') as in (5-25b) (74 tokens). This relative marker is semantically more complex than *waut*, but it shares its lack of an overtly expressed preposition. Many Mennonites, however, used morphologically complex markers, either in the form of a synthetic pronominal adverb as in (5-25c) (37 tokens; cf. the interesting repair in this token and the comparable one in (5-39a) below) or in the form of analytic pied-piped combinations like *tu waut* in (5-25d) (16 tokens), *tu wo* in (5-25e) (2 tokens), and *tu der* in (5-25f) (15 tokens; cf. FLEISCHER (2002: 24) for comparable synthetic and analytic strategies in Low German dialects of Germany).

As surprising as it may seem for a paragraph dealing with preposition stranding, we will not present any visible occurrences of this phenomenon at this point. This will only be done in In-Depth Analysis 5.1.4. Table 5-15 demonstrates why we do not need such tokens here. This table presents the distribution of the different *dune*-groups with regard to morphologically simple and complex relative markers in sentence <33>. As no influence of the interview language can be detected, we will provide the results for all North American translations, not just the English-based ones.

Table 5-15: Relative markers in the relative clause of sentence <33> separated by three groups of North American *dune*-users

	-dune	***+dune*** NR-variants	***+dune*** V2-VPR-variant	**Total**
n (tokens)	135	6	4	145
wo / waut / daut	82	6	4	92
	60.7%	100%	100%	63.4%
χ^2 (2, n=145) = 6.2, p=0.045* / Cramer's V: 0.21 / 4 cells (66.7%) with less than 5 expected tokens				
(*tu*) *wo*(*tu*) (…) (*tu*)	53	0	0	53
(*tu*) *waut* (…) (*tu*)	39.3%	0%	0%	36.6%

While the non-users show relative markers with (stranded) prepositions in 39.3% of the cases, the heavy *dune*-users never do so. Without the information in Table 5-14, which showed a strong affinity of heavy *dune*-users to prepositional marking of arguments, one would now have to conclude that the grammar of the six (possibly of all eleven) heavy *dune*-users does not show similarities to that of Early Modern English. With the information gained from Table 5-14, we can conclude that incorporation of the preposition of the relative marker of sentence <33> has been so comprehensive that it exhausted its phonetic content. This process may be related to the processes LIGHTFOOT (1999: 200 and 202) describes for the behavior of the Romance words for *home*, especially the reanalysis of the old French noun *casa* into the modern preposition *chez*:

> *Veni domum*/*Romam*, "I came home/to Rome." It is necessary to analyze these structures with an empty locative preposition and plausible to claim that the P incorporates into the noun.
>
> Longobardi argues that, since *casa* raised to D, then it was liable to be incorporated with a higher locative preposition. Then, in turn, early French children would have been susceptible to analyzing *chies* as a preposition.

For Latin, the assumption is that an empty preposition incorporates into the adjacent noun. LONGOBARDI assumes that the noun was incorporated into a possibly empty adjacent locative preposition in the case of the Old French *casa*. Locative/directional prepositions can remain phonetically empty under certain conditions because locality/direction is frequently sufficiently marked by the verb. If you go, you always go **to** a place (cf. the Latin example above, but also the frequent lack of the directional postposition *ko* in Hindi (cf. VERMEER & SCHMITT 1988: 23) and the lack of directional prepositions in ethnolectal varieties of German (cf. SIEGEL 2014)). The predominant preposition *tu* ('to') in sentence <33> is originally also locative (*für* ('for') and *no* ('to') only occur rarely), although its use in this sentence is slightly metaphorical. Its disappearance, therefore, does not constitute a source of misunderstanding. If you invite somebody, you always invite somebody **to** something. This argument obviously holds for sentence <46> as well. If one shows something, one always shows something **to** someone. Why, then, do the heavy *dune*-users use a phonetically empty preposition in sentence <33>, but prefer a phonetically realized one in sentence <46>? The reason for this apparently contradictory behavior is easily found. In sentence <46>, the preposition is not selected by the governing verb *wiesen* ('show'), it merely marks the status of the argument as an indirect object. In sentence <33> the preposition is selected by the governing verb *einloden* ('invite'), a structurally much stronger connection apparently allowing/demanding a more complete degree of incorporation.

As in Early Modern English, the grammar of these six informants still allows for many exceptions to the presumed rules. This is by no means surprising as the long history of the rise of English *do*-support shows. In view of this current variation, it is indeed unfortunate that MLG in the United States will probably not withstand the pressure of the US-American majority society, eventually giving way to English. It would be interesting to see whether MLG would develop the same way English developed. Furthermore, in order to verify our hypothesis and in order to see whether aspect or syntactic necessity is decisive, one would have to ask comparable speakers to translate sentences such as *I am reading the book you have given to me* or *I saw the man who is always looking at your house*, either with transitive verbs like *read* (compatible with a progressive aspect) or with transitive verbs like *see* (much less compatible with this aspect). Moreover, one would need comparable information for negated and/or interrogative main clauses with transitive single verbs. Unfortunately, we do not have access to this kind of information.[118] Judging from the information we have, one can nevertheless conclude that marking conditionality and aspect are only necessary conditions for the use of *dune* in the grammar of these six informants.[119] The sufficient condition for its appearance is the inability of transitive verbs to leave VP.[120]

(ii) How about the five extremely raising-friendly *dune*-user (*+dune/V2-VPR-variant*)? Have they lost the ability to raise transitive verbs as well, just like the six previously analyzed informants? After all, they show a comparably low share of clauses with single verbs in Tables 5-10 and 5-12 and their behavior with regard to prepositional marking in Tables 5-14 and 5-15 is comparable too. A first difference can be seen in the distribution of Table 5-13, where these informants' affinity for complementizer deletion was much less marked. Furthermore, there is another difference undermining the assumption of absolutely identical

[118] The fact that the MLG data set was elicited with a focus on verb clusters in dependent clauses is responsible for the many matrix clauses which only contain semantically simple verbs in the present tense like the copula *sene* ('be') (cf. sentences <7>, <16>, <28>, <34>, <40>, etc.). These verbs are neither transitive nor are they compatible with any type of *dune*. Even in English, the copula can still move to IP and CP (cf. LIGHTFOOT 1999: 160–161).

[119] The still rare, but definitely more frequent appearance of *dune* in Brazil in sentence <25> is probably the result of these informants' aspectual sensibility, not of any syntactic necessity. In the matrix clause of sentence <25>, the Brazilian informants produced *dune* in 12.5% of the cases (7 of 56 tokens). In the non-conditional clauses analyzed in Table 5-10, they do so in 25.2% of 702 tokens. This is a notable difference, but it is much lower than the differences for any group of North American informants. Even for the non-users of Table 5-10, the corresponding shares are 6.3% (10 of 159 tokens) and 31.9% (627 of 1,965 tokens).

[120] For Early Modern English, ELLEGÅRD (1953: 208) describes the relation of the semantic and the structural use of *do* differently: "The periphrastic auxiliary is mainly due to the causative use."

behavior. One of these five informants[121] produces one of the few tokens with *dune* in sentence <25> *He is crying, because he has to eat salad every day*.

Additionally, one must assume that the insertion of *dune* and the strong drive for raising are related in the grammar of these informants. After all, they are the only informants that excel in both phenomena. As raising is the phenomenon in which they differ from the six informants whose grammar we have just sketched, it stands to reason that this syntactic mechanism plays an important role. The question is: Does it play a decisive role? One could argue that raising is so important for these informants that they are required to generate clauses with at least two verbal elements in order to be able to raise. *Dune* would then be a necessary dummy verb. In this case, raising-unfriendly *dune*, however, would be a poor choice.

Furthermore, the necessity of a second verb for raising is dispensable for some MLG speakers. There are dependent clauses with one verbal element in which the finite verb unexpectedly surfaces before its internal argument (cf. (1-1) *[äh] Johann gleuf nich daut dü: gut kenns sine Frend*; gloss: [eh] John believes not that you good know his friends). As we will find out, the best derivational history for these rarely, but robustly occurring tokens is provided by the assumption of generalized raising, i.e. raising that also affects dependent clauses with single verbs (cf. Section 5.5). Therefore, if raising were indispensable for these informants, they could have followed this way, which they did not. A more satisfactory explanation for the lack of tokens such as (1-1) in this group is that the main verb in such a clause does not appear in clause-final position. This and the fact that the five informants also produce a very high share of *do*-support in the analyzed main clauses (70.6%; 12 of 17 tokens)[122] may indicate that they are mainly concerned about clause-final main verbs.

The grammar of these informants could have developed in the following way: Some Mennonites started to generate a grammar which used *do*-support in main clauses in order to keep main verbs clause-final. Then, *do*-support was generalized for all clauses that did not feature other types of auxiliaries. It is important to note that although the outcome of this insertion is the same as in the case of the six less raising-friendly *dune*-users, namely very few clauses with just one verbal element, the reason is not so much the inertness of transitive verbs, but the desire to keep them at the absolute end of the clause. The raising-unfriendly auxiliary *dune*, however, created a conflict in dependent clauses since it pushed the main verb to the penultimate position. To undo this impasse, informants with this grammar had to start raising in a raising-unfriendly context, since only this allowed the main verb to regain its final position. The effort of raising in such a raising-unfriendly context seems to have been so

[121] Four of these informants come from the United States, one from Mexico. There are three English-dominant and two MLG-dominant speakers. Three informants belong to the Flemish-type, two to the Dutch-type CLUSTER. Three are men (2 young men) and two are women. Their average age is 24 years (the group of non-users in Table 5-9 has an average of 32.7 years).

[122] This state of affairs is completely different from what WEBER (2015: 234) reports for *Nordniedersächsisch*, for which he finds 491 occurrences of *done* (‘do’) in the ultimate position of dependent clauses, but only a single unclear occurrence in a V2-main clause. *Dune* in the MLG data set appears robustly in both main and dependent clauses. This is also true for the MLG variety of the Altai region (cf. NIEUWEBOER 1999: 175).

tremendous that raising spread quickly to other clauses. After all, the extremely high raising values of these informants were not calculated by clauses with *dune*, but by clauses with *han* ('have') and modal verbs (cf. Table 5-9).

We also have to find an explanation for the fact that these informants did not or rarely inserted *dune* in the matrix clauses of sentences <2> *John doesn't think that you know your friends well*, <5> *Henry doesn't know that he can leave the country*, <6> *Don't you know that he should learn English?*, and <25> *He is crying, because he has to eat salad every day*. Obviously, the question of transitivity may be part of the story, but it cannot be the whole story since the grammatical scenario differs in important aspects. For the matrix clause in sentence <25>, the insertion of *dune* – one of the five informants in question inserted this auxiliary – can be considered redundant in the grammar sketched here, since in this clause, the main verb is structurally in second, but superficially in last position with or without *dune*.

For the matrix clauses of sentences <2>, <5>, and <6>, things are easier and more difficult at the same time. They are easier because the matrix clauses cannot possibly be interpreted as progressive or conditional, so we do not have to explain why aspectual or conditional *dune* does not appear. But – and this is the difficult part – syntactic *dune* seems to be necessary in order to guarantee the clause-final position of the main verb which otherwise precedes the negation particle and a possible correlate. One explanation could be connected to the matrix verb *know*, which appears in sentences <5> and <6>. Could it be that there is a MLG aversion to combining this verb with *dune*, comparable to the one detected in Early Modern English? ELLEGÅRD (1953: 199) writes:

> We never find it [*do*; G.K.] with the verb *wot*, which was passing out of use in the 16th century. […] Its successor, *know*, was also reluctant to adopt the do-form in the negative phrase (though not in other contexts […]).

One of the other contexts, where *do* appears together with *know*, is the verb question, i.e. *yes-no*-questions (cf. ELLEGÅRD 1953: 207). MLG *dune*, however, is not combined with *weiten* ('know') in the matrix clause of sentence <6> even though this is a *yes-no*-question. Besides this, disregarding the lexical difference of MLG *weiten* ('know a fact') and *kennen* ('know someone'), we see that there is no general problem in combining the conditional auxiliary *dune* with *kennen* in MLG. In the complement clause of sentence <2> *John doesn't think that you* ***know*** *your friends well*, we find *dune* in 21.8% of the North American complement clauses (36 of 165 tokens: non-users: 19.5%; less raising-friendly *dune*-users: 66.7%; extremely raising-friendly *dune*-users: 40% – South American tokens: 8.6% (12 of 139 tokens)). The reason for the insertion of *dune* in this case is probably the marking of some type of conditionality (possibly a perceived non-direct speech event). Such a marking would be impossible in SG, but we have already seen in the discussion of sentence <1> (cf. Table 5-6) that the MLG complementizer *daut* is amenable to semantic expansion. This function, however, does not eliminate the possibility of an additional syntactic function of *dune*.

A tentative solution for the non-occurrence of *dune* together with *know* and *think* in the matrix clauses of sentences <2>, <5>, and <6> could be that the five informants in question analyze such sentence compounds as one integral unit (cf. LEHMANN (1988: 202) for a comparable analysis for causative constructions in Latin and Italian). Sections 7.1 and 7.2 will show that complement clauses after negated matrix clauses are strongly integrated into the matrix clause (cf. In-Depth Analysis 7.1.3.3 for one curious consequence of such a strong integration). They do not, for example, allow complementizer deletion and they frequently surface with integration-furthering correlates. Aside from this, HOPPER and THOMPSON (2008: 116) state that "several studies have questioned the biclausality of "complement" constructions in everyday conversational language." If sentence compounds <2>, <5>, and <6> are indeed perceived as one unit, it is sufficient to ensure that the complement clause in the postfield features the main verb clause-finally. Insertion of *dune* in the short matrix clauses would then be dispensable.

It should have become clear that if our explanation is not completely off target, this type of informant has chosen a roundabout way to keep the main verb clause-final in dependent clauses. First, they insert raising-unfriendly *dune*, thus pushing the main verb from its clause-final position, then they raise the VP in order to put it back in this position, the very position where the main verb would have surfaced without *dune*. LIGHTFOOT (1999) would probably call this a Rube Goldberg property of MLG grammar. It could also be qualified as the syntactic counterpart to RICHARD DAWKINS' famous example for the lack of foresight in evolution, the giraffe's recurrent laryngeal nerve. This nerve travels several meters down the giraffe's neck and up again in order to cover an actual distance of a couple of centimeters.

5.1.4 Sentences <26> and <27>: Causal clauses in the South American colonies

In Tables 5-3, 5-7, and 5-8, we have shown that the informants treat the auxiliaries *woare* ('will') and *dune* ('do'), which did not appear in the clauses used for index formation, in the same way, in which they treat *han* ('have') and modal verbs, which appeared in the clauses used for index formation. The last new context to revise is that of causal clauses, the only clause type which was not used in Chapter 4. Since most North American informants have reanalyzed causal clauses as structural V2-clauses (cf. Section 6.3 and KAUFMANN 2003a: 188–189), only tokens from South American informants will be analyzed. The following stimulus sentences are available:

(5-26)	**stimulus <25>**	He's crying, *because* he **has to eat** salad every day
(5-27)	**stimulus <26>**	He needs glasses, *because* he **can't see** the blackboard
(5-28)	**stimulus <27>**	I will give him a good grade, *because* he **has read** the book
(5-29)	**stimulus <28>**	I am very hungry, *because* I **haven't had** lunch yet

Sentences <25> and <28> cannot be analyzed due to possible incorporation of the bare nouns *salad* and *lunch* into *eat* and *have*. The finite verb in the causal clause of sentence <27> is the temporal auxiliary *han* (‘have’), while sentence <26> features a finite modal verb and a negation particle. Due to this particle, two separate analyses will be carried out. The tokens in (5-30a-c) illustrate the basic cluster variants for sentence <27>:

stimulus <27> Spanish: **Voy a darle una buena nota porque leyó el libro**
Portuguese: **Eu vou dar uma nota boa para ele porque ele leu o livro**
English: I will give him a good grade, because he has read the book

(5-30) a. *ik wer dem ne gute [1.2] nota gewe weils dei daut Bük gelest ha* (Bol-6; m/32/MLG)
I will him a good […] grade give because he the book read-VERB2 has-VERB1

b. *ik wer ihm ne gute Not gewe wegens der haft daut Buuk gelest* (Fern-18; f/30/SG>MLG-71%)
I will him a good grade give because he has-VERB1 the book read-VERB2

c. *ik wer ihm eine gute Not gewe wegens her daut Buuk haft gelest* (Bra-40; f/32/MLG)
I will him a good grade give because he the book has-VERB1 read-VERB2

Token (5-30a) features a NR-variant, token (5-30b) the unscrambled V2-VPR-variant, and token (5-30c) the scrambled VR-variant. The distribution of these variants is given in Table 5-16:

Table 5-16: Distribution of the basic cluster variants in South American causal clauses of sentence <27> separated by the informants’ raising and scrambling behavior (definite ObjNPs; finite verb *han*; scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	122	116	27	72	10	6	115
NR-variants	100	95	23	64	3	4	94
ObjNP-V2-V1	-0.187	-0.008	85.2%	88.9%	30%	66.7%	81.7%
	F (2,119) = 11.3 p=0***	F (2,113) = 2.9 p=0.06(*)	χ^2 (6, n=115) = 39.8, p=0*** / Cramer’s V: 0.42 / 8 cells (66.7%) with less than 5 expected tokens				
VPR-variant	21	20	4	8	7	1	20
V1-ObjNP-V2	+0.037	-0.147	14.8%	11.1%	70%	16.7%	17.4%
VR-variant	1	1	0	0	0	1	1
ObjNP-V1-V2	+0.193	+0.325	0%	0%	0%	16.7%	0.9%

As the North American informants had to be excluded, the share of the non-raised variants is much higher than expected for an extraposed adverbial clause (cf. Tables 6-7 and 6-8). Unfortunately, the number of tokens with raised variants is so small that many cells do not have five expected tokens, but again, the distribution is significant, the strength of association is medium, and the gist of the story is comparable to the other analyses in Section 5.1. Raising-friendly Flemish- and Dutch-type informants raise in 56.3% of the cases (9 of 16 tokens), while the raising-unfriendly German-type informants do so in only 12.1% (12 of 99 tokens). Scrambling-friendly German II- and Dutch-type informants scramble in 10% of their raised variants (1 of 10 tokens), while scrambling-unfriendly German I- and Flemish-type informants never scramble (0 of 11 tokens). The unique occurrence of one token with the VR-variant is unfortunate, but the marked predominance of the V2-VPR-variant in comparison to the VR-variant is expected for strongly disintegrated causal clauses. Among the North American tokens, there are two more tokens with the VR-variant. Both of them are produced by Dutch-type informants thus strengthening the connection between this particular variant and this particular type of informant (cf. Section 6.3 for a thorough analysis of North American causal clauses).[123]

The differences in the index values confirm these conclusions: It takes a moderately high raising value and a very high scrambling value to produce the VR-variant in sentence <27>. In contrast, the tokens with the V2-VPR-variant are produced by informants whose scrambling value is 0.472 points lower and whose raising value is 0.156 points lower. The fact that their raising value is relatively low is not only the consequence of the exclusion of the predominantly raising-friendly North American informants. It also shows that it takes less raising-proneness to generate the V2-VPR-variant in this context. The reason for this is that the second position of the finite verb in extraposed causal clauses, the position characteristic for main clauses, is a perfect iconical measure to indicate a low degree of integration (cf. Section 6.1.2).

The average raising value for the V2-VPR-variant in sentence <27> is +0.037 and 12.1% of the raising-unfriendly German-type informants produce it (12 of 99 tokens). The relatively low raising value and the relatively high share among raising-unfriendly informants also indicate the high degree of disintegration of causal clauses. The comparable figures for the relative clause of sentence <37>, which also features *han* (‘have’), are +0.463 and 1.4% (1 of 73 tokens; cf. Table 5-2). Importantly, raising-friendly North American informants were not excluded in that analysis, a fact, which should have furthered the appearance of the V2-VPR-variant even among German-type speakers. For the complement clause with *dune* in Table 5-8, the figures are +0.454 and 8.1% (3 of 37 tokens). Even the two analyses, which were restricted to North American informants, fit into this picture. Granted, the share of the raised V2-VPR-variant produced by German-type Mexican informants is somewhat higher in the conditional clauses of sentences <11> through <14> (19.4%; 7 of 36 tokens; cf. Table 5-3). One must not forget though that these informants come from a raising-friendly colony and produce clauses with the raising-friendly auxiliary *woare* (‘will’). Their raising value of +0.303 is still much higher than that in Table 5-16. Finally, the US-American German-type informants did not produce a single V2-VPR-variant with *dune* (‘do’) in the same conditional clauses in Table 5-7 (just 8 tokens!). The high degree of disintegration of the causal clause of sentence <27> and the consequential frequency of superficial V2-clauses is a necessary precondition for the reanalysis of such clauses into dependent main clauses (cf. Section 6.3 for the far more advanced North American situation). We will now see that the causal clause of sentence <26>, which features the negation particle and a raising-friendly modal verb, is

[123] Besides these two tokens, thirty North American informants produced the NR-variants and 114 (78.1% of all 146 tokens instead of 17.4% among the South American informants) came up with V2-causal clauses, i.e. either with the V2-VPR-variant or with reanalyzed structural V2-clauses.

not only more complex than the relative clause of sentence <27>, but also indicates a more advanced stage in the process of reanalysis. Five Brazilian tokens are shown in (5-31a-e):

stimulus <26> Portuguese: **Ele precisa de óculos porque ele não consegue enxergar o quadro negro**
English: He needs glasses, because he can't see the blackboard

(5-31) a. *hei bruukt ne Brill wiels hei nich den quadro sehne kann* (Bra-12; m/61/MLG)
he needs a glass because he not-NEGATION the blackboard see-VERB2 can-VERB1

b. *hei bruukt ne Brill wiels hei die Wandtafel nich sehne kann* (Bra-3; f/52/MLG)
he needs a glass because he the blackboard not-NEGATION see-VERB2 can-VERB1

c. *hei brookt [0.3] ne Brill wiel hei kann nich den- [2.6] de Wandtofel [0.3] sehne* (Bra-1; m/33/P>MLG-89%)
he needs […] a glass because he can-VERB1 not-NEGATION ~~the~~.MASC- […] the blackboard […] see-VERB2

d. *der bruukt die: [1.1] die Brill [0.5] um daut he- wegens hei nich kann die [1.1] dem: quadro sehne* (Bra-61; f/39/MLG)
he needs ~~the-~~ […] the glass […] ~~in order that he-~~ because he not-NEGATION can-VERB1 ~~the~~.REDUCED- […] the.DAT blackboard see-VERB2

e. *hei bruukt ne Brill weil her nich die- die schworte Tofel kann sehn* (Bra-51; m/33/MLG+P)
he needs a glass because he not-NEGATION ~~the-~~ the black board can-VERB1 see-VERB2

The (long) pauses before *Brill* (*óculos*, 'glasses') and *Wandtofel* (*quadro negro*, 'blackboard') in (5-31c-e) and the hesitations with regard to their gender again suggest that these concepts are frequently expressed by means of Portuguese loans (cf. also Footnote 40 in Chapter 4). In (5-31e), one even finds the loan translation *schworte Tofel* for *quadro negro* ('blackboard'). Tokens (5-31a+b) present the two NR-variants. Sentence <26> thus offers another possibility to check whether the sequence of ObjNP and adverb(ial)/negative particle is sensitive to the scrambling index. Token (5-31c) represents the unscrambled V2-VPR-variant, while the scrambled VR-variant can be found in (5-31e). In both raised variants, there is some variation in the sequence of the ObjNP and the negation particle. Due to the reasons mentioned in Footnote 44 (Chapter 4) and due to the low number of tokens, we will not distinguish these subvariants (cf. the underspecified marking *adv/ObjNP* in Table 5-17). Finally, token (5-31d) represents the non-V2-VPR-variant. As this variant occurred frequently in many clauses featuring adverb(ial)s, a more detailed analysis of its relationship to other variants will be carried out in In-Depth Analysis 5.1.4. Table 5-17 shows the distribution of the five variants:

Table 5-17: Distribution of five cluster variants in South American causal clauses of sentence <26> separated by the informants' raising and scrambling behavior (definite ObjNPs; finite modal verbs; Obj=ObjNP; scrambl.=scrambling) →

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	118	109	27	64	4	5	100
NR-variant I	36	30	9	21	0	0	30
neg-Obj-V2-V1	-0.201	-0.001	33.3%	32.8%	0%	0%	30%

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
NR-variant II	36	34	7	25	0	2	34
Obj-**neg**-V2-V1	-0.238	+0.011	25.9%	39.1%	0%	40%	34%
	F (4,105) = 7 p=0***	ns	ns				
VPR-variant I	25	24	8	10	3	2	23
V1-neg/Obj-V2	-0.112	-0.143	29.6%	15.6%	75%	40%	23%
VPR-variant II	8	8	2	4	1	1	8
neg-V1-Obj-V2	+0.107	+0.003	7.4%	6.3%	25%	20%	8%
VR-variant	5	5	1	4	0	0	5
neg/Obj-V1-V2	-0.134	+0.104	3.7%	6.3%	0%	0%	5%

The raising-friendly Flemish- and Dutch-type CLUSTERS do not raise in two of their nine tokens (22.2%), while the raising-unfriendly German-type CLUSTERS do so in 69.8% of their 91 tokens. With regard to scrambling, the two scrambling-unfriendly German I- and Flemish-type CLUSTERS only scramble in one of fifteen raised tokens (6.7%), while the scrambling-friendly German II- and Dutch-type CLUSTERS do so in four out of 21 tokens (19%). The distribution is not significant though and there are many cells with less than five expected tokens (13 of 20 cells, i.e. 65%). Just comparing the three basic cluster variants (the two NR-variants taken together; V2-VPR-variant, and VR-variant), the distribution is significant, but the number of problematic cells is still high (χ^2 (6, n=92) = 13.4, p=0.037* / Cramer's V: 0.27 / 8 cells (66.7%) with less than 5 expected tokens).

Going into more detail, one sees that scrambling-unfriendly German I-type informants use the unscrambled NR-variant (NR-variant I in Table 5-17) more frequently than the scrambled one (NR-variant II). Their ratio is 1.3 (9:7), whereas it is 0.84 (21:25) for scrambling-friendly German II-type informants. This smaller ratio is expected. A glance at the more reliable scrambling values, however, shows that the difference is minimal with 0.012 points. Table 5-17 is, therefore, inconclusive as for the two sequences of ObjNPs and adverb(ial)s/negative particles. The raising values of the two variants show an expected small difference of 0.037 points. Things would improve if one included the seven North American tokens that feature the NR-variants and are all produced by scrambling-friendly German II-type informants (no tokens of German I-type informants are available). Six of these seven tokens belong to the scrambled NR-variant II.

Comparing the three raised cluster variants, the focus here is on the non-V2-VPR-variant (VPR-variant II; cf. (5-31d)). If this variant is comparable to the V2-VPR-variant, raising-friendly, but scrambling-unfriendly German I- and Flemish-type informants should produce it frequently. The distribution also remains inconclusive in this respect. The scrambling-unfriendly informants produce three tokens with the non-V2-VPR-variant (9.7% of 31 tokens), while the share of the scrambling-friendly German II- and Dutch-type informants is only marginally lower with 7.2% (5 of 69 tokens). If one included the six North American raised non-V2-tokens (92 tokens exhibit causal V2-clauses), things would again improve. The two tokens with the unscrambled non-V2-VPR-variant are produced by two scrambling-unfriendly informants (1 German I-type, 1 Flemish-type); the four tokens with the scrambled VR-variant are all produced by raising- and scrambling-friendly Dutch-type informants.

Looking at the values of the raising index of the raised cluster variants, it seems that the eight tokens of the non-V2-VPR-variant behave completely different from the other two variants (+0.107 vs. -0.112 and -0.134, respectively). This high value results from the fact that all these tokens are produced by the more raising-friendly Brazilian and Bolivian informants. With regard to the V2-VPR-variant, things are different. There are thirteen tokens from Brazil and Bolivia and thirteen tokens from Paraguay. The reason for this difference is not clear. In any case, the very low raising value of the 25 tokens with the V2-VPR-variant confirms the high degree of syntactic disintegration of causal clauses. One does not need to be very raising-friendly to produce causal V2-clauses. While the raising values of the VR-variant and the V2-VPR-variant are almost identical, their scrambling values are – as expected – very different. The informants that produce the scrambled VR-variant have a value of +0.104, while the ones that produce the unscrambled V2-VPR-variant have a value of -0.112. The value of the non-V2-VPR-variant is +0.003 and thus lies between the other two values. We will see in the first part of the following in-depth analysis and in Sections 7.2 and 7.3 that this intermediate value is recurrent and explainable. After all, this variant shares the lack of scrambling with the V2-VPR-variant, while it shares its non-V2-characteristic with the scrambled VR-variant.

In-Depth Analysis 5.1.4: Less frequent verb cluster variants

In Section 4.1, two less frequent cluster variants were excluded from index formation (cf. point (c)). These variants are illustrated by tokens (5-32a+b), in which two German II-type informants inserted definite articles in the ObjNP not present in the stimulus versions:

stimulus <25> Spanish: **Está llorando porque tiene que comer ensalada todos los días**
Portuguese: **Ele está chorando porque ele tem que comer salada todos os dias**
English: He is crying, because he has to eat salad every day

(5-32) a. *her rohrt weils her jeder Tag mut [0.4] die Frucht eten* (Mex-44; m/39/MLG)
he cries because he every.NOM day-ADVERBIAL must-VERB1 […] ~~the~~ <u>fruit</u> eat-VERB2

b. *hei rohrt weil hei den Salot soll alle Tag ete* (Bra-52; m/30/MLG)
he cries because he ~~the~~ salad should-VERB1 all days-ADVERBIAL eat-VERB2

The main reason for the exclusion of these variants was the desire to form the raising and the scrambling index by means of homogeneous cluster types. Due to this, structural variation was to be kept to a minimum. The exclusion of tokens like (5-32a) was also necessary, since all clauses with the VPR-variant should be superficial V2-clauses. For tokens like (5-32b), a further reason for exclusion was that the two verbal elements are interrupted by non-verbal material in spite of the fact that the ObjNP appears in front of them. As these two variants were not used for index formation, their distribution and the index values of their producers may now reveal whether the superficial similarity between a token like (5-32a) and the V2-

VPR-variant and between (5-32b) and the VR-variant is related to structural similarities. We will begin our analysis with the non-V2-VPR-variant illustrated by (5-32a).

(a) The non-V2-VPR-variant (adverb(ial)-V1-ObjNP/PP-V2): If the non-V2-VPR-variant represented by (5-32a) is comparable to the unscrambled V2-VPR-variant, scrambling-unfriendly German I- and Flemish-type informants should produce them frequently. Precisely in token (5-32a), however, this is not the case; it was produced by a scrambling-friendly German II-type informant (raising value: -0.03; scrambling value: +0.149). In the following, we will only analyze dependent clauses containing adverbial elements which may be generated within VP and raised together with it. This excludes, for example, sentence <17> *If he really killed the man, nobody can help him*, because *wirklich* (‘really’) hardly ever raises. Due to this, the non-V2-VPR-variant is the only possible VPR-variant, while the VR-variant represented by (5-32b) cannot occur.

(a1) The relative clause of sentence <34>: Our first analysis deals with the relative clause of sentence <34> covering tokens whose relative clause features the finite verb *dune* (‘do’) and a definite ObjPP. The translations in (5-33a-d) illustrate the extant cluster variants:

stimulus <34> Spanish: **Este es el hombre que está siempre mirando mi casa**
English: **This is the man who is always staring at my house**

(5-33) a. *det is de Mann waut immer no min Hüs kieken dät* (Mex-81; m/46/S>MLG-71%)
this is the man that always-ADVERB to my house look-VERB2 ~~does~~-VERB1

b. *det is dei Mensch waut immer dät no mi Hüs kieken* (Mex-67; m/16/MLG)
this is the person that always-ADVERB ~~does~~-VERB1 to my house look-VERB2

c. *det is der Ohmtje der dut immer no min Hüs kieken* (USA-17; f/14/E>MLG-Ø)
this is the man who/he ~~does~~-VERB1 always-ADVERB to my house look-VERB2

d. *daut is dei Ohmtje waut [0.3] immer no min [0.7] Hüs dät kieken* (USA-8; f/14/E>MLG-Ø)
this is the man that […] always-ADVERB to my […] house ~~does~~-VERB1 look-VERB2

This relative clause shows once more that ObjPPs in MLG rarely scramble. There is not a single example of the ObjPP surfacing before *immer* (‘always’) in unraised tokens such as (5-33a). This is a rather astonishing fact since clauses featuring the NR-variant represent the vast majority of the 72 analyzable tokens. Even in translation (5-33d), the only token where the ObjPP scrambles out of the VP, *immer* precedes the ObjPP. Token (5-33b) represents the non-V2-VPR-variant, while (5-33c) may be a case of the V2-VPR-variant. In this case, we cannot be sure though, since it is not clear whether *der* functions as an anadeictic personal pronoun (‘he’) in the prefield of a main clause or as a relative pronoun (‘who’) introducing a relative clause. The fact that relative pronouns are very rare in the MLG variety in the United States suggests the first solution, but there are no unambiguous intonational signs hinting at two independent main clauses. Table 5-18 presents the distribution of the variants:

Table 5-18: Distribution of the cluster variants in the relative clause of sentence <34> in all colonies separated by the informants' raising and scrambling behavior (definite ObjPPs; finite verb *dune*; Obj=ObjNP; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	70	68	7	24	15	21	67
NR-variant	65	63	7	24	11	20	62
adv-Obj-V2-V1	+0.153	+0.01	100%	100%	73.3%	95.2%	92.5%
	F (3,66) = 3 p=0.038*	F (3,64) = 4.2 p=0.009**	χ^2 (9, n=67) = 16.9, p=0.051$^{(*)}$ / Cramer's V: 0.29 / 12 cells (75%) with less than 5 expected tokens				
VPR-variant	1	1	0	0	1	0	1
V1-**adv**-Obj-V2	+0.745	-0.718	0%	0%	6.7%	0%	1.5%
VPR-variant	3	3	0	0	3	0	3
adv-V1-Obj-V2	+0.366	-0.255	0%	0%	20%	0%	4.5%
VR-variant	1	1	0	0	0	1	1
adv-Obj-V1-V2	+0.701	+0.062	0%	0%	0%	4.8%	1.5%

Only five clauses do not feature the NR-variant. Token (5-33d), which features the only scrambled VR-variant, is produced by a scrambling-friendly and extremely raising-friendly Dutch-type informant. This fits our expectation but due to its unique occurrence, it cannot be taken as decisive evidence. With regard to the unclear token (5-33c), we are also faced with an exceptional informant (cf. the discussion following Table 2-10 and Footnotes 1 in Chapter 1 and 65 in Chapter 4). USA-17 is the Mennonite with the third-highest raising value and the lowest scrambling value of all informants. As this is the case, the unclear nature of (5-33c) is less of a problem. If it is a V2-VPR-variant, it fits the informant's Flemish profile perfectly; if it is a dependent main clause, it fits her profile, too. The reason for this is that there is not only a tendency of superficial and structural V2-clauses appearing in comparable contexts (cf. In-Depth Analysis 7.1.4.3), but also a tendency of North American Flemish-type informants to produce both variants (cf. Tables 7-11 and 7-16).

The decisive point in Table 5-18 is that tokens of the non-V2-VPR-variant are exclusively produced by scrambling-unfriendly Flemish-type informants. While three of their fifteen tokens belong to this cluster variant, none of the 52 tokens of the other three CLUSTERS do. As the favorite cluster variant of the Flemish-type informants is the V2-VPR-variant, the fact that they produce the non-V2-VPR-variant exclusively should not be underestimated, even if the relevant distribution is highly unreliable due to the massive concentration of tokens in the category *NR-variant*. In spite of this, both the raising and the scrambling values show (highly) significant differences. The comparable behavior of Flemish-type informants in regard to the V2-VPR-variant and the non-V2-VPR-variant also makes it clear that non-causal dependent clauses with the V2-VPR-variant are not structural V2-clauses. If they were, we would not expect the very same informants to produce the non-V2-VPR-variant.

(a2) The conditional clause of sentence <15>: Sentence <15> is the most appropriate context with which to investigate the characteristics of the informants who produce the two rare cluster variants. The reason for this is that eight different types of serializations can be found in the translations of its preposed conditional clause. Granted, most of these types were used for index formation and thus cannot be interpreted here, but the two variants (5-34e+f) relevant for this section did not enter index formation.

stimulus <15> Portuguese: **Se ele tiver que vender a casa agora, ele vai ficar muito triste**
English: If he has to sell the house now, he will be very sorry

(5-34) a. *wann der nü daut Hüs verköpe mut [0.5] dann wird der sehr trürig* (Bra-59; f/56/MLG)
if he now-ADVERB the house sell-VERB2 must-VERB1 […] ~~then~~ turns he very sad

b. *wann hei sin Hüs nu verköpe soll dann wird her sehr trürig sene* (Bra-2; m/55/MLG)
if he <u>his</u> house now-ADVERB sell-VERB2 <u>shall</u>-VERB1 ~~then~~ will he very sad be

c. *wann dei mut nu daut Hüs verköpe dann wird her sehr trürig were* (Bra-37; m/34/P>MLG-∅)
if he must-VERB1 now-ADVERB the house sell-VERB2 ~~then~~ will he very sad turn

d. *wann her mut daut Hus nu verköpe wird her sehr trürig bliewe* (Bra-24; m/36/MLG+P)
if he must-VERB1 the house now-ADVERB sell-VERB2 will he very sad remain

e. *wann hei nu mut det Hüs verköpe wird her sehr trürig werde* (Bra-8; f/14/P>MLG-∅)
if he now-ADVERB must-VERB1 the house sell-VERB2 will he very sad turn

f. *wenn hei daut Hus mut nu verköpe dann wird her sehr trürig* (Bra-6; f/23/MLG)
if he the house must-VERB1 now-ADVERB sell-VERB2 ~~then~~ turns he very sad

g. *wann hei nu daut Hüs mut verköpe dann wird hei sehr trürig sene*
(Bra-53; m/33/P>MLG-57%)
if he now-ADVERB the house must-VERB1 sell-VERB2 ~~then~~ will he very sad be

h. *wann hei daut Hüs nu mut verköpe wird her sehr trürig sene* (Bra-4; m/40/P>MLG-∅)
if he the house now-ADVERB must-VERB1 sell-VERB2 will he very sad be

Tokens (5-34a+b) exhibit the two NR-variants, which were used in the formation of both the raising and the scrambling index. The same is true for tokens (5-34c+d) with the V2-VPR-variant and tokens (5-34g+h) with the VR-variant. Although these variants were used in index formation, differences in the internal sequence of ObjNP and adverb have been disregarded until now (cf. Footnote 44 in Chapter 4). Therefore, this difference can be analyzed here. Especially important are the tokens (5-34e+f), which represent the non-V2-VPR-variant and the VR-variant in which non-verbal material separates the two verbal elements. All conditional clauses presented in Table 5-19 feature definite ObjNPs. Fifteen of the 226 tokens feature *woare* (‘will’) instead of the expected modal verb. As this future auxiliary behaves like modal verbs with regard to raising and scrambling, these tokens were not excluded.

Table 5-19: Distribution of eight cluster variants in the conditional clause of sentence <15> in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite modal verbs or *woare*; scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	223	219	29	100	31	57	217
NR-variants I	13	13	11	2	0	0	13
adv-ObjNP-V2-V1	-0.258	-0.327	57.9%	2.8%	0%	0%	13.8%
NR-variants II	85	82	8	69	1	3	81
ObjNP-adv-V2-V1	-0.204	+0.066	42.1%	97.2%	100%	100%	86.2%
VPR-variant Ia	2	2	1	0	1	0	2
V1-adv-ObjNP-V2	+0.139	-0.614	25%	0%	11.1%	0%	12.5%
VPR-variant Ib	14	14	3	0	8	3	14
V1-ObjNP-adv-V2	+0.408	-0.305	75%	0%	88.9%	100%	87.5%
VPR-variant II	22	20	3	5	5	7	20
adv-V1-ObjNP-V2	+0.229	-0.059	10.3%	5%	16.1%	12.3%	9.2%
VR-variant Ia	6	6	1	2	1	2	6
adv-ObjNP-V1-V2	+0.215	-0.014	50%	9.5%	8.3%	5%	8%
VR-variant Ib	69	70	1	19	11	38	69
ObjNP-adv-V1-V2	+0.315	+0.083	50%	90.5%	91.7%	95%	92%
VR-variant II	12	12	1	3	4	4	12
ObjNP-V1-**adv**-V2	+0.229	+0.01	3.4%	3%	12.9%	7%	5.5%

No indications for statistical tests are given because their significance does not mean anything in a sentence which was used for index formation. Starting with the internal ordering of adverb and ObjNP in the V2-VPR-variant (cf. (5-34c+d)) and the VR-variant (cf. (5-34g+h)), we can see that the (more) scrambled sequence *ObjNP-adverb* (VPR-variant Ib and VR-variant Ib; cf. (5-34d+h)) is produced by more scrambling-friendly informants. The internal comparisons between the two subvariants are not significant, but their absolute difference is noteworthy (0.309 points as for the V2-VPR-variants (-0.614-(-0.305)); 0.097 points as for VR-variants (0.083-(-0.014))). These are 25.2% and 7.9% of the maximum span of the scrambling index of 1.224 points (cf. Footnote 91 in Chapter 5 for the meaning of such differences). One may thus ponder the possibility that the scrambling index is so sensitive that it even distinguishes the difference between short scrambling and no scrambling in the V2-VPR-variants and between very long scrambling and long scrambling in the VR-variants. Unfortunately, we do not have enough data to put this assumption on firmer ground.

Looking at tokens like (5-34f), it becomes clear that the distribution of this VR-variant (VR-variant II) does not correspond to our expectations. Especially the relatively high number of Flemish-type informants that produce it is surprising. With the reduced number of twelve tokens, it is more important to have a look at the index values though. Here, we see that the scrambling value of +0.01 lies in between the other two subvariants of the VR-variant (VR-variants Ia and Ib; -0.014 and +0.083, respectively) and is thus unproblematic. The fact that all these figures are rather low is due to clause type. Conditional clauses show a preference for the VR-variant (cf. Table 6.1) and, therefore, this unmarked variant is partly generated by informants who normally prefer other cluster variants. This is comparable to the low raising values of the V2-VPR-variant in causal clauses (cf. Tables 5-16 and 5-17).

More difficult to understand is the relatively high scrambling value of -0.059 of the informants that produce the non-V2-VPR-variant (VPR-variant II; cf. (5-34e)). The difference to the frequent V2-VPR-variant (VPR-variant Ib) is huge with 0.246 points, while the difference to the VR-variant II only amounts to 0.069 points. Section 7.3 will show that this is partly due to a difference, which was already mentioned in Section 4.1 (point (h)). The matrix clauses of tokens (5-34a-c+f+g) start with the resumptive element *dann* ('then'), while those of tokens (5-34d+e+h) start with the finite verb. A third variant, disintegrated conditional clauses, is not present in those tokens (but cf. (4-19c+d+f+g)). Resumptive elements influence the strength of clause linkage and have a measurable impact on the choice of cluster variants in conditional clauses. Reducing the analysis to integrated sentence compounds without *dann*, the difference between the two VPR-variants diminishes from 0.246 to 0.159, while the one between the non-V2-VPR-variant and the VR-variant II slightly augments from 0.069 to 0.087. This result is still somewhat unexpected, but it is closer to our expectations.

(b) The rare VR-variant (ObjNP/PP-V1-X-V2): In the second part of this in-depth analysis, we focus exclusively on tokens resembling the rare VR-variant represented by (5-32b) and (5-34f). If these tokens are connected to the prototypical VR-variant of Chapter 4, scrambling should be part of their derivational history. Therefore, they should predominantly appear in the translations of scrambling-friendly German II- and Dutch-type informants. For the Mennonite, who produced translation (5-32b) (raising value: +0.118; scrambling value: +0.264), we have already seen that this is indeed the case, while the results with regard to (5-34f) were not entirely conclusive. Aside from the general comparability for the informants producing the two variants of the VR-variant, verb clusters separated by stranded prepositions, floating quantifiers and indefinite *waut* ('something') will offer independent support for the scrambling analysis of the VR-variants (cf. points (b2) through (b4)). We will start out with more simple examples though:

(b1) ObjNP/PP-V1-adverb(ial)-V2: Tokens (5-35) through (5-37) feature cluster-internal adverbials:

stimulus <18> English: **If he stole the book, I won't trust him anymore**

(5-35) *wann- wann hei die*[124] *Bük haf: ap iernst ge[0.5]stohlen [0.9] dann wer ik den nich- nich mehr können vertrüen* (USA-7; f/16/E>MLG-Ø)

~~if-~~ if he the.REDUCED book has-VERB1 ~~in earnest-~~ADVERBIAL st[…]olen-VERB2 […] ~~then~~ will I him ~~not-~~ not anymore ~~can~~ trust

[124] With regard to the hypotheses elaborated in KAUFMANN (2008), this reduced article constitutes a piece of counterevidence (cf. Excursus 4.6.1). As the ObjNP has been scrambled, expected *daut* ('the') should not be replaced by a phonetically lighter form.

stimulus <12> English: **If he does his homework, he can have some ice-cream**

(5-36) *wann her sin [äh] [2.1] Schularbeit wird t'Hüs don [0.4] dann kann er ice-cream eten* (USA-43; M/42/E>MLG-Ø)
if he his [eh] […] homework ~~will~~-VERB1 ~~at home~~-ADVERBIAL do-VERB2 […] ~~then~~ can he ice-cream eat

stimulus <29> Portuguese: **Ele está bravo porque ele poderia ter comprado a casa por muito menos**
English: He is angry, because he could have bought the house for much cheaper

(5-37) *hei is doll wegen hei daut Hüs könnt für viel billiger köpe* (Bra-36; f/31/P>MLG-Ø)
he is angry because he the house could-VERB1 for much cheaper-ADVERBIAL buy-VERB2

As the translations resulted from slight deviations from the respective stimulus sentences, they only occurred once or twice. Token (5-35) shows *ap iernst* ('really') raised together with the verb phrase. Raising adverb(ial)s alone or together with an ObjNP occurs quite frequently with other types of adverbs (e.g., *nu* ('now') in Table 5-19), but it occurs very rarely with a sentence adverbial like *ap iernst* ('really'). Token (5-36) shows the locative adverbial *t'Hüs* ('at home') in between the two verb forms. Finally, example (5-37) representing two occurrences features the adverbial *für viel billiger* ('for much cheaper') in the same position.

As expected, three of the tokens are produced by scrambling-friendly Dutch-type informants, one by a scrambling-friendly German II-type informant. Their average raising value is +0.381, their average scrambling value +0.228, a rather high value (total range of the scrambling index is [-0.718; +0.506]; cf. Table 4-17). As the scrambling index is based on tokens with no separation between the verbal elements, we have a first indication that the position of the ObjNP before the two verbal elements, i.e. scrambling, is the decisive shared structural feature between tokens (5-35) through (5-37) and the prototypical VR-variant. The fact that the two verbal elements are separated by adverbials only seems to be of secondary importance.

(b2) ObjNP/PP-V1-floating quantifier-V2: Aside from adverbials, syntactically more complex and thus more conclusive types of intervening non-verbal material exist in right-branching clusters. These tokens also feature the complement in front of the verbal elements. Examples (5-38a-d) show four translations of sentence <35> *Is this the film you want to show to all your friends?* The decisive element is *all* (*todos* in Spanish and Portuguese). EISENBERG (2013b: 161) calls SG *alle* an adsubstantive quantifier (*adsubstantivischer Quantor*), which sometimes has a generic interpretation and sometimes a referential one. In sentence <35>, the referential interpretation is the only possible interpretation. ZANOGA (1988: 104 and 152) regards Spanish *todos* either as a more nominal pre-determiner or (like *all*) as a more verbal subject-oriented quantifier-like adverbial. Both these interpretations are also discussed in BOBALJIK (2003).

stimulus <35> Spanish: **¿Esta es la película que quieres mostrar a todos tus amigos?**
English: **Is this the film you want to show to all your friends?**

(5-38) a. *is det de Film*[125] *waut dü all dine Frend wiesen willst* (USA-33; m/42/MLG)
is this the film that you all-QUANTIFIER your friends show-VERB2 want-VERB1

b. *is det det die [0.3] die Film waut dü dine Frend alle wiesen wills* (Mex-52; m/28/MLG)
is this ~~the-~~ ~~the-~~ […] the film that you your friends all-QUANTIFIER show-VERB2 want-VERB1

c. *is daut daut Film waut dü willst all dine Frend wiesen* (USA-6; m/20/E>MLG-79%)
is this the film that you want-VERB1 all-QUANTIFIER your friends show-VERB2

d. *is det daut Film waut dü willst dine Frend alle wiesen* (USA-28; f/31/MLG+E)
is this the film that you want-VERB1 your friends all-QUANTIFIER show-VERB2

The translations in (5-38a+b) display the NR-variants, the ones in (5-38c+d) the V2-VPR-variant. If one parts from the assumption that *all* (‘all’) is an adverbial element and marks the left edge of the VP, one could assume that (5-38a) (89 tokens) is an illustration of the unscrambled NR-variant, while (5-38b) (18 tokens) represents the scrambled NR-variant. There is, however, no difference whatsoever in the scrambling values of the informants who produce these two variants. As such a difference was detected several times (cf., e.g., the sentences in Section 4.5.2), we will not overestimate this result (cf. however, also the relevant data in Table 5-17). What one may say though is that there is no stochastic support for an adverbial interpretation of *all* in sentence <35>. This assumption is further undermined by a curious morphological fact. If the quantifier precedes *dine Frend* as in (5-38a+c), both *all* and *alle* occur (with *all* occurring much more frequently). If *dine Frend* precedes the quantifier as in (5-38b+d), only *alle* is possible. This variation must be characterized as nominal[126] and is identical to the one found in SG (cf. Merchant 1996: 181–182) and comparable with the distribution of the Hebrew forms *kol* and *kulam* mentioned by Bobaljik (2003: 113).

The nominal interpretation assumes that *all* (‘all’) and *dine Frend* (‘your friends’) form one constituent, normally identified as QP. The head of this phrase is the quantifier *all*, its complement the ObjNP *dine Frend*. In contrast, Zanoga (1988: 105) sees *todos* as a phrasal constituent in Spec/QP. Her deviant analysis makes sense since *todos* and *all* are not identical. *Todos*, but not *all*, can function as a pronoun, for example. MLG *all* behaves more like English *all* than like Spanish and Portuguese *todos*. We, therefore, conclude that the ObjNP *dine Frend* in both (5-38b+d) has been moved to Spec/QP. In (5-38b), movement may have continued to a specifier position higher up in the structural tree. Such a long movement would be string-vacuous. In many cases, however, long movement leads to the visible and non-contiguous stranding of so-called floating quantifiers (FQs). Although Bobaljik (2003: 134) lists several problematic points with regard to a movement hypothesis, he (2003: 116) also mentions its potential explanatory power:

---

[125] *Film* (‘movie’) appears robustly with all genders. Due to this, gender deviations cannot be indicated.

[126] Merchant (1996: 180) writes: “Investigation of floated quantifiers in a number of languages has shown that these quantifiers are part of the nominal system. Agreement of quantifiers with nouns seems to be the rule, not the exception.”

> A corollary of Sportiche's proposal (and related ones) was that FQs could be used as a convenient diagnostic for the exact positions of empty categories, including traces of A-movement and PRO. Though this hypothesis has gained widespread currency, it should come as no surprise that language is not so obligingly straightforward.
>
> If the stranding analyses are correct that the FQs are adjacent to the positions of empty categories, then they constitute one of our most direct and thus most powerful tools for the investigation of phrase structure and movement.

With this in mind, the following translations become crucial:

stimulus <35> English: **Is this the film you want to show to all your friends?**

(5-38) e. *is det daut [1.3] Film waut dü all dine Frend willst wiesen* (USA-5; m/16/MLG+E)
is this the […] film that you all-QUANTIFIER your friends want-VERB1 show-VERB2

f. *is det daut Film waut dü wills:*[127] *waut dü dine Frend alle willst wiesen* (USA-11; f/20/MLG)
is this the film ~~that~~ ~~you~~ ~~want-~~ that you your friends all-QUANTIFIER want-VERB1 show-VERB2

g. *is det daut tape waut dü dine Frend willst alle wiesen* (USA-21; m/15/E>MLG-Ø)
is this the tape that you your friends want-VERB1 all-QUANTIFIER show-VERB2

For tokens (5-38e+f), we must assume that the whole QP, i.e. *all* and the ObjNP *dine Frend*, has scrambled out of the verb phrase regardless of their internal ordering. Translations such as (5-38e) occurred 55 times, translations such as (5-38f) thirteen times. The decisive point is that the NP *dine Frend* in (5-38g), which has already been presented as (1-10), has been scrambled out of the QP and out of the verb phrase on its own, while the quantifier and most probably the trace of the scrambled NP remain within the verb phrase and are raised together with it (cf. for a comparable analysis of floating quantifiers GREWENDORF 2002: 49 – Footnote 17). This token, therefore, constitutes visible support for the scrambling hypothesis of the MLG VR-variant, especially if we recall what MERCHANT (1996: 191) writes about SG:

> *Alle* was seen [in the preceding section; G.K.] to strand only in A-positions: either in its base position within the VP, or in the specifier of a functional projection -- Spec-AgrSP for subjects, and Spec-AgrOP for objects. *Alle* cannot be stranded in adjoined A'-positions (including those created by scrambling); this is expected since extraction from adjoined phrases is in general ungrammatical in German as in English.

For (5-38g), only the "base position within the VP" is feasible. For (5-38e+f), *alle* and the QP headed by it must be in Spec-AgrOP according to MERCHANT (1996: 191), while *dine Frend* ('your friends') in (5-38f) may have scrambled out of QP and of AgrOP string-vacuously. Even if we assume – despite the stochastic and morphological counterevidence given above – that *all* in sentence <35> has more of an adverbial quality, its position still supports the scrambling hypothesis. DOETJES, who propagates this view, claims that isolated *all* c-commands and binds the trace of the moved NP (cf. BOBALJIK 2003: 134–135). In order to do so, *all* must appear to the left of the trace and would thus still mark the original position of the

[127] Once more, the informant's repair in (5-38f) is quite enlightening. USA-11 is about to produce the V2-VPR-variant, but then changes her translation in order to generate the VR-variant. As she is a Dutch-type informant (raising value: +0.53; scrambling value: +0.301), this repair is not surprising.

ObjNP in (5-38g). In spite of this and in spite of the equally reassuring fact that (5-38g) is produced by a scrambling-friendly German II-type informant (raising value: +0.094; scrambling value: -0.004), one problem remains: There is just one token such as (5-38g). This may be considered too thin a basis to build an entire theory on.

(b3) ObjNP/PP-V1-stranded preposition-V2: Fortunately, the Mennonite data set contains a somewhat comparable phenomenon, which is more frequent and probably less controversial, namely preposition stranding in sentence <33> *This is the journey I am inviting my mother on*. We already provided a short introduction to this phenomenon in Section 5.1.3.3 where tokens (5-25a-f) presented different possibilities of relative markers, either suppressing the preposition in the morphologically simple markers *waut* ('that') and *wo* ('where') or pied-piping the preposition into the CP-domain in the synthetic or analytic markers *wotu*, *tu wo*, *tu waut*, and *tu der* (all 'to which'). Many translations, however, show preposition stranding just like in the English stimulus version.[128] Granted, preposition stranding is caused by *wh*-movement and not by scrambling, but what matters at this point is the shared fact of phrasal movement. The following translations show first cases of preposition stranding:

stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: **This is the journey I am inviting my mother on**

(5-39) a. *det is die Reis wo ik mine Mama [0.9] einlode [0.5] tu einlode du* (USA-15; f/35/MLG)
this is the journey where I my mother […] ~~invite~~- […] to-PREPOSITION invite-VERB2 ~~do~~-VERB1

b. *det's die Reis waut ik mine Ma tu einlode du* (Men-5; m/15/MLG)
this-is the journey that I my mother to-PREPOSITION invite-VERB2 ~~do~~-VERB1

c. *det is die Reis wo ik mine Mutter no han eingelod* (Men-15; f/20/MLG)
this is the journey where I my mother to-PREPOSITION ~~have~~-VERB1 invited-VERB2

Translations such as (5-39a) (38 tokens) and (5-39b) (5 tokens) occur frequently. For these tokens, it is unproblematic to assume that the *wh*-phrases *wo* ('where') and *waut* ('that') have been moved out of the PP thus stranding the prepositional head *tu* ('to'). The derivational history of (5-39c) is somewhat more complex since – according to our assumptions – we must assume that the *wh*-phrase has moved out of PP and subsequently this partly emptied phrase must have scrambled out of VP, an instance of remnant movement. Both these steps must have happened before the verb phrase is raised. As extraction out of a moved constituent is derivationally problematic (cf. Wexler & Culicover's (1980) freezing principle), a different ordering, i.e. first scrambling of the entire PP out of VP, then *wh*-movement out of PP, is less probable.

In any case, tokens with such complex derivational histories seem to be less preferred; the translation in (5-39c) is a unique occurrence. This rarity fits the fact that scrambling of ObjPPs in MLG is a generally rare phenomenon (cf. Table 4-8). Moreover, it is also in line with assumptions put forward by Hornstein and Weinberg (1981: 70–74; cf. also

128 Priming, however, is not involved in these translations since the majority of the relevant tokens stem from the Spanish and Portuguese stimulus versions, i.e. from languages, which do not exhibit preposition stranding.

HAEGEMAN & VAN RIEMSDIJK 1986: 421 – tree (10)). According to their assumptions, reanalysis of the extension of the VP is necessary in order to explain preposition stranding in English. If MLG functioned in the same way, scrambling of the phrase containing the preposition in (5-39c) would be impossible, because the preposition would have been integrated into VP and would thus be invisible for a movement like scrambling. The same argument holds for clauses with extraposed ObjPPs as in (5-39d-f):

stimulus <33> Portuguese: **Essa é a viagem para a qual eu estou convidando a minha mãe**
English: **This is the journey I am inviting my mother on**

(5-39) d. *det‘s die Reis wo ik mine Mame einloden du tu* (Mex-54; f/19/MLG)
this-is the journey where I my mother invite-VERB2 ~~do~~-VERB1 to-PREPOSITION

e. *det is die Reis [0.4] wo ik mine Ma einlode du datu* (Bra-15; f/44/MLG)
this is the journey […] where I my mother invite-VERB2 ~~do~~-VERB1 ~~there~~-to-PREPOSITION

f. *this is [0.3] det‘s die Reis waut ik mine [0.5] Mama will einladen tu* (USA-30; m/39/S>MLG-Ø)
~~this is~~ […] this-is the journey that I my […] mother ~~want~~-VERB1 invite-VERB2 to-PREPOSITION

Extraposition of ObjPPs is more robustly attested in the Mennonite data set than scrambling of ObjPPs (cf., e.g., (4-26a)). Due to this fact, it does not come as a surprise that there are five translations like (5-39d-f). Extraposition occurs in clauses with the NR-variants as in (5-39d+e) and with the VR-variant as in (5-39f). Example (5-39e) shows the only case of doubling of the pronominal part of the relative marker (***wo*** and ***da****tu*). As FLEISCHER (2002: 271) considers the doubling of relative *wo* and *da* a typical High German feature, this rarity is expected. The derivation of *tu* in the postfield would again be a case of remnant movement. First the *wh*-phrase leaves the PP and then the PP is extraposed (before raising in the case of (5-39f)). Having shown that preposition stranding occurs frequently in the translations of sentence <33>, we now come to the crucial tokens:

stimulus <33> Spanish: **Este es el viaje al que estoy invitando a mi madre**
English: **This is the journey I am inviting my mother on**

(5-39) g. *det is die Reise wo ik mine Mame du tu einloden* (Mex-51; m/22/MLG)
this is the journey where I my mother ~~do~~-VERB1 to-PREPOSITION invite-VERB2

h. *det is die Reis [1.3] waut ik mine Mom du tu [0.4] tu nokriegen* (USA-16; m/15/E>MLG-Ø)
this is the journey […] that I my mother ~~do~~-VERB1 ~~to~~- […] to-PREPOSITION there-get-VERB2

i. *det is: [0.3] die journey [0.5] da ik mine Mama du [0.9] tu kriegen* (USA-8; f/14/E>MLG-Ø)
this is […] the journey […] where I my mother ~~do~~-VERB1 […] to-PREPOSITION get-VERB2

j. *det‘s die Rei:s [0.5] [äh] waut ik mine Mame eingeloden tu ha* (USA-36; m/28/E>MLG-71%)
this-is the journey […] [eh] that I my mother invited-VERB2 to-PREPOSITION ~~have~~-VERB1

k. *det is die: Reis waut ik wer mine Mame einloden* (Mex-69; f/36/MLG)
this is the journey that I will-VERB1 my mother invite-VERB2

In tokens (5-39g-i), the stranded preposition surfaces in between the two verbal elements in a right-branching cluster. Token (5-39g), which has already been presented as (1-11), features the relative adverb *wo* (‘where’) (7 tokens), (5-39h) the default relative marker *waut* (‘that’) (2 tokens), and (5-39i) the unique relative adverb *da* (‘there’). The reader may have noticed that the informants of (5-39h+i) produce many (long) pauses, but this is an exception. The seven translations represented by (5-39g) hardly exhibit any pause or hesitation, i.e. they do not constitute cases of erratic translations. The fact that these ten tokens are produced by informants with an average scrambling value of +0.123 (10 values) and an average raising value of +0.37 (8 values) strongly suggests their derivational comparability with the VR-variant. Five scrambling-friendly Dutch-type informants, two scrambling-friendly German II-type informants, and just one scrambling-unfriendly Flemish-type informant are responsible for eight of the ten tokens. Most interestingly, the translation in (5-39j), whose relative clause is spoken without any pause or hesitation, features an interverbal *tu* in a left-branching verb cluster. It is widely assumed that non non-verbal elements cannot surface in this position. Because of the uniqueness of this translation, we should, however, not overestimate its significance.

In any case, if we assume a movement analysis in regard to preposition stranding,[129] the stranded preposition surfaces adjacent to the *wh*-trace. The fact that the preposition appears in between the two verbal elements in ten tokens makes it clear that this VR-variant is not just the consequence of raising the main verb *einloden*/*(no)kriegen* (‘invite’ and ‘(there-)get’). In addition to the verb, the preposition *tu* and the *wh*-trace is raised too. In spite of the fact that this does not constitute direct evidence for the scrambling of ObjNPs in the VR-variant, it shows that traces of phrasal movement can be raised and thus suggests that the trace of *mine Mame*/*Mom* (‘my mother’) may also be found between the two verbal elements.

One curious fact with regard to sentence <33> is the complete absence of tokens like *daut is die Reise wo/waut ik* ***du*** *mine Mame tu* ***einloden*** (gloss: this is the journey where/that I ~~do~~-VERB1 my mother to-PREPOSITION invite-VERB2). That it is in principle possible to find both an ObjNP and a stranded preposition within a right-branching verb cluster is shown by HAEGEMAN and VAN RIEMSDIJK’s (1986: 450) West Flemish example (77b), given as (5-40):

(5-40) *dan-ze doa willen een besprekinge t van moaken*
that-they there want-VERB1 a review “trace” of-PREPOSITION make-VERB2
‘that they want to write a review of it’

In this clause, an ObjNP, the stranded preposition, and the trace of the moved adverbial element *doa* surface inside the verb cluster. Interestingly though, (5-40) features a scrambling-unfriendly indefinite ObjNP, whereas in our hypothetical token, the definite ObjNP *mine Mame* and the stranded preposition *tu* plus the *wh*-trace would appear between the verbal elements. Aside from this, the fact that (5-40) is not a relative, but a complement clause may play a role, since the position of West Flemish *doa* (‘there’) is different from the MLG relative markers *wo* (‘where’) or *waut* (‘that’).

[129] This is the generally accepted analysis. Nevertheless, there are also approaches which do not assume movement, but base generation (cf., e.g., FLEISCHER (2002: 407–410) for a relevant discussion).

Be that as it may, looking at the behavior of scrambling-unfriendly Flemish-type informants – the ones we would expect to generate the hypothetical token –, it becomes clear that they only produce the unscrambled V2-VPR-variant in combination with morphologically simple relative markers like *wo* and *waut* as in (5-39k) (6 of their 29 tokens with two verbal elements (20.7%)). As expected, this combination occurs much less frequently among Dutch-type informants (3.7%; 2 of their 54 tokens). Interestingly though, the Flemish-type informants' reluctance to produce morphologically complex relative markers seems to be more general. Table-5-20 shows the distribution for sentence <33> for the four CLUSTERS of informants.

Table 5-20: Relative markers in the relative clause of sentence <33> separated by the informants' raising and scrambling behavior

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	36	111	33	68	248
wo/waut/daut	11	38	27	46	122
	30.6%	34.2%	81.8%	67.6%	49.2%
χ^2 (3, n=248) = 38.3, p=0*** / Cramer's V: 0.39 / 0 cells with less than 5 expected tokens					
(*tu*) *wo*(*tu*) (…) (*tu*)	25	73	6	22	126
(*tu*) *waut* (…) (*tu*)	69.5%	65.8%	18.2%	32.4%	50.8%

Only six of the 33 tokens of Flemish-type informants feature a complex relative marker with a phonetically realized preposition. This is the lowest share of all CLUSTERS. Three of these six tokens appear in relative clauses with the NR-variant, two with the VR-variant, and one with a single verbal element. As the production of complex relative markers is possible for Flemish-type informants, one wonders whether there is a derivational restriction against the hypothetical token *daut is die Reise wo/waut ik* ***du*** *mine Mame tu* ***einloden*** featuring the V2-VPR-variant and a cluster-internal stranded preposition? If so, Flemish-type informants seem to solve this impasse by either resorting to morphologically simple relative markers or by swallowing the bitter pill of scrambling. Assuming an upper limit of how much (phonetic) material can be raised does not offer a solution, since tokens like (4-20c+d) frequently found in sentence <46> *I should have shown the little dog to the kids* show that Mennonites have no problem whatsoever raising a VP with two full-fledged ObjNPs.

One need not assume a general restriction though in order to explain the absence of this hypothetical token; one may also look for an underlying factor influencing both the position of the ObjNP and the lack of a phonetically realized preposition. Coming back to the behavior of heavy *dune*-users with regard to sentence <33> (cf. Section 5.1.3.3) may lead to a solution. If these eleven informants really share a propensity for the incorporation of functional elements, they may either satisfy this drive after spell-out, i.e. on LF – and this may be an important reason for scrambling-unfriendly behavior in general –, or they may do so before spell-out. The phonetic exhaustion of the preposition and its eventual complete incorporation into the verb may be an example for the second option. This means that the preposition is still present in a token such as (5-39k); it would just be phonetically empty and incorporated.

Flemish-type informants thus have two options: (a) They may follow their personal syntactic calling by keeping the verb phrase as compact as possible. Compactness as a precondition for incorporation before or after spell-out would then be the underlying factor we are looking for. This option means that the ObjNP remains within the verb phrase and the preposition of the second argument incorporates into the verb losing not only its syntactic independence, but also its phonetic content. The other option is to disengage from one's personal preferences and to heed the actual context. In Section 6.2, we will see that relative clauses show a tendency for non-V2-clauses. Thus, the VR-variant is syntactically more adequate than the V2-VPR-variant. Flemish-type informants who choose this option exceptionally scramble the ObjNP. This behavior seems at times to be accompanied by another process of loosening the compactness of the verb phrase, namely by not (completely) incorporating the preposition into the verb. In this case, the preposition remains audible and normally surfaces adjacent to the verb as in (5-39g-i).

In any case, the naming of the Flemish-type informants after the Dutch variety spoken in parts of Belgium is felicitous as the similarity to Standard Belgian Dutch as described by HAEGEMAN and VAN RIEMSDIJK (1986: 450) shows.

> At this point it may be useful to dwell a moment on preposition stranding in (77b,c). It is well known that, in standard Belgian Dutch, stranded prepositions may in general occur inside the verb cluster, although in this variant of the language further incorporation of nonverbal elements through VPR is not possible. In order to account for this, it is generally assumed that the preposition first reanalyzes with the verb and then is moved with V after Reanalysis for VR[.]

(b4) ObjNP/PP-V1-indefinite waut-V2: HAIDER (2010: 170–172) discusses the syntactic behavior of the SG indefinite wh-pronoun *was* ('something'), a reduced form of *(et)was*. He shows that *was* can appear before or after the negative particle *nicht* ('not') and adverbials like *mehr als einmal* ('more than once'). Using scope differences, HAIDER (2010) concludes that indefinite *was* can never scramble. In his opinion, the different positions in which *was* occurs are superficially the consequence of different positions of *nicht* and adverbials. As scrambling is the mechanism with which we distinguish, for example, the VPR- from the VR-variant, it is interesting to take a closer look at the syntactic behavior of the MLG indefinite pronoun *waut*.

Something did not occur in any of the stimulus sentences, but *waut* nevertheless appeared in fourteen Spanish-based translations of sentence <10> *He didn't know that he should have fed the dogs this morning*. The Spanish stimulus version had to be constructed differently since a comparable verb for *feed* does not exist. The more complex Spanish version *Él no sabía que debería haberles dado de comer a los perros esta mañana* used the verbal periphrasis *dar de comer*. This sometimes provoked the insertion of the indefinite pronoun *waut* in *waut tu(m) ete(n) gewen* ('to give something to eat/for eating'). Tokens (5-41a-e) present five of the fourteen translations:

stimulus <10> Spanish: **Él no sabía que debería haberles dado de comer a los perros esta mañana**
English: He didn’t know that he should have fed the dogs this morning

(5-41) a. *hei wißt nich daut hei die [äh] die Hung diese [0.4] vondaag zu Morjes waut tu ete gewe soll* (Men-16; f/21/MLG)
he knew not that he ~~the~~ [eh] the dogs ~~this~~- […] today at morning Ø ~~something~~ to eat-VERB3 give-VERB2 should-VERB1

b. *[äh] hei wißt daut nich daut her eigentlich hat sollt de Hung diese- vondaag zu Morjens waut tu ete gewe*
(Fern-17; m/64/MLG)
[eh] he knew ~~that~~ not that he ~~actually~~ had-VERB1 should-VERB2 the dogs ~~this~~- today at morning ~~something~~ to eat-VERB4 give-VERB3

c. *[och] hei hei wißt daut nich daut hei dies: dies zu Morjes soll de Hung waut tu eten gewen* (Mex-24; f/14/MLG)
[och] ~~he~~- he knew ~~that~~ not that he ~~this~~- this at morning Ø should-VERB1 the dogs ~~something~~ to eat-VERB3 give-VERB2

d. *hei wißt daut nich daut hei de Hung hat sollt waut tum Eten gewen* (Mex-84; f/15/MLG+E)
he knew ~~that~~ not that he the dogs Ø had-VERB1 should-VERB2 ~~something~~ for eating give-VERB3

e. *hei wißt daut nich daut hei de Hung soll vondaag zu Morjes: waut tu eten gewen*
(Mex-41; m/37/MLG)
he knew ~~that~~ not that he the dogs should-VERB1 today at morning ~~something~~ to eat-VERB3 give-VERB2

One problem with these translations is that sentence <10> is the most complex sentence in the data set. This led to quite a few restarts, hesitations, and deviations from the stimulus sentence as one can verify in (5-41a-e). Furthermore, the status of *tu ete(n)* is somewhat ambiguous. The reader can immediately see that all five occurrences of *waut* (~~something~~ in the glosses) surface adjacently to their complement *tu(m) ete(n)*. Translation (5-38d) and two more translations feature *tum Eten* (‘for eating’) instead of *tu ete(n)* (‘to eat’), a clear indication for the nominal quality of this constituent. In analogy to this, the *tu* (‘to’) in *tu ete(n)* is not necessarily an infinitival marker, i.e. *tu* may still retain a prepositional quality.[130] Finally, the whole complex *waut tu(m) ete(n)* functions as the direct ObjNP of the bi-transitive verb *gewen* (‘give’). Therefore, in spite of the verbal labeling of *tu eten* in the glosses, this constituent does not form a prototypical cluster with other verbal elements.

Some interesting conclusions can nevertheless be drawn. Token (5-41a) features the rare verbal sequence *verb3-verb2-verb1* (counting *tu(m) ete(n)* as a verbal element). Four translations function in this way and in three of them, the indirect ObjNP *de Hung* (‘the dogs’) appears before the temporal adverbial *vondaag zu Morjes* (‘today at morning’), which precedes the direct ObjNP *waut tu(m) ete(n)* (‘something to eat/for eating’). In one translation, the adverbial is missing, but the sequence indirect ObjNP before direct ObjNP is maintained. The four responsible informants are all raising-unfriendly German-type informants. Their average raising value is -0.265; their average scrambling value -0.134. The rather low scrambling value is due to the only German I-type informant, a very scrambling-unfriendly

[130] This resembles the situation in Old English. ARNOLD (1996: 6 – Footnote 7) writes: “Jared also shows that infinitival *to* in Old English cannot accurately be analyzed as the head of CP, Gap, or TP. The combined evidence points quite strongly to the conclusion that the *to*-infinitival in Old English was a PP.”

informant from Fernheim, whose scrambling value is -0.5. The other three informants are scrambling-friendly German II-type informants, albeit all with a comparatively low scrambling value of +0.033. According to our assumptions, we have to assume scrambling for *de Hung* (the dogs) in three of the cases, because it appears in front of the temporal adverbial.

The following two tokens (5-41b+c) show (partial) raising and also represent four translations. The decisive point here is that both ObjNPs surface within the verb cluster, while the adverbial appears either within the cluster as in (5-41b) (short scrambling of *de Hung* within its verb phrase) or before the cluster as in (5-41c). The informants' profile fits the lack of (longer) scrambling. Their raising value is +0.019, their scrambling value is negative with -0.041. With regard to the status of *tu(m) ete(n)*, one interesting conclusion can be drawn from an additional token of this group of speakers.

stimulus <10> Spanish: **Él no sabía que debería haberles dado de comer a los perros esta mañana**
English: He didn't know that he should have fed the dogs this morning

(5-41) f. *hei wißt daut nich daut hei würd han sollt die: Hung waut Eten gewen vondaag zu Morjes* (Mex-96; f/21/MLG)
he knew ~~that~~ not that he ~~would~~-VERB1 have-VERB2 should-VERB3 the dogs ~~some~~ food give-VERB4 today at morning

Perhaps the fact that Mex-96 uses four verbal elements (cf. Section 5.4) causes her to clearly mark *Eten* as a nominal entity. She does this by suppressing the infinitival marker *tu*. A complement clause with five verbal elements would probably have unduly increased complexity. This assumption is supported by the fact that the temporal adverbial has been extraposed. As both the generation of four clearly verbal elements and the suppression of *tu* are unique occurrences among the fourteen relevant tokens, interdependency between these two phenomena is probable.

While translations (5-41b+c+f) resemble the VPR-variants, translations (5-41d+e) are somewhat similar to the VR-variant. In Section 5.3, we will see that this resemblance is not coincidental since scrambling-unfriendly Flemish-type informants prefer the cluster-internal position of ObjNPs like *de Hung* in three-verb-clusters as in (5-41b+c+f), while scrambling-friendly Dutch-type informants prefer a pre-cluster position as in (5-41d+e) (cf. Table 5-24). This pre-cluster position is the consequence of the scrambling of the indirect ObjNP *de Hung*. As expected, only scrambling-friendly informants (3 German II-type, 1 Dutch-type) are responsible for the four translations in this third group. Their average scrambling value is +0.132, much higher than that of the informants responsible for (5-41b+c+f). As all four tokens are produced by Mexican informants, even the three raising-unfriendly German II-type informants raise once in a while. This explains the high raising value of +0.315.

It must be kept in mind that although the four informants are all scrambling-friendly, none of them scrambles the indefinite direct ObjNP *waut tu(m) ete(n)*, which contains *waut* as its head. These and all other tokens hitherto analyzed thus correspond perfectly with HAIDER's (2010) assumption that indefinite pronouns like SG *was* or MLG *waut* cannot scramble. We should not underestimate the Mennonites' syntactic creativity though. The last two tokens we will present are produced by two German II-type informants with a raising value of -0.213 and a scrambling value of +0.258. The impact of this high scrambling value is clearly discernable in (5-41g+h):

stimulus <10> Spanish: **Él no sabía que debería haberles dado de comer a los perros esta mañana**
English: He didn't know that he should have fed the dogs this morning

(5-41) g. *her wißt daut nich daut der die Hung Hung soll vondaag Vor- Vormittag waut gewe tu frete* (Bol-3; m/31/MLG)
he knew ~~that~~ not that he the ~~dogs~~- dogs Ø should-VERB1 today ~~mor~~- morning ~~something~~ give-VERB2 to eat-VERB3

h. *hei wußt daut nich daut hei dei Hung [äh] diese Morje waut [0.5] hat tu frete gewe sollt* (Fern-16; f/70/SG>MLG-75%)
he knew ~~that~~ not that he the dogs [eh] this morning ~~something~~ […] had-VERB1 to eat-VERB4 give-VERB3 should-VERB2

That raising-unfriendly informants produce a completely raised and thus right-branching verb cluster as in (5-41g) need not worry us. This is the consequence of the high complexity of a clause with three verbal elements (cf. Section 5.3). The crucial fact in (5-41g+h) is that *waut* does not surface adjacent to *tu (fr)ete* anymore. As already said, *tu (fr)ete* may either be characterized as the most deeply embedded verbal element or as a complement to *waut*. Either way, the separation of the two elements is noteworthy. While (5-41g) may be explained either as a case of extraposition of a pseudo-prepositional phrase or as a case of scrambling of *waut*, the token in (5-41h) can only be explained by means of scrambling. After all, unlike in (5-41g), where *waut* surfaces after the finite verb *soll* ('should'), *waut* appears in front of the finite verb *hat* ('had') in (5-41h). Informant Fern-16, who is responsible for the latter token, has a fittingly high scrambling value of +0.367.

Two types of behavior with regard to indefinite *waut* can thus be distinguished for scrambling-friendly informants. Tokens (5-41d+e) have shown that scrambling-friendly informants, who scramble definite ObjNPs easily, do not scramble indefinite *waut*. This is in line with HAIDER's (2010: 170–172) assumption. The positioning of the two constituents, which differ precisely in their sensitivity to scrambling, thus constitutes indirect evidence for the assumption that scrambling forms part of the derivational process of the VR-variant. The last two tokens strengthen this hypothesis further, as they show that even scrambling of indefinite *waut* is possible in MLG. If it occurs however, extremely scrambling-friendly informants must be involved.

Summarizing the results of this in-depth analysis, there is no doubt whatsoever that the rare VR-variant, in which the two verbal elements are separated by non-verbal material other than ObjNPs/ObjPPs, is produced by the same Mennonites that prefer the prototypical VR-variant. We conclude from this that both these variants feature a scrambled complement, the landing site of which is before the entire verb cluster. One important consequence of this is that the finite verb never surfaces in second position in the two VR-variants. The fact that the non-V2-VPR also differs in this respect from the V2-VPR-variant explains its somewhat incoherent behavior in the first part of this in-depth analysis. In spite of this, the general comparability between the two VPR-variants is beyond any doubt (cf. Sections 7.2 and 7.3 for more support). In general, the informants who prefer the V2-VPR-variant frequently produce the non-V2-VPR-variant.

End of In-Depth Analysis

By analyzing different clauses with two verbal elements in Section 5.1, the reliability of the two indexes created in Chapter 4 could be confirmed. The reader may object that in many analyses either several colonies or several clauses were combined. This objection is not justified with regard to the pooling of informants from different colonies because abstracting from this and other sociolinguistic factors was the very reason for index formation. With regard to pooling clauses, the objection is more to the point, both conceptually and statistically. In most of the cases, conjoint analyses were necessary in order to obtain a sufficient number of tokens. In any case, it would be quite a coincidence if the highly comparable results of all analyses presented were just the consequence of pooling clauses. We would be able to show more analyses for dependent clauses with two verbal elements, but we deem the examples presented sufficient for the point we wanted to make. Most of the contexts we could still present show the same frequency distribution and the same hierarchies with regard to the index values (frequently with significant differences). None of these contexts shows a significant frequency distribution or significantly differing index values undermining the reliability of the two indexes.

5.2 Testing ground II: A main clause with three verbal elements

We now leave the relatively safe haven of comparable contexts, i.e. of two-verb-clusters in dependent clauses, and apply the indexes to less comparable contexts. The first step will be the analysis of sentence <45> *Yesterday I could have sold the ring*, a main clause with a modal verb in the present perfect tense governing a bare infinitive. The most important difference between dependent clauses (with an introductory element) and main clauses (with no such element) is that the least embedded verb in a main clause does not only move from V^0 to I^0 to pick up its finiteness features, but continues to move from there to C^0. At first glance, this second movement seems to make the contexts discussed in Sections 5.1 and 5.2 more alike since we are dealing with clause-final two-verb-clusters in both cases. Unlike in dependent clauses though, such two-verb-clusters in a main clause do not contain a finite verb. In view of this, the decisive questions in this section are (i) whether the indexes formed in Chapter 4 are able to account for (part of) the variation found in sentence <45> and (ii) whether the lack of a finite verb in two-verb-clusters causes differences in the distribution of the extant variants. As in Section 5.1, there are three basic variants:[131]

[131] There were quite a lot of translations with four verbal elements in sentence <45>. These deviating translations are responsible for the relatively low number of tokens in Table 5-21.

stimulus <45> Spanish: **Ayer podría haber vendido el anillo**
English: **Yesterday I could have sold the ring**

(5-42) a. *jestere hat ik [0.5] den Ring verköpe könn*[132] (Fern-2; m/18/SG>MLG-64%)
yesterday had-VERB1 I […] the ring sell-VERB3 could-VERB2

b. *jestere hat ik könnt dem Ring verköpe* (Fern-3; f/17/MLG)
yesterday had-VERB1 I could-VERB2 the.DAT ring sell-VERB3

c. *jestere ha ik dem Ring könnt verköpe* (Fern-21; f/33/MLG)
yesterday have-VERB1 I the.DAT ring could-VERB2 sell-VERB3

Due to superficial similarities, we are led to compare (5-42a) to the NR-variants with no raising and unclear scrambling characteristics, (5-42b) to the VPR-variants with raising but no scrambling, and (5-42c) to the VR-variant with raising and scrambling. Unlike the examples in Section 5.1 though, the head of the visibly raised VP3 *dem Ring verköpen* in (5-42b+c) is V3, not V2. Furthermore, we do not know whether VP2 containing VP3 has been raised and adjoined to IP, because the head of IP is phonetically empty since the temporal auxiliary *han*, which originated as head of VP1, has moved to the head position of CP. This means that the raising of VP2, which can be easily detected in dependent clauses with three verbal elements (cf. Section 5.3) could have taken place string-vacuously. If we assume that no raising of VP2 has taken place, the structural descriptions for the three variants are (5-43a) (without scrambling of the ObjNP), (5-44a), and (5-45a) (phonetically realized parts in bold print; the adverb *jestern* and the subject pronoun *ik* are not represented). If we assume that raising of VP2 has taken place string-vacuously, (5-43b) (without scrambling of the ObjNP), (5-44b), and (5-45b) represent the relevant structures. In this case, we assume that VP2 first raises containing VP3 and then VP3 raises in a second step:

(5-42a) jestere hat$_{V1}$ *ik [0.5] den Ring verköpe*$_{V3}$ *könn*$_{V2}$ (Fern-2; m/18/SG>MLG-64%)

(5-43) a. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\}_{g'}\ [_{IP} \ldots [_{VP1}\ [_{VP2}\ [_{VP3}\ \mathbf{NP\ V3}]\ \mathbf{V2}]\ t_g]\ t_{g'}]]$
b. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\ \}_{g'}\ [_{IP}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ t_{g'}]\ [_{VP2}\ [_{VP3}\ \mathbf{NP\ V3}]\ \mathbf{V2}]_m]]$

(5-42b) jestere hat$_{V1}$ *ik könnt*$_{V2}$ *dem Ring verköpe*$_{V3}$ (Fern-3; f/17/MLG)

(5-44) a. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\}_{g'}\ [_{IP}\ [_{IP} \ldots [_{VP1}\ [_{VP2}\ t_k\ \mathbf{V2}]\ t_g]\ t_{g'}]\ [_{VP3}\ \mathbf{NP\ V3}]_k]]$
b. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\}_{g'}\ [_{IP}\ [_{IP}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ t_{g'}]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ \mathbf{NP\ V3}]_k]]$

(5-42c) jestere ha$_{V1}$ *ik dem Ring könnt*$_{V2}$ *verköpe*$_{V3}$ (Fern-21; f/33/MLG)

(5-45) a. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\}_{g'}\ [_{IP}\ [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ [_{VP2}\ t_k\ \mathbf{V2}]\ t_g]\ t_{g'}]]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]]$
b. $[_{CP} \ldots \{\mathbf{V1_g\text{-}I}\}_{g'}\ [_{IP}\ [_{IP}\ [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ t_{g'}]]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]]$

As we will see in Section 5.3, VP2 raises in almost all cases in dependent clauses with three verbal elements. Therefore, one may assume that (5-43b), (5-44b), and (5-45b) illustrate the correct structural descriptions. The quantitative analyses in Tables 5-21 and 5-22 support this assumption:

[132] As previously mentioned, there is no *Infinitivus-pro-Participio*-effect in MLG, i.e. although the modal verb is not prefixed with {ge-} like regular verbs in MLG, it appears in the morphological form of a past participle. Interestingly, the final *-t* of *könnt* ('could') is deleted in (5-42a), but not in (5-42b+c).

Table 5-21: Distribution of the basic cluster variants in sentence <45> in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han* / scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	154	147	22	68	18	37	145
ObjNP-V3-V2	37	36	6	29	0	1	36
'NR-variants'	-0.263	+0.044	27.3%	42.6%	0%	2.7%	24.8%
	F (2,151) = 22.5 p=0***	F (2,144) = 4.2 p=0.016*	χ^2 (6, n=145) = 39.6, p=0*** / Cramer's V: 0.37 / 3 cells (25%) with less than 5 expected tokens				
V2-ObjNP-V3	93	86	16	28	17	24	85
'VPR-variant'	+0.088	-0.054	72.7%	41.2%	94.4%	64.9%	58.6%
ObjNP-V2-V3	24	25	0	11	1	12	24
'VR-variant'	+0.224	+0.087	0%	16.2%	5.6%	32.4%	16.6%

The raising-friendly Flemish- and Dutch-type CLUSTERS do not raise VP3 just once (1.8% of 55 tokens), while the raising-unfriendly German-type CLUSTERS do not raise in 38.9% of the cases (35 of 90 tokens). As for scrambling, the two scrambling-friendly German II- and Dutch-type CLUSTERS scramble in 23 out of 75 raised tokens (30.7%), whereas the scrambling-unfriendly German I- and Flemish-type CLUSTERS scramble just once in 34 tokens (2.9%). The whole frequency distribution is highly significant with a weak-to-medium-size level of association. The index values confirm this result. The sequence *ObjNP-V3-V2*, which is unclear with regard to scrambling and resembles the NR-variants, has a scrambling value in between the one of the unscrambled sequence *V2-ObjNP-V3* (resembling the VPR-variants) and the one of the scrambled sequence *ObjNP-V2-V3* (resembling the VR-variant). With regard to the raising index, the two raised sequences *V2-ObjNP-V3* and *ObjNP-V2-V3* show much higher average values than the strictly left-branching sequence *ObjNP-V3-V2*. In view of these results, one can say that in relative terms there is no difference between these non-finite two-verb-clusters and the finite two-verb-clusters analyzed in Chapter 4 and Section 5.1. In absolute numbers, however, there is a huge difference. We will deal with this difference in In-Depth Analysis 5.2. Subsequently, Excursus 5.2 will show one more time that the two approaches to the scrambling index are comparable.

In-Depth Analysis 5.2: The impact of surface and structural characteristics

Table 5-22 displays the distribution of the three variants of sentence <45> in the six colonies.

Table 5-22: Distribution of the basic cluster variants in sentence <45> in six Mennonite colonies →

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (tokens)	42	22	2	32	29	29	156
ObjNP-V3-V2	0	4	0	6	16	11	37
'NR-variants'	0%	18.2%	0%	18.8%	55.2%	37.9%	23.7%
χ^2 (10, n=156) = 53.6, p=0*** / Cramer's V: 0.41 / 6 cells (33.3%) with less than 5 expected tokens							

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
V2-ObjNP-V3 ‘VPR-variant’	25	15	1	24	13	16	94
	59.5%	68.2%	50%	75%	44.8%	55.2%	60.3%
ObjNP-V2-V3 ‘VR-variant’	17	3	1	2	0	2	25
	40.5%	13.6%	50%	6.3%	0%	6.9%	16%

Having presented evidence for the reliability of the two indexes on several occasions, it should not come as a surprise that the distribution in Table 5-22 mirrors the predominance of particular CLUSTERS in particular colonies. There is a strong concentration of the unraised sequence *ObjNP-V3-V2* in the two raising-unfriendly Paraguayan colonies, where most informants belong to the two German-type CLUSTERS, and a likewise strong concentration of the sequence *ObjNP-V2-V3* in the predominantly Dutch-type US-American colony (cf. Table 4-18).

The fact that the superficially unraised sequence *ObjNP-V3-V2* is only used in 23.7% of all cases is a little bit surprising however.[133] After all, the share of the corresponding NR-variants with finite modal verbs in the selected clauses in Section 4.2 is 50.1% (463 of 925 clauses), i.e. more than twice as high. The difference between the main clause in sentence <45> and the dependent clauses with two verbal elements increases further if we look only at the Paraguayan informants. For the selected clauses with modal verbs, the Paraguayan informants have a very low share of the raised V(P)R-variants of 8.3% (21 of 252 clauses), while the share of the comparable raised sequences *V2-ObjNP-V3* and *ObjNP-V2-V3* in sentence <45> is 53.4%, i.e. 6.4 times higher.

These huge differences question the comparability of clusters in main clauses with two non-finite verbal elements and clusters in dependent clauses with one finite and one non-finite verbal element. As the distribution of sentence <45> is more similar to the one found in dependent clauses with three verbal elements (1 finite and 2 non-finite verbal elements; cf. Section 5.3), we conclude that VP2 is almost always raised in sentence <45>, i.e. the parsing complexity of three-verb-clusters is not reduced by the fact that the finite verb moves out of the cluster in order to occupy the head position of CP. This could either mean that structural complexity does not depend on phonetically realized elements, but on structural extant positions (cf. the principle of structure preservation), or that raising of verb phrases takes place before head movement of the finite verb to C^0.[134] In any case, it seems that the structural derivation (three VPs) is more decisive than the two superficially visible verbal elements.

[133] The share of the sequence *ObjNP-ObjNP-V3-V2* in sentence <46> *I should have shown the little dog to the kids* is 9.2% (13 tokens exclusively found among German-type informants). The reason for this even lower share is probably the bi-transitivity of the main verb, which increases the sentence’s overall complexity.

[134] In order to explain this different behavior, one could also think of a particular topological model of German clauses, in which non-finite verbal elements occupy a final field (*Schlußfeld*), while the finite verb occupies the closing bracket (*rechte Klammer*; cf. STERNEFELD 2008: 286–288 and for yet another relevant model STERNEFELD 2009: 521 – trees (34) and (35)). The *Schlußfeld* is more complex in sentence <45> (2 non-finite verbal elements) than in a dependent clause with just one non-finite verb. The higher complexity of the *Schlußfeld* in a main clause with three verbal elements may, therefore, also explain the different raising behavior.

The quantitative difference between two-verb-clusters in main and in dependent clauses also constitutes evidence against STERNEFELD's (2009: 522) claim that a verb stem without a finite inflection and one with a finite inflection do not behave differently. STERNEFELD (2009: 520) also writes that a particular sequence in a clause-final cluster in a dependent clause is only grammatical if the same sequence is grammatical in a clause-final cluster in a main clause. He uses these two assumptions to conclude that IP does not exist in German varieties. However, as the first assumption is not correct for MLG, this conclusion may not be justified either.

End of In-Depth Analysis

Excursus 5.2: The validity of the scrambling index (part II)

In Section 4.5.2.2, the sequence of an ObjNP and an adverbial in sentence <13> *If he quits his job, I won't help his family anymore* was analyzed. We were able to show that the scrambling values of the Flemish- and Dutch-type informants, which are predominantly based on clauses with V(P)R-variants, correctly predict the distribution of the sequence between ObjNP and adverbial in that clause. This was used as evidence for the claim that both the preference of either the unscrambled V2-VPR-variant or the scrambled VR-variant and the two possible sequences of ObjNP and adverbial measure the same movement type, a movement type we identified as scrambling. The opposite direction was adopted in Excursus 5.1.2. The two Mexican German-type CLUSTERS, in which the scrambling index is based on the sequence of ObjNP and adverb in 74.4% and 45.5% of the cases, show an even greater difference in preference for either the V2-VPR- or the VR-variant in conditional clauses with *woare* ('will'). Unfortunately, the difference of 74.4% and 45.5% is rather big, affecting the reliability of the conclusions. This problem does not exist here. The informants who translated sentence <45> will shatter any pending doubt. Table 5-23 shows the predominance of either method used for the formation of the scrambling index for the informants from Table 5-21:

Table 5-23: Distribution of the two methods used for the formation of the scrambling index of the informants of Table 5-21 separated by their raising and scrambling behavior

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	63	201	94	212	570
V(P)R-variants	14	39	76	173	302
	22.2%	19.4%	80.9%	81.6%	53%
adverb + ObjNP	49	162	18	39	268
	77.8%	80.6%	19.1%	18.4%	47%

The decisive information comes again from the two German-type CLUSTERS. The scrambling index for the informants in these CLUSTERS was calculated on the basis of the preference for either the V2-VPR- or the VR-variant in only 22.2% and 19.4% of the cases, respectively. In spite of this similarity, the difference in the preference for the unscrambled sequence *V2-ObjNP-V3* (resembling the VPR-variants) and the scrambled sequence *ObjNP-V2-V3* (resembling the VR-variants) in sentence <45> is huge and significant. Taking out the tokens of the unraised sequence *ObjNP-V3-V2*, the scrambled sequence is used in 28.2% of the tokens in the scrambling-friendly German II-type CLUSTER (11 tokens of the scrambled sequence; 28 tokens of the unscrambled sequence), while the scrambling-unfriendly German I-type informants do not produce a single scrambled sequence in sixteen tokens (for these two variants in these two CLUSTERS: χ^2 (1, n=55) = 5.6, p=0.018* / Phi: -0.32 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0.023*). This is another clear indication that the sequence between ObjNP and adverb, which in these two CLUSTERS is used in roughly 80% of the cases for index formation, is a good predictor for the preference of certain verb cluster variants. If one accepts the claim that the sequence *ObjNP-adverb* in the three clauses used for index formation (cf. Section 4.3.3) is the consequence of scrambling, the assumption that the sequence *ObjNP-V2-V3* (comparable to the VR-variant) is also the consequence of scrambling is strongly supported.

The two raising-friendly CLUSTERS almost exclusively produce the two raised sequences in sentence <45>. The scrambled sequence *ObjNP-V2-V3*, however, is used by the scrambling-friendly Dutch-type informants in 33.3% of their tokens (12 tokens of the scrambled sequence; 24 tokens of the unscrambled sequence), while the scrambling-unfriendly Flemish-type informants produce only one scrambled sequence in eighteen tokens (5.6%; for these two variants in these two CLUSTERS: χ^2 (1, n=54) = 5.1, p=0.024* / Phi: 0.31 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0.04*). Unlike the two German-type CLUSTERS, the scrambling index of the informants of the raising-friendly CLUSTERS are based in 80.9% and 81.6% of the cases (and not in just roughly 20%) on the preference of either the V2-VPR-variant or the VR-variant. As expected, the first method to measure scrambling is also a good predictor for the distribution of the cluster variants in sentence <45>. One can, therefore, claim once again and now conclusively that both methods used in the formation of the scrambling index measure the same phenomenon.

5.3 Testing ground III: Dependent clauses with three verbal elements

Inscriptions in the church *Mariä Heimsuchung* (*Käppele*) in Würzburg, Germany

There are eight dependent clauses with three verbal elements among the 46 stimulus sentences. With the exception of the complement clause in sentence <9>, these clauses share the same verbal make-up, i.e. they feature a deontic modal verb in the present perfect tense governing a bare infinitive. Excluding – as before – causal clauses, six clauses can be used to investigate the type of cluster variant the informants prefer. The English stimulus versions of the six sentences are presented (the number of selected tokens is given in brackets):

(5-46)	**stimulus <9>**	Elisabeth insists *that* you **must have seen** the truck (44 tokens[135])
(5-47)	**stimulus <10>**	He didn't know *that* he **should have fed** the dogs this morning (48 tokens)
(5-48)	**stimulus <19>**	*If* he really **had wanted to write** this letter, he would have found the time (218 tokens)
(5-49)	**stimulus <20>**	*If* he **could have repaired** the car, he would have done it (232 tokens)
(5-50)	**stimulus <39>**	The truth *which* you **should have told** the judge is horrible (171 tokens)
(5-51)	**stimulus <40>**	Who is the guy *who* **could have saved** my brother's life? (136 tokens)

Some of the strict rules applied so far had to be loosened in order to guarantee a sufficiently high number of tokens. This is important because there are more basic variants with three verbal elements than with two such elements. The infrequent absence of the adverb(ial)s *this morning* and *really* in sentences <10> and <19> and the rare presence of adverb(ial)s not present in the stimulus sentences was no longer a reason for exclusion. Likewise, adverb(ial)s could be placed in front of the finite verb, so the sequences *adverb-V1-ObjNP-V3-V2* (13 of 28 tokens in (5-53a)), *adverb-V1-V2-ObjNP-V3* (147 of 463 tokens in (5-55a)), and *adverb-V1-ObjNP-V3-V2* (10 of 34 tokens in (5-56a)) were included. This pooling is possible because In-Depth Analysis 5.1.4 has shown that the superficial position of the finite verb does not interfere decisively with the structure of the verb cluster which is defined by the sequence of the verbal elements and the position of the ObjNP. Not included were tokens where

[135] All translations of sentence <9> selected for this analysis were translated with the "erroneous" deontic instead of the intended epistemic reading of the modal verb.

adverb(ial)s surfaced clause-finally or where an adverb(ial) separated an otherwise compact verb cluster. With regard to the second category (20 tokens), we were stricter than in the case of adverb(ial)s surfacing in front of the finite verb. The reason for this is that we wanted to stress the compactness or lack of compactness of verb clusters. The presence or absence of correlates and resumptive elements in the matrix clauses of sentences <9>, <10>, <19>, and <20> was not controlled for either. All other criteria were adhered to. Conditional clauses are preposed and complement clauses are extraposed. In addition, the ban on pronominal and indefinite ObjNPs was maintained. ObjPPs were not included either. The finite verb is always *han* (‘have’).

Six tokens of sentence <20> are presented in order to illustrate the basic verb clusters. The translations and glosses appear under (a), one possible structural make-up under (b) (sometimes various possibilities with regard to the landing site of scrambled ObjNPs exist; phonetically realized parts in bold print; subject pronouns are not represented):

stimulus <20> Spanish: **Si él hubiera podido reparar el coche, lo habría hecho**
English: If he could have repaired the car, he would have done it

(5-52) a. *wann hei det Auto repariere hat könnt hat her daut [0.5] gedune* (Men-37; f/18/MLG+SG)
if he the car repair-VERB3 had-VERB1 could-VERB2 <u>had</u> he it […] done

b. $[_{CP} \ldots [_{IP} \ldots [_{VP1} [_{VP2} [_{VP3}\ \mathbf{NP\ V3}]\ t_h]\ t_g]\ \mathbf{V1_g\text{-}I\text{-}V2_h}]]$ (cf. Footnote 136 in this chapter)

(5-53) a. *wann hei hat den Woage fertigmeake könnt [0.9] dann würd her daut gedune han* (Men-46; m/42/S>MLG-64%)
if he had-VERB1 the car ready-make-VERB3 could-VERB2 […] ~~then~~ would he it done have

b. $[_{CP} \ldots [_{IP} [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2} [_{VP3}\ \mathbf{NP\ V3}]\ \mathbf{V2}]_m]]$

(5-54) a. *wann hei daut Fohrtieg hat torechtmeaken könnt würd her daut wirklich gedun han* (Mex-43; m/31/MLG)
if he the <u>vehicle</u> had-VERB1 right-make-VERB3 could-VERB2 would he it ~~really~~ done have

b. $[_{CP} \ldots [_{IP} [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2} [_{VP3}\ t_j\ \mathbf{V3}]\ \mathbf{V2}]_m]]$

(5-55) a. *wann hei hat könnt det Fohrtieg fertigmeaken dann wird her daut gedun han* (Mex-4; m/16/S>MLG-71%)
if he had-VERB1 could-VERB2 the <u>vehicle</u> ready-make-VERB3 ~~then~~ <u>will</u> he it done have

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ \mathbf{NP\ V3}]_k]]$

(5-56) a. *wenn ik hat det- [ähm] den- die Coa könnt [0.3] abfixen dann würd ik daut han gedun* (Mex-8; f/14/MLG)
if <u>I</u> had-VERB1 ~~the~~.NEUTER- [ehm] ~~the~~.MASC- the.FEM car could-VERB2 […] up-fix-VERB3 ~~then~~ would <u>I</u> it have done

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ \mathbf{NP_j}\ [_{VP2}\ t_k\ \mathbf{V2}]]_m]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]]$

(5-57) a. *wann hei die Coa hat könnt trechtmeaken dann würd her daut gedun han* (Mex-14; f/44/MLG+SG)
if he the car had-VERB1 could-VERB2 ready-make-VERB3 ~~then~~ would he it done have

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]]$

Abstracting the precise position of the ObjNP, the variants *V1-ObjNP-V3-V2* in (5-53a) and *ObjNP-V1-V3-V2* in (5-54a) show the SG verbal sequence *verb1-verb3-verb2*. Assuming a strictly left-branching base for clusters with three verbal elements, i.e. *verb3-verb2-verb1*, this sequence is best described as the consequence of raising and adjoining of VP2 containing VP3 to the right of IP (simplified structure only showing verbal heads: t_m-V1-[V3-V2]$_m$). As before, we suppose that in dependent clauses V1 has been moved from VP1 to the head position of IP (cf. the discussion of rule (3-24)). The variants *V1-V2-ObjNP-V3* in (5-55a), *V1-ObjNP-V2-V3 in* (5-56a), and *ObjNP-V1-V2-V3* in (5-57a) all exhibit the verbal sequence *verb1-verb2-verb3*. For these variants, we assume that as in (5-53a) and (5-54a) VP2 containing VP3 is raised and adjoined to the right of IP. Moreover, VP3 is raised and adjoined to the right of VP2 and IP (simplified structure: t_m-V1-[t_k-V2]$_m$-[V3]$_k$). The variant *ObjNP-V3-V1-V2* in (5-52a) is not considered to be the consequence of verb projection raising, but of head movement of V2 to the finite verb V1-I in IP forming the complex head V1-I-V2.[136]

With regard to scrambling, the variants *ObjNP-V3-V1-V2* in (5-52a), *V1-ObjNP-V3-V2* in (5-53a), and *V1-V2-ObjNP-V3* in (5-55a) exhibit the ObjNP superficially adjacent to its governing verb. In *V1-ObjNP-V3-V2* and *V1-V2-ObjNP-V3*, the ObjNP is still contained in VP3. As for *ObjNP-V3-V1-V2*, the situation is comparable to the NR-variants without an adverb(ial), i.e. we do not know whether scrambling has taken place string-vacuously. The facts are clearer with regard to the variants *ObjNP-V1-V3-V2* in (5-54a), *V1-ObjNP-V2-V3* in (5-56a), and *ObjNP-V1-V2-V3* in (5-57a). Here, the ObjNP has definitely been scrambled out of its verb phrase.

Table 5-24 shows the distribution of the six variants for the different CLUSTER types. A total of 284 informants are responsible for the 849 tokens, i.e. the observations are not independent. On average, every informant contributes three sentences. Obviously, pooling six different sentences could be labeled a somewhat bold venture, but only by pooling will the less frequent variants occur in a sufficiently robust number. At the end of this section, Table 5-27 will avoid pooling, but will nevertheless yield comparable results.

[136] If one does not want to add head movement as an additional mechanism for deriving cluster variants, one would have to assume something like the following for the sequence *ObjNP-V3-V1-V2*. VP3 would be raised out of VP2 and adjoined to VP1. After this, the partially evacuated VP2 would be raised and adjoined to the right of IP. In this way, one would obtain the superficially correct derivation $[_{CP} \ldots [_{IP} [_{IP} \ldots [_{VP1} [_{VP1}\ t_m\ t_g]\ [_{VP3}\ \textbf{NP V3}]_k]\ \textbf{V1}_{\mathbf{g}}\textbf{-I}]\ [_{VP2}\ t_k\ \textbf{V2}]_m]]$. However, aside from theoretical problems, this approach does not convince empirically either since it is the Paraguayan Mennonites, who produce twelve of the relevant 23 tokens (only 1 token in the North American colonies), and it is the German-type informants, who produce all 23 tokens (cf. Table 5-24). Both these groups do not like verb projection raising, i.e. they prefer the NR-variants in two-verb-clusters. For this alternative derivation, however, we would have to assume two cycles of raising, i.e. even more than for variants (5-53a) and (5-54a).

Table 5-24: Distribution of the basic cluster variants in six dependent clauses with three verbal elements in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han*; Obj=ObjNP; scrambl.=scrambling)

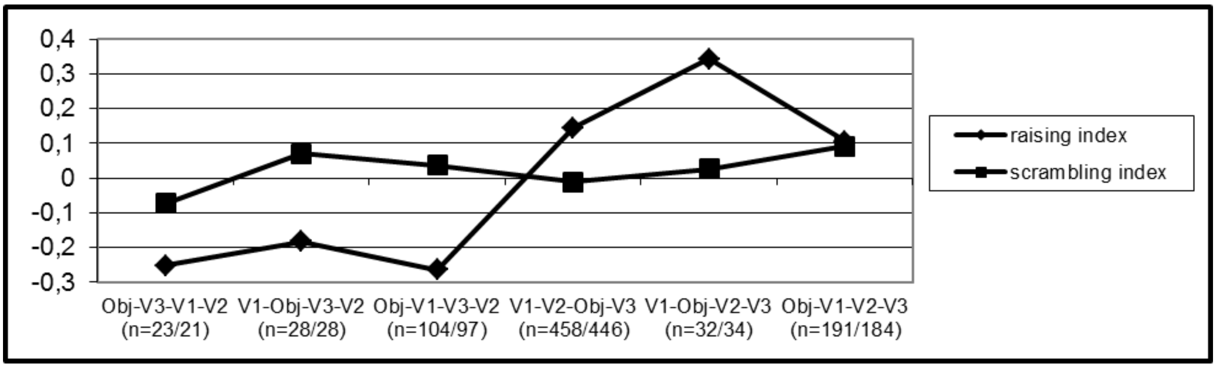
	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	836	810	102	362	103	231	798
Obj-V3-V1-V2 +/-scrambl.	23	21	7	14	0	0	21
	-0.252	-0.074	6.9%	3.9%	0%	0%	2.6%
	F (5,830) = 47.3 p=0***	F (5,804) = 5.5 p=0***	χ^2 (15, n=798) = 159.6, p=0*** / Cramer's V: 0.26 / 6 cells (25%) with less than 5 expected tokens				
V1-Obj-V3-V2 -scrambling	28	28	5	21	0	2	28
	-0.183	+0.071	4.9%	5.8%	0%	0.9%	3.5%
Obj-V1-V3-V2 +scrambling	104	97	18	77	1	1	97
	-0.264	+0.037	17.6%	21.3%	1%	0.4%	12.2%
V1-V2-Obj-V3 -scrambling	458	446	51	164	89	137	441
	+0.145	-0.012	50%	45.3%	86.4%	59.3%	55.3%
V1-Obj-V2-V3 +scrambling	32	34	2	5	4	21	32
	+0.342	+0.026	2%	1.4%	3.9%	9.1%	4%
Obj-V1-V2-V3 +scrambling	191	184	19	81	9	70	179
	+0.105	+0.091	18.6%	22.4%	8.7%	30.3%	22.4%

The highly significant distribution follows our expectations. The three unraised or partly raised variants *ObjNP-V3-V1-V2*, *V1-ObjNP-V3-V2*, and *ObjNP-V1-V3-V2* are strongly preferred by the raising-unfriendly German-type informants. Interestingly, the fact that informants that prefer the NR-variants in two-verb-clusters also prefer the sequence *ObjNP-V3-V1-V2* in three-verb-clusters is no MLG specialty. The same co-occurrence pattern can be found for Swiss German (cf. SEILER 2004: 380 – Table 1).[137] However, even for these raising-unfriendly German-type informants the most frequent variant is *V1-V2-ObjNP-V3*. The three completely raised variants *V1-V2-ObjNP-V3*, *V1-ObjNP-V2-V3*, and *ObjNP-V1-V2-V3* account for 69.4% of their 464 tokens. This unexpected fact is evidence for the high complexity of three-verb-clusters. Verb projection raising offers one possibility of complexity reduction by turning left-branching clusters into right-branching ones (cf., e.g., LÖTSCHER 1978: 12, HAWKINS 1994: 5 and 97, HAWKINS 2004: 130, and HAIDER 2003: 91 and 119–123). The difference to the raising-friendly Flemish- and Dutch-type informants is still clear though since these informants do not raise completely in only four of 334 tokens (1.2%). The completely raised and scrambled variants *V1-ObjNP-V2-V3* and *ObjNP-V1-V2-V3* are – as was to be expected – concentrated among the scrambling-friendly Dutch-type informants. The

[137] These facts speak against the hypothesis BARBIERS and BENNIS (2010: 33–36) develop for Dutch. They see V3 (participle or infinitive) as a nominalized entity claiming that the sequence *(V3-)V1-V2* is actually a right-branching two-verb-cluster (cf. also BARBIERS et al. (2005: 22–23) for this question). If this were true for MLG or Swiss German, we would expect raising-friendly informants to produce the sequence *ObjNP-V3-V1-V2*. This is not the case though.

completely raised, but unscrambled variant *V1-V2-ObjNP-V3* is most dominant among the Flemish-type informants. The distributional facts of Table 5-24 bear witness to the fact that the informants' raising and scrambling behavior applies in all contexts. They only differ according to the complexity of the dependent clause. Both indexes in Table 5-24 also show highly significant results. The index values are illustrated in Figure 5-3:

Figure 5-3: Average values for raising and scrambling of six variants in three-verb-clusters (cf. Table 5-24)



With regard to raising, all variants show the expected values. Variants with two cycles of raising (right-hand side of Figure 5-3) are produced by informants with high raising values, whereas the variants with no or just one cycle of raising (left-hand side) are generated by informants with low raising values. As for scrambling, the values for the completely raised variants fit perfectly. The bigger the distance between the ObjNP and its governing verb, the higher the informants' scrambling index: It is -0.012 for the sequence *V1-V2-**ObjNP-V3***, +0.026 for the sequence *V1-**ObjNP**-V2-**V3***, and +0.091 for the sequence ***ObjNP**-V1-V2-**V3*** (for the scrambling values of these 3 variants: F (2,661) = 11.2, p=0***).

With regard to the variants *V1-ObjNP-V3-V2* and *ObjNP-V1-V3-V2*, one would have expected a lower scrambling value for *V1-ObjNP-V3-V2* because unlike variant *ObjNP-V1-V3-V2*, variant *V1-ObjNP-V3-V2* does not include scrambling. Therefore, its relatively high scrambling value of +0.071 comes as a surprise even though the difference is not significant. One explanation may be that the rather scrambling-friendly North American informants (cf. Table 4-18) are responsible for 25% of the tokens of *V1-ObjNP-V3-V2* (7 of 28 tokens), but only for 10.6% of the tokens of *ObjNP-V1-V3-V2* (11 of 104 tokens). The 23 tokens of the variant *ObjNP-V3-V1-V2* show the lowest scrambling value of all variants. As this variant is ambiguous in regard to scrambling, this result is also slightly surprising. The explanation could again be connected to the origin of the tokens. Only one of the tokens comes from North America (4.3%).[138]

One fundamental problem with the data in Table 5-24 is that there are six different variants and just 849 tokens. Moreover, variant *V1-V2-ObjNP-V3* contributes more than half of all

[138] Such highly different shares of the North American informants do not exist for the two entirely raised variants, which occur frequently. The share of North American tokens for variant *V1-V2-ObjNP-V3* is 59% (273 of 463 tokens), the one for variant *ObjNP-V1-V2-V3* 66% (130 of 197 tokens). Only the less frequent variant *V1-ObjNP-V2-V3* has a higher share (85.3%; 29 of 34 tokens).

tokens and three variants together only contribute 81 tokens (*ObjNP-V3-V1-V2*, *V1-ObjNP-V3-V2*, and *V1-ObjNP-V2-V3*). In view of this, it is advisable to pool variants that share certain characteristics. In Table 5-25, the variants are combined according to their raising characteristics, i.e. we abstract from the position of the ObjNP. Three groups with identical sequences of verbal elements can be formed: (ObjNP-)**V3-V1-V2**, (ObjNP-)**V1**-(ObjNP-)**V3-V2**, and (ObjNP-)**V1**-(ObjNP-)**V2**-(ObjNP-)**V3**.

Table 5-25: Distribution of the basic cluster variants in six dependent clauses with three verbal elements in all colonies grouped by their raising characteristics and separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han*; scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	836	810	102	362	103	231	798
V3-V1-V2	23	21	7	14	0	0	21
	-0.252	-0.074	6.9%	3.9%	0%	0%	2.6%
	F (2,833) = 106.6 p=0***	ns	χ^2 (6, n=798) = 116.2, p=0*** / Cramer's V: 0.27 / 2 cells (16.7%) with less than 5 expected tokens				
V1-V3-V2	132	125	23	98	1	3	125
	-0.247	+0.045	22.5%	27.1%	1%	1.3%	15.7%
V1-V2-V3	681	664	72	250	102	228	652
	+0.143	+0.019	70.6%	69.1%	99%	98.7%	81.7%

The frequency distribution is highly significant with a weak strength of association. Unlike in Table 5-24, the predominance of the verbal sequence *verb1-verb2-verb3* is clearly visible, even in the raising-unfriendly German-type CLUSTERS. Even more impressive is the (almost) complete absence of unraised or partly raised tokens in the raising-friendly Flemish- and Dutch-type CLUSTERS. The index values show a highly significant difference for raising, but no difference for scrambling. The fact that the scrambling values for the two frequently appearing sequences are very close to each other (0.026 points (0.045-0.019), i.e. only 2.1% of the maximum span of the scrambling index of 1.224) is exactly what we expect after disregarding the precise position of the ObjNP.

Table 5-26 groups the variants according to the position of the ObjNP (disregarding the verbal sequence). As seen above, three groups can be formed, the ambiguous variant *ObjNP-V3-V1-V2* (represented by the line *Obj-[?]-V3*), the two variants, where the ObjNP is clearly adjacent to its governing verb V3 (variants *V1-ObjNP-V3-V2* and *V1-V2-ObjNP-V3* represented by the line *Obj-V3*), and the three variants, where scrambling out of the respective verb phrase must have taken place (variants *ObjNP-V1-V3-V2*, *V1-ObjNP-V2-V3*, and *ObjNP-V1-V2-V3* represented by the line *Obj-[…]-V3*).

Table 5-26: Distribution of the basic cluster variants in six dependent clauses with three verbal elements in all colonies grouped by their scrambling characteristics and separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han*; Obj=ObjNP; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	836	810	102	362	103	231	798
Obj-[?]-V3	23	21	7	14	0	0	21
±scrambling	-0.252	-0.074	6.9%	3.9%	0%	0%	2.6%
	F (2,833) = 23.5 p=0***	F (2,807) = 10.1 p=0***	χ^2 (6, n=798) = 55.8, p=0*** / Cramer's V: 0.19 / 2 cells (16.7%) with less than 5 expected tokens				
Obj-V3	486	474	56	185	89	139	469
-scrambling	+0.126	-0.007	54.9%	51.1%	86.4%	60.2%	58.8%
Obj-[…]-V3	327	315	39	163	14	92	308
+scrambling	+0.011	+0.068	38.2%	45%	13.6%	39.8%	38.6%

The frequency distribution is significant, but only weakly associated. The scrambling-friendly German II-type informants use the scrambled variants slightly more frequently than the scrambling-unfriendly German I-type informants. For the other two CLUSTERS, things are clearer. The scrambling-friendly Dutch-type informants use the scrambled variants 26.2% more often than the scrambling-unfriendly Flemish-type informants. The scrambling-friendly German II- and Dutch-type CLUSTERS thus use the scrambled variants in 44% of the clear cases (255 out of 579 tokens), while the scrambling-unfriendly German I- and Flemish-type CLUSTERS do so in only 26.8% (53 out of 198 tokens).

Both index values are highly significant. Excluding the ambiguous variant *ObjNP-V3-V1-V2* from the analysis, nothing changes. For the scrambling index, which is more important at this point, the new result is F (1,787) = 17.2, p=0***. This confirms our expectations and thus the reliability of this index. It is the informants with higher scrambling values that prefer scrambled variants. The fact that the raising index also unexpectedly shows a highly significant difference has to do with the huge numeric dominance of the completely raised variant *V1-V2-ObjNP-V3* in the group of the unscrambled variants (94.2%; 458 of 486 tokens). For the scrambled variants, the share of the completely raised variants *V1-ObjNP-V2-V3* and *ObjNP-V1-V2-V3* is only 68.2% (223 of 327 tokens).

The reader might have gained the impression that we juggle around the data of three-verb-clusters until we receive the results we were hoping for. To dispel possible doubts, Table 5-27 offers separate analyses for the four clauses in which the three most frequent variants *ObjNP-V1-V3-V2*, *V1-V2-ObjNP-V3*, and *ObjNP-V1-V2-V3* appear at least fifteen times. With this, many possible skewing factors are eliminated and no informant enters an analysis more than once. In spite of the necessary data reduction, we still cover 681 of the 849 tokens (80.2%). Furthermore, both dimensions, i.e. raising and scrambling, can be evaluated.

Table 5-27: Index values for three cluster variants separated for four sentences (scrambl.=scrambling)

	sentence <19>		**sentence <20>**		**sentence <39>**		**sentence <40>**	
	raising	scrambl.	raising	scrambl.	raising	scrambl.	raising	scrambl.
(a) **ObjNP-V1-V3-V2**	18	16	20	20	29	28	28	25
-raising	-0.264	+0.008	-0.257	+0.095	-0.267	+0.015	-0.268	+0.032
(a)–(b)+(c)	p=0***	ns	p=0***	ns	p=0***	ns	p=0***	ns
(b) **V1-V2-ObjNP-V3**	150	143	144	142	50	48	53	51
+raising/-scrambling	+0.127	-0.002	+0.13	-0.008	+0.112	-0.054	+0.146	-0.016
(b)–(c)	ns	p=0.005**	p=0.095(*)	p=0.054(*)	ns	p=0.012*	ns	p=0.03*
(c) **ObjNP-V1-V2-V3**	20	19	56	51	66	64	38	38
+raising/+scrambling	+0.032	+0.176	+0.044	+0.071	+0.162	+0.067	+0.105	+0.101

Contrasting the partially raised variant *ObjNP-V1-V3-V2* with the two completely raised variants *V1-V2-ObjNP-V3* and *ObjNP-V1-V2-V3* taken together, all differences of raising values are highly significant, while all scrambling values do not show any difference at all (line *(a)–(b)+(c)*). The lack of significant differences in the scrambling values is expected since the two strictly right-branching variants differ in this respect and since scrambling may be assumed to be comparatively short in the partly raised variant ***ObjNP**-V1-**V3**-V2*. The superficial distance between ObjNP and V3 is smaller here than in variant ***ObjNP**-V1-V2-**V3***. This assumption is supported by the fact that the scrambling value of *ObjNP-V1-V3-V2* lies in between the values of the other two variants in three of the four sentences. The only exception is sentence <20>, where the partly raised variant exhibits the highest scrambling value.

Only comparing the two entirely raised variants (line *(b)–(c)*), things are equally clear-cut. As expected, there is only one weak statistical tendency for raising (cf. sentence <20>) and as expected, three of the four scrambling values exhibit a (highly) significant difference. The only exception is again sentence <20>, where only a strong statistical tendency can be detected for scrambling. These results confirm our assumptions about the structural make-up of clusters with three verbal elements.

The results gathered in Section 5-3 allow us to establish the following implicational relationships between two- and three-verb-clusters in dependent clauses (square brackets indicate that a variant is typical for a particular type of informant, but not the predominantly used variant):

(5-58) German-type informants ObjNP/PP-V2-V1
[ObjNP/PP-V3-V1-V2] [ObjNP/PP-)V1-(ObjNP/PP-)V3-V2]

(5-59) Flemish-type informants V1-ObjNP/PP-V2
V1-V2-ObjNP/PP-V3

(5-60) Dutch-type informants ObjNP/PP-V1-V2
[(ObjNP/PP-)V1-(ObjNP/PP-)V2-V3]

At the end of this section, we return to the question whether superficial serialization or structural facts are more important. In Section 5.2, it was assumed that VP2 in a main clause with three verbal elements is string-vacuously raised in the majority of the cases. The base for this assumption was that the seemingly unraised sequence *ObjNP-V3-V2* was only produced in 23.7% of the tokens, while the clearly unraised NR-variants *ObjNP-V2-V1* in the tokens with modal verbs selected in Section 4.2 exhibit a share of 50.1%. If we now return to the figures in Table 5-24, we see that variants *ObjNP-V1-V3-V2* and *V1-ObjNP-V3-V2*, where VP2 containing VP3 was raised, account for 15.5% of the cases (18.3% including the unraised variant *ObjNP-V3-V1-V2*[139]). This share is comparable to the share of the sequence *ObjNP-V3-V2* in the main clause with three verbal elements in Section 5.2, but definitely not comparable to the share of the NR-variants. For the especially raising-unfriendly Paraguayan informants, who used the NR-variants with modal verbs in 91.7%, the shares of the verbal sequences *ObjNP-(V1-)V3-V2* in Sections 5.2 and 5.3 are also similar: They are 46.6% in sentence <45> and 37.9% in the clauses analyzed in this section (43.2% including the unraised variant *ObjNP-V3-V1-V2*). Consequently, the fact that all these clauses contain three verbal elements, i.e. three VPs, seems to be more decisive for the informants' behavior than the question whether the finite verb is found within (dependent clauses) or outside the verb cluster (main clause). With this result, one can safely claim that phonetically non-realized traces leave their mark on the surface by increasing the complexity of verb clusters, a clear piece of evidence for the principle of structure preservation.[140]

5.4 Testing ground IV: Dependent clauses with four verbal elements

We have seen on several occasions that deviations from the stimulus sentences can serve as valuable sources for insights into the grammar of MLG. This was the case with tokens where indefinite ObjNPs surfaced instead of definite ObjNPs (cf. Table 4-9, but also Tables 5-36 and 5-37); it happened in sentence <25>, where definite articles for the bare noun *salad* were inserted (cf. Table 4-22); and it also occurred in some conditional clauses where *woare* ('will') and *dune* ('do') appeared (cf. Sections 5.1.2 and 5.1.3). In Section 5.4, we will now take advantage of another deviation from the stimulus sentences. Some informants used four instead of three verbal elements. This behavior affects precisely the same clauses that were dealt with in Section 5.3. The clauses are repeated here, again adding the information of the number of tokens entering the analysis (separated as for the finite verb, either *woare* ('will')

---

[139] It is unclear whether the variant *ObjNP-V3-V1-V2* has a counterpart in a main clause with three verbal elements. As we assume that it is the consequence of head-movement and adjunction of V2 to the right of V1-I in IP (cf. Footnote 136 in this chapter), one may speculate that the resulting structure V1-I-V2 may move to the head position of CP. This result would look rather odd in Continental West Germanic varieties (cf. the same problem in STERNEFELD 2009: 521), but DONALDSON (1993: 364) shows fitting examples for certain verbs in Afrikaans and POSTMA (2014) claims its existence for a Pomeranian variety spoken in Brazil. For sentence <45>, a corresponding token would be something like *jestern **hat könnt** ik DEN RING **verköpen*** (gloss: yesterday had-VERB1 could-VERB2 I the ring sell-VERB3). Such a translation does not turn up though. In view of this, it seems reasonable to either assume that this variant only exists in clause-final three- or more-verb-clusters or that V1-I can still move on its own to the head of CP even after adjoining of V2.

[140] BENNIS (1992: 43) does not exclude the possibility of cluster formation with a verbal trace either (cf. also KAYNE 2000: 263 – Footnote 17).

or *han* (‘have’)). In total, there are 133 tokens produced by 91 informants (each informant contributes on average 1.5 sentences to the analysis).

(5-61) **stimulus <9>** Elisabeth insists *that* you **must have seen** the truck
(10 tokens; 3 x *woare* / 7 x *han*)

(5-62) **stimulus <10>** He didn’t know *that* he **should have fed** the dogs this morning
(9 tokens; 0 x *woare* / 9 x *han*)

(5-63) **stimulus <19>** *If* he really **had wanted to write** this letter, he would have found the time
(10 tokens; 9 x *woare* / 1 x *han*)

(5-64) **stimulus <20>** *If* he **could have repaired** the car, he would have done it
(37 tokens; 36 x *woare* / 1 x *han*)

(5-65) **stimulus <39>** The truth *which* you **should have told** the judge is horrible
(13 tokens; 9 x *woare* / 4 x *han*)

(5-66) **stimulus <40>** Who is the guy *who* **could have saved** my brother’s life?
(54 tokens; 46 x *woare* / 8 x *han*)

With one exception, the same criteria apply as in Section 5.3. The exception is that two different finite verbs had to be accepted. This is necessary because of the very low number of tokens with four verbal elements. In 103 of the 133 tokens (77.4%), the informants translated the clauses with *woare*; in thirty cases, they used *han* (‘have’). The two finite verbs can be seen in the following translations of sentence <20>:

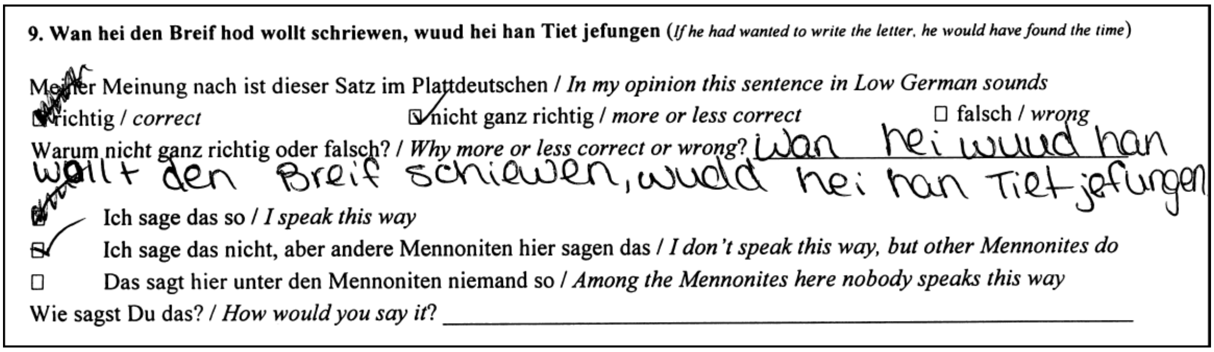
stimulus <20> Spanish: **Si él hubiera podido reparar el coche, lo habría hecho**
Portuguese: **Se ele tivesse podido consertar o carro, ele teria feito isso**
English: If he could have repaired the car, he would have done it

(5-67) a. *wann hei würd han könnt de Coa fertigmeaken dann würd her daut gedun han*
(Mex-82; m/52/MLG)
if he ~~would~~-VERB1 have-VERB2 could-VERB3 the car ready-make-VERB4 ~~then~~ would he it done have

b. *wann hei hat könnt den det Auto trechtgemoakt habe dann hat her daut könnt gedone habe*
(Bra-5; f/22/MLG+P)
if he had-VERB1 could-VERB2 ~~the~~.MASC- the.NEUTER car ready-made-VERB4 ~~have~~-VERB3 ~~then~~ had he it could done ~~have~~

In example (5-67a), the informant replaces the expected finite verb *hat* (‘had’) with the analytic combination *würd han* (‘would have’). This is a comparable phenomenon to the one encountered in Section 5.1.2. The preference for *woare* can also be seen in the judgment test, in which two clauses with three verbal elements were presented to the judges. Four informants (1 from the USA; 3 from Mexico) preferred four over three verbal elements introducing the finite verb *wuud*.

Figure 5-4: Judgment test: USA-‘21’ (f/17/MLG) inserting the auxiliary *wuud* in sentence {9}



9. Wan hei den Breif hod wollt schriewen, wuud hei han Tiet jefungen (*If he had wanted to write the letter, he would have found the time*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *In my opinion this sentence in Low German sounds*

☐ richtig / *correct* ☒ nicht ganz richtig / *more or less correct* ☐ falsch / *wrong*

Warum nicht ganz richtig oder falsch? / *Why more or less correct or wrong?* Wan hei wuud han wollt den Breif schiewen, wudd hei han Tiet jefungen

☐ Ich sage das so / *I speak this way*

☒ Ich sage das nicht, aber andere Mennoniten hier sagen das / *I don't speak this way, but other Mennonites do*

☐ Das sagt hier unter den Mennoniten niemand so / *Among the Mennonites here nobody speaks this way*

Wie sagst Du das? / *How would you say it*? ____________

Linguistically more interesting is the rather peculiar translation in (5-67b). From a morpho-syntactic perspective, this variant could be described as a mix of a deontic modal verb in the present perfect tense (elements V1 through V3: ***hat***$_{V1}$ ***könnt***$_{V2}$ *[det Auto] torechgemoakt*$_{V4}$ ***habe***$_{V3}$) and an epistemic modal verb governing an infinitive perfect (elements V2 through V4: *hat*$_{V1}$ ***könnt***$_{V2}$ *[det Auto]* ***torechgemoakt***$_{V4}$ ***habe***$_{V3}$). From a semantic perspective, however, stimulus sentence <20> does not suggest an epistemic reading. In any case, this variant does not seem to be unusual in MLG; the informant, who produces (5-67b) for example, uses it both in the dependent and in the matrix clause. In European varieties of German, this variant is rare, but not inexistent.[141] Interestingly, 23 of the 30 tokens represented by (5-67b) are produced by Paraguayan and Brazilian informants, whose MLG shows some convergence to SG. These informants only produce one token with *woare*. On the other hand, the three colonies with less knowledge of SG produce only seven tokens with *han*, but 102 tokens with *woare*. These clear preferences are obviously problematic for our analysis, but due to the low overall number of tokens, we will not be able to control for this factor.

As can be expected, translations featuring four verbal elements will yield many different cluster variants. However, only four of the twelve extant variants were produced more than three times. The four more frequent variants are illustrated with translations from sentences <20> and <39>, twice with *han* and twice with *woare*. As before, translations and glosses appear under (a), one possible structural make-up under (b) (sometimes various possibilities with regard to the landing site of scrambled ObjNPs exist; phonetically realized parts in bold print; subject pronouns are not represented):

[141] REIS (2001: 295–296) calls such constructions double-periphrastic cases (*doppelperiphrastische Fälle*). She gives the following example in (18b): *Da hätte er sich aber schwer getäuscht haben müssen* (gloss and translation by G.K.: there had.SUBJUNCTIVE-Verb1 he himself PARTICLE severely mistaken-VERB4 have-VERB3 must-VERB2; ‘In this case, I suspect that he would have been severely mistaken’). Unlike the syntactically comparable MLG token (5-67b), the SG sentence has an “embedded” epistemic meaning (*müssen*) which is best translated by *I suspect* or *I am sure*.

stimulus <20> Portuguese: **Se ele tivesse podido consertar o carro, ele teria feito isso**
English: If he could have repaired the car, he would have done it

(5-68) a. *wann hei hat könnt den det Auto trechtgemoakt habe dann hat her daut könnt gedone habe* (Bra-5; f/22/MLG+P)

if he had-VERB1 could-VERB2 ~~the~~.MASC- the.NEUTER car ready-made-VERB4 ~~have~~-VERB3 ~~then~~ had he it could done ~~have~~

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3} [_{VP4}\ \mathbf{NP\ V4}]\ \mathbf{V3}]_k]]$

stimulus <39> Portuguese: **A verdade que tu deverias ter dito para o juiz é horrivel**
English: The truth which you should have told the judge is horrible

(5-69) a. *die Woarheit waut dü dem Juiz hats sollt gesagt ha is [0.6] sehr schlecht* (Bra-53; m/33/P>MLG-57%)

the truth that you the judge had-VERB1 should-VERB2 said-VERB4 ~~have~~-VERB3 is […] very bad

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3} [_{VP4}\ t_j\ \mathbf{V4}]\ \mathbf{V3}]_k]]$

stimulus <20> Spanish: **Si él hubiera podido reparar el coche, lo habría hecho**
English: If he could have repaired the car, he would have done it

(5-70) a. *wann hei würd han könnt de Coa fertigmeaken dann würd her daut gedun han* (Mex-82; m/52/MLG)

if he ~~would~~-VERB1 have-VERB2 could-VERB3 the car ready-make-VERB4 ~~then~~ would he it done have

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP} [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ t_z\ \mathbf{V3}]_k]\ [_{VP4}\ \mathbf{NP\ V4}]_z]]$

stimulus <20> Spanish: **Si él hubiera podido reparar el coche, lo habría hecho**
English: If he could have repaired the car, he would have done it

(5-71) a. *wann hei daut Fohrtieg würd han könnt fertigmeaken dann würd her daut gedun han* (Mex-22; m/17/MLG)

if he the car ~~would~~-VERB1 have-VERB2 could-VERB3 ready-make-VERB4 ~~then~~ would he it done have

b. $[_{CP} \ldots [_{IP} [_{IP} [_{IP} [_{IP}\ \mathbf{NP_j}\ [_{IP} \ldots [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]\ [_{VP3}\ t_z\ \mathbf{V3}]_k]\ [_{VP4}\ t_j\ \mathbf{V4}]_z]]$

In Section 5.3, it was claimed that the complexity of clusters increases with the number of verbal elements. Strong support for this claim can be seen in the fact that for all four major variants in this section, at least two cycles of raising have to be assumed. Starting from the basic verbal sequence *verb4-verb3-verb2-verb1*, the raising of VP2 containing VP3 and VP4 results in the sequence *verb1-verb4-verb3-verb2* (simplified structure: t_m-V1-[V4-V3-V2]$_m$).[142] If VP3 containing VP4 raises, this leads to the sequence *verb1-verb2-verb4-verb3* (variants *V1-V2-ObjNP-V4-V3* in (5-68a) and *ObjNP-V1-V2-V4-V3* in (5-69a); simplified structure: t_m-V1-[t_k-V2]$_m$-[V4-V3]$_k$). Finally, raising VP4 realizes the sequence *verb1-verb2-verb3-verb4* (variants *V1-V2-V3-ObjNP-V4* in (5-70a) and *ObjNP-V1-V2-V3-V4* in (5-71a); simplified structure: t_m-V1-[t_k-V2]$_m$-[t_z-V3]$_k$-[V4]$_z$). In order to be able to critically

[142] This verbal sequence does exist in the data set, but there are only five tokens for two variants with different positions of the ObjNP. Three of these five tokens could be allocated to one of the four CLUSTERS. As these variants are the consequence of just one of three possible cycles of raising, it should not come as a surprise that the three tokens were produced by raising-unfriendly German-type informants. Another interesting sequence, which occurred just once, is *ObjNP-V4-V2-V1-**V3***, which mirrors the variant *ObjNP-V3-V1-**V2*** (cf. Footnote 136 in this chapter). In both cases it is the second most embedded verbal element, V3 and V2, respectively, which moves and adjoins to V1-I in IP. It almost goes without saying that this token, for which we do not assume any verb projection raising, was again produced by a German-type informant.

accompany the following analyses, Table 5-28 exhibits the distribution of the four cluster variants according to the finite verb.

Table 5-28: Distribution of basic cluster variants according to the type of finite verb in dependent clauses with four verbal elements

	woare	***han***	**Total**
n (tokens)	103	30	133
V1-V2-ObjNP-V4-V3	2	9	11
	1.9%	30%	8.3%
ObjNP-V1-V2-V4-V3	0	18	18
	0%	60%	13.5%
χ^2 (3, n=133) = 107.1, p=0*** / Cramer's V: 0.9 / 2 cells (25%) with less than 5 expected tokens			
V1-V2-V3-ObjNP-V4	74	3	77
	71.8%	10%	57.9%
ObjNP-V1-V2-V3-V4	27	0	27
	26.2%	0%	20.3%

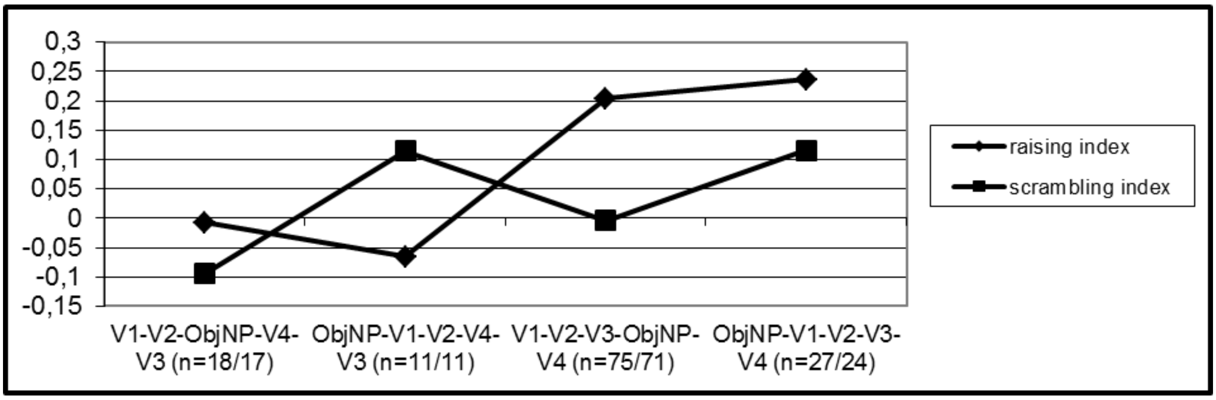
Table 5-28 shows that the distribution of *han* ('have') and *woare* ('will') is light years away from an arbitrary distribution, not only with regard to their origin. Informants that use *han* in four-verb-clusters only produce three completely right-branching sequences (10% of 30 tokens), whereas informants that use *woare* produce these sequences almost exclusively (98.1%; 101 of 103 tokens). There is obviously a connection to the fact that the clauses with *woare* are predominantly produced by raising-friendly informants while those with *han* come from raising-unfriendly informants. As already mentioned we will not be able to solve this problem due to the low number of tokens. It is nevertheless worth taking a look at Table 5-29 and Figure 5-5, since they support the decision to rank syntactic behavior above sociolinguistic characteristics such as origin.

Table 5-29: Distribution of the basic cluster variants in six dependent clauses with four verbal elements in all colonies separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han* or *woare*; Obj=ObjNP; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	131	123	14	37	25	45	121
V1-V2-Obj-V4-V3	18	17	5	7	3	2	17
	-0.007	-0.095	35.7%	18.9%	12%	4.4%	14%
	F (3,127) = 5.2 p=0.002**	F (3,119) = 2.3 p=0.081(*)	χ^2 (9, n=121) = 19.2, p=0.023* / Cramer's V: 0.23 / 8 cells (50%) with less than 5 expected tokens				
Obj-V1-V2-V4-V3	11	11	2	5	0	4	11
	-0.065	+0.114	14.3%	13.5%	0%	8.9%	9.1%
V1-V2-V3 Obj-V4	75	71	5	20	19	25	69
	+0.204	-0.004	35.7%	54.1%	76%	55.6%	57%
Obj-V1-V2-V3-V4	27	24	2	5	3	14	24
	+0.236	+0.116	14.3%	13.5%	12%	31.1%	19.8%

The distribution is significant with a weak strength of association. There is, again, a significant concentration of the two not completely raised variants with the verbal sequence *verb1-verb2-verb4-verb3* among the German-type informants, who produce these variants in 37.3% of the cases (19 of their 51 tokens). The share of the Flemish- and Dutch-type informants is much lower with 12.9% (9 of 70 tokens). The scrambled variants *ObjNP-V1-V2-V4-V3* and *ObjNP-V1-V2-V3-V4* are produced by scrambling-friendly German II- and Dutch-type informants in 34.1% of the cases (28 of 82 tokens), while the share of the scrambling-unfriendly German I- and Flemish-type informants is lower at 17.9% (7 of 39 tokens). As the scrambling values were much less dependent on the informants' origin (cf. Table 4-18), this second result is reliable. With regard to the index values, a glance at Figure 5-5 shows the expected course of the two graphs. The raising index shows a highly significant difference, the scrambling index a statistical tendency.

Figure 5-5: Average value for raising and scrambling of four variants in four-verb-clusters (cf. Table 5-29)



As variant pooling has turned out to be a useful measure in Section 5.3, this procedure will be carried out again. We will, however, refrain from offering a separate table for the raising characteristics since in this case, the comparison would be basically between tokens with *woare* from the USA, Mexico, and Bolivia and tokens with *han* from Brazil and Paraguay. When checking the scrambling dimension, origins and finite verbs are mixed. Table 5-30 shows the scrambling characteristics abstracting from the sequence of verbal elements. All four variants can be unambiguously characterized as either the result of scrambling (line *Obj-[…]-V4*) or the lack thereof (line *Obj-V4*).

Table 5-30: Distribution of the basic cluster variants in six dependent clauses with four verbal elements in all colonies grouped by their scrambling characteristics and separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han* or *woare*; Obj=ObjNP; scrambl.=scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	131	123	14	37	25	45	121
Obj-V4	93	88	10	27	22	27	86
-scrambling	+0.163	-0.022	71.4%	73%	88%	60%	71.1%
	ns	F (1,121) = 5.6 p=0.02*	ns				
Obj-[…]-V4	38	35	4	10	3	18	35
+scrambling	+0.149	+0.115	28.6%	27%	12%	40%	28.9%

The frequency distribution does not even show a statistical tendency. However with regard to the more expressive index values, everything is as expected. The difference in the raising values is not significant, while the one in the scrambling value is. Informants who produce the scrambled variants *Obj-[…]-V4* have a significantly higher scrambling value than informants who produce the unscrambled variants *Obj-V4*. With this result, we can enlarge the set of implicational relationships including cluster variants in dependent clauses with four verbal elements. One should not forget however that in this case, the empirical basis is rather slim and the distribution is partly skewed with regard to origin and finite verb (as before, square brackets indicate that a variant is highly typical for a particular type of informant, but not the predominantly used variant):

(5-72) German-type informants
ObjNP/PP-V2-V1
[ObjNP/PP-V3-V1-V2] [(ObjNP/PP-)V1-(ObjNP/PP-)V3-V2]
[(ObjNP/PP-)V1-V2-(ObjNP/PP-)V4-V3]

(5-73) Flemish-type informants
V1-ObjNP/PP-V2
V1-V2-ObjNP/PP-V3
V1-V2-V3-ObjNP/PP-V4

(5-74) Dutch-type informants
ObjNP/PP-V1-V2
[(ObjNP/PP-)V1-(ObjNP/PP-)V2-V3]
[ObjNP/PP-V1-V2-V3-V4]

German-type informants show a preference for left-branching dependencies between the two most embedded verbal elements (V1 and V2, V2 and V3, V3 and V4, respectively). As we are forced to mix scrambling-unfriendly German I-type and scrambling-friendly German II-type informants, the ObjNP/PP is or is not adjacent to the most embedded verb. In any case, the two most embedded left-branching verbal elements have to appear to the right of the ObjNP/PP. The Flemish-type informants show a preference for completely right-branching verbal sequences. The unscrambled ObjNP/PP appears adjacent to the left of its governing main verb (V2, V3, and V4, respectively). Interestingly, in dependent clauses with three and four verbal elements (albeit not in those with two verbal elements), this type of variant is the unmarked option for all CLUSTERS. These variants seem to be especially apt to solving production and parsing difficulties in contexts of high complexity. The Dutch-type informants also share a liking for completely right-branching verbal elements, but unlike the Flemish-type informants, they scramble. In most cases, the ObjNP/PP appears before the entire array of verbal elements.

5.5 Going beyond verb clusters: Dependent clauses with one verbal element

5.5.1 Presentation of the phenomenon

Section 5.5, the last section of Chapter 5, leaves the field of verb clusters. It is based on an article recently published (cf. KAUFMANN 2015), which deals with dependent clauses with one verbal element which unexpectedly surfaces in front of its complement. Although the content of this section matches the content of that article in general, there are some important differences: First, some additional tokens are included in the analyses; second, some unclear cases and – for most analyses – the colonies where hardly any variation exists are disregarded; third, additional binary logistic regression analyses will be carried out in Section 5.5.5.

The marked variant is illustrated by the translation in (5-75a). Example (5-76a) shows a dependent clause with two verbal elements, with the ObjNP surfacing in post-verbal position again. These rare variants are in contrast to the expected serializations in (5-75b) and (5-76b):

stimulus <11> Spanish: **Si él firma ese contrato, va a perder mucho dinero**
English: If he signs this contract, he will lose a lot of money

(5-75) a. *wann hei unterschrieft [0.4] diesen contrato [0.6] dann verliest der viel Geld* (Mex-26; m/34/MLG)
if he signs-VERB […] this contract […] ~~then~~ loses he much money

b. *wann hei dit Kontrakt [ähm] unterschrieft dann wird her viel Geld verlieren* (Mex-77; f/46/MLG)
if he this contract [ehm] signs-VERB ~~then~~ will he much money lose

stimulus <26> Spanish: **Necesita lentes porque no puede ver el pizarrón**
English: He needs glasses because he can't see the blackboard

(5-76) a. *dü bruuks: [0.7] Brill wiels dü nich sehne kanns die Tofel* (Bol-4; m/44/MLG)
you need […] glass because you not see-VERB2 can-VERB1 the blackboard

b. *de bruukt ne Brill wegens her nich de [0.6] Tofel sehne kann* (Bol-8; m/20/MLG)
he needs a glass because he not the […] blackboard see-VERB2 can-VERB1

The translation (5-75a) only appears once in eighty translations with one verbal element (1.3%); (5-76a), which has already been presented as (2-6), appears twice in 311 translations with two verbal elements (0.6%). Their rareness is probably caused by the unexpected post-verbal position of the complements, i.e. *diesen Contrato* ('this contract') and *die Tofel* ('the blackboard').[143] At first glance, one may assume a priming effect or a translation error in (5-75a) and (5-76a). However, at least in (5-76a) this could only be part of the explanation, since the two verbal elements do not appear in the sequence of the Spanish stimulus sentence (*sehne*-VERB2 *kanns*-VERB1 vs. *puede*-VERB1 *ver*-VERB2; both 'can see').

Due to space limitations, we will not analyze tokens such as (5-76a) (but cf. the short discussion of examples (2-1) through (2-8)). Their structure and the explanation for their occurrence are, however, completely different from those in (5-75a). The major structural difference is that the ObjNP in (5-76a) appears after two verbal elements, i.e. after a verb cluster, while there is just one verbal element in (5-75a). In spite of this, HAEGEMAN and VAN RIEMSDIJK (1986: 428) have ruled out both examples for West-Flemish and the Swiss German variety spoken in Zurich:

> As stated, Inversion can never have the effect of moving a complement constituent to the right of its governing verb. Consequently, the object in (27) can surface in any position inside the verb cluster, as shown in (28), but never all the way at the end:
> (29) *das er hat$_A$ wele$_M$ chone$_M$ singe en arie [gloss by G.K.: that he has wanted can sing an aria]

HAEGEMAN and VAN RIEMSDIJK (1986) discuss this impossibility in order to show that an extraposition analysis for VPR-variants is out of the question. With regard to some Old High German dependent clauses with one verbal element, AXEL (2007: 102), however, assumes extraposition of the SubjNP:

> Note, however, that the low numbers for Comp-XP-V-XP$_{subj}$ and Comp-V-XP$_{subj}$ orders would not be surprising given the assumption that these orders are merely the result of extraposition […]. As was discussed above, the evidence strongly suggests that subject extraposition is a native construction, at least in the context of unaccusative predicates.

The orders mentioned by AXEL (2007) are not comparable to translations such as (5-75a) since the ObjNP/PP, not the SubjNP, surfaces clause-finally in these tokens. In any case, a MLG token such as (5-75a) is not a case of embedded V2, which HAIDER (2010: 4) rules out categorically for introduced German and Dutch clauses:

> The V2 pattern alternates with the embedded C^0-introduced clause pattern for the complements of a class of verbs and nouns. Keep in mind, however, that V2 is never allowed within C^0-introduced clauses in German […] or Dutch, contrasting with Scandinavian languages […].

There are 56 tokens like (5-75a) in 2,375 translations with one verbal element (2.4%). In 51 of these 56 cases the verb occupies – on the surface – the second position of the clause (cf. for non-V2-clauses (5-84)). Examples (5-77) through (5-80) present complement, conditional, and relative clauses. The analysis of causal clauses is again carried out separately (cf. Sections 5.5.6 and 6.3.2). As in (5-75), the (a)-examples illustrate the rare sequence *verb-ObjNP/PP(-particle)*, whereas the (b)-examples represent the unmarked sequence *ObjNP/PP-(particle-)verb*. The translation in (5-77c) was added because it constitutes an interesting case of repair.

[143] The rare phenomenon of this section is not rare in the typological sense, i.e. the sequence *verb-ObjNP/PP* in dependent clauses with one verbal element is obviously not a rare phenomenon in the languages of the world. It is, however, a rare phenomenon in MLG and in most Continental West Germanic languages.

The informant starts out by producing the marked variant with the sequence *verb-ObjNP/PP(-particle)*, but then restarts the complement clause preferring the unmarked variant. Her hesitation may be connected to the fact that the ObjNP is indefinite, one of the furthering factors for the marked variant (cf. Tables 5-36, 5-37, and 5-39).

stimulus <4> English: **Can't you see that I am wearing a new dress?**

(5-77) a. *kos nich sehen daut ik ha en nüet Kleid an* (USA-22; f/15/E>MLG-∅)
can ∅ not see that I have-VERB a new dress on-PARTICLE

b. *kos dü daut nich sehen daut ik en nüet Kleid anha* (USA-29; f/19/MLG)
can you ~~that~~ not see that I a new dress on-PARTICLE-have-VERB

c. *kos du nich sehen daut ik ha en- [0.4] daut ik en nüen Kleid anha* (USA-20; f/14/E>MLG-∅)
can you not see that ~~I have a~~- […] that I a new.MASC dress on-PARTICLE-have-VERB

stimulus <5> Portuguese: **O Enrique não sabe que ele pode sair do país**
English: Henry doesn't know that he can leave the country

(5-78) a. *Hein weit daut nich daut hei darf [0.4] üt dem [0.3] Laund rüter* (Bra-5; f/22/MLG+P)
Henry knows ~~that~~ not that he <u>may</u>-VERB […] out the […] country <u>out</u>-PARTICLE

b. *Hein weit nich daut hei üt dem Laund rüterdarf* (Bra-52; m/30/MLG)
Henry knows not that he out the country <u>out</u>-PARTICLE-<u>may</u>-VERB

stimulus <12> English: **If he does his homework, he can have some ice cream**

(5-79) a. *wann der dät den sine Arbeit dann kann her etz some ice cream eten* (USA-77; f/42/MLG)
if he does-VERB the his homework ~~then~~ can he ~~now~~ some ice cream <u>eat</u>

b. *wann her sinen [1.1] homework dät dann kann her ice cream han*
(USA-64; f/41/E>MLG-57%)
if he his.MASC […] homework does-VERB ~~then~~ can he ∅ ice cream have

stimulus <32> Portuguese: **As estorias que ele está contando para os homens são muito tristes**
English: The stories that he is telling the men are very sad

(5-80) a. *Die Geschichte waut hei vertahlt für de Manner is sehr trürig* (Bra-37; m/34/P>MLG-∅)
the <u>story</u> that he tells-VERB for the men <u>is</u> very sad

b. *die Geschichte waut hei to de Männer vertahlt sind sehr trürig* (Bra-6; f/23/MLG)
the stories that he to the men tells-VERB are very sad

These examples are structurally not uniform: (i) Eighteen of the 56 relevant tokens feature a verb with a particle as in (5-77a) and (5-78a), the rest are verbs with (cf. (5-80a)) or without a non-separable prefix (cf. (5-79a)). This difference does not have a measurable effect on the frequency of the rare phenomenon though. Nevertheless, they are important in light of AXEL's (2007: 94) comment about Old High German.

> What is also very problematic is that the assumption of a base-generated VO-option leads to over-generalization. For example, the separable particles of partical verbs do not appear to the right of their verb in dependent clauses; such V_{fin}-particle-orders are almost completely absent from our corpus.

AXEL (2007: 94 – Footnote 69) offers one counterexample by NOTKER (*táz er béiz ímo sélbemo ába die zúngûn*; gloss: that he bit-VERB him self off-PARTICLE the tongue), but this token is not comparable to (5-77a) and (5-78a) since the ObjNP surfaces after, not before the particle. (ii) In most cases, the ObjNPs/PPs in the tokens with the sequence *verb-ObjNP/PP* are definite (with a definite article as in (5-78a) or a possessive determiner as in (5-79a)). Only sixteen complements are indefinite as in (5-77a). (iii) Nineteen tokens feature an ObjPP as in (5-78a) and (5-80a) (cf. Tables 5-35 and 5-38). As there is a certain tendency in some Continental West Germanic varieties to extrapose ObjPPs into the postfield and as such a movement would undermine our argumentation, some tokens which seem to belong to the variant represented by (5-75a) were excluded. Translations of stimulus sentence <5>, for example, were only accepted if the particle surfaced at the end of the clause after the ObjPP as in (5-78a). In such a case, extraposition of the ObjPP into the post-field cannot represent the correct analysis. Translations such as (5-81), however, were not included because the particle *rüt* (‘out’) surfaces in a non-final position, strongly suggesting an extraposed ObjPP:

stimulus <5> Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn’t know that he can leave the country

(5-81) *Heinrik weit daut hei nicht kann rüt [0.6] üt diese- [0.4] üt det Land* (Mex-45; m/59/MLG)
Henry knows ∅ that he ~~not~~ can-VERB out-PARTICLE […] ~~out this-~~ […] out the country

Despite its exclusion, the unique token (5-81), which comes from a Dutch-type informant, is highly interesting as we will see in the discussion of translation (5-88). Another excluded variant is illustrated by (5-82). In this token, extraposition also seems to be the correct analysis because the particle surfaces not only in front of the ObjPP but also in front of the verbal element:

stimulus <42> Spanish**: Antes de irme de casa siempre apago las luces**
English: Before leaving the house, I always turn off the lights

(5-82) *immer wann ik weggo von Hüs dann du ik immer daut Lich ütmeaken* (Mex-82; m/52/MLG)
~~always~~ when I away-PARTICLE-go-VERB from home ~~then~~ ~~do~~ I always the light out-make

Like in (5-82), but unlike in (5-78a), the structural position of the indirect ObjPP in (5-80a) is not clear either; in principle, extraposition into the postfield could be a possible derivation. The decisive difference to the extraposed directional (ablative) ObjPPs in (5-81) and (5-82) is that *für* in *für de Manner* (‘to the men’) is not selected by the verb but marks an indirect object. This means that *für* in (5-80a) is semantically vacuous and more importantly, it is optional. Most Mennonite informants do not mark indirect objects prepositionally. In contrast, the ablative prepositions *üt* (‘out’) and *von* (‘from’) in (5-81) and (5-82) add semantic value to the verbal proposition. As *für de Manner* is syntactically closer to indirect ObjNPs than to directional ObjPPs and as indirect ObjNPs cannot be extraposed in MLG, extraposition does not seem to be an adequate explanation for (5-80a) (cf. the discussion after Table 5-35, but also (4-26a), a case of an extraposed ObjPP in sentence <46>).

5.5.2 Monofactorial analyses of the verb-object-sequence

The sequence *verb-ObjNP/PP(-particle)* is well-known in causal clauses and some other adverbial clauses in colloquial German (cf., e.g., KELLER 1993). In these clauses, the finite verb occupies the second position of the clause not only superficially, but structurally. An ObjNP/PP that surfaces to the right of its governing verb in other types of dependent and introduced clauses constitutes a rare phenomenon in Continental West Germanic varieties (but cf. LARREW 2005, who analyzes verb-second word order in German relative and complement clauses). In view of this, it is unlikely that the finite verb in tokens such as (5-75a) and (5-77a) through (5-80a) structurally occupies the second position, i.e. the head position of CP. We will therefore have to find a different explanation for these tokens. In order to do so, it is important to discuss the distribution of these tokens according to relevant (socio)linguistic criteria. Table 5-31 shows the distribution of the marked variant with regard to the origin of the informants.

Table 5-31: Distribution of the two variants in dependent non-causal clauses with one verbal element in all colonies separated by the informants' origin (Obj=ObjNP/PP; part=particle)

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n	363	741	63	445	400	363	2375
Obj-(part-)verb	339	724	62	434	398	362	2319
	93.4%	97.7%	98.4%	97.5%	99.5%	99.7%	97.6%
χ^2 (5, n=2375) = 41.6, p=0*** / Cramer's V: 0.13 / 1 cell (8.3%) with less than 5 expected tokens							
verb-Obj(-part)	24	17	1	11	2	1	56
	6.6%	2.3%	1.6%	2.5%	0.5%	0.3%	2.4%

In the highly significant, but with 0.13 only very weakly associated distribution of Table 5-31, three types of colonies can be distinguished. The informants in the United States show by far the highest share of the non-verb-final variant (6.6% of their 363 tokens). The other extreme is represented by the Paraguayan colonies, which only produce three tokens (0.4% of 763 tokens). The other three colonies range from 1.6% to 2.5%. The differences between the colonies seem to be connected to different competence levels in SG. Much contact with SG, as in the Paraguayan colonies, correlates with very few non-verb-final tokens; hardly any contact with SG, as in the US-American colony, correlates with a much higher number of non-verb-final tokens.

To ensure that the results of the variant in questions are now skewed, all Paraguayan and Bolivian tokens will be excluded from the following analyses. In the case of Paraguay, this is due to the extreme rarity of the marked variant; in the case of Bolivia, it is due to its single occurrence. The excluded four tokens of the rare variant nevertheless fit in with the general results. Two of them are produced by Flemish-type informants (1 each by a German I- and a Dutch-type informant; cf. Table 5-34); two are found in complement clauses (the other two in relative clauses; cf. Table 5-33); and all four feature ObjPPs (cf. Tables 5-35 and 5-38). In spite of this, the mass of Paraguayan and Bolivian tokens featuring the verb-final default variant would skew the analyses severely. Table 5-32 offers further sociolinguistic information about the North American and Brazilian informants responsible for the two variants:

Table 5-32: Characteristics of the informants producing two variants in dependent non-causal clauses with one verbal element (no Paraguayan and Bolivian tokens)

	competence in MLG	competence in majority language	competence in SG	age
n	1282	1282	1282	1549
ObjNP/PP-(particle-)verb	1246	1246	1246	1497
	12.6	9.2	7.4	33.7
	F (1,1280) = 4.7, p=0.03*	ns	F (1,1280) = 6.1, p=0.014*	F (1,1547) = 9.5, p=0.002**
verb-ObjNP/PP(-particle)	36	36	36	52
	11.9	8.8	6.3	27.7

Judging from these results exclusively, one could conclude that the rare variant is an innovation by younger speakers and/or the result of language attrition. Forty informants produce the 52 tokens in Table 5-32 (2 of them produce 4 tokens each). For 28 of these forty informants, we can provide the precise value of their language competences and these values prove to be significantly lower for MLG and SG. One must not forget though that the MLG index value of the informants in question is 11.9, i.e. it is still high. Thirteen tokens, for example, are produced by informants who allotted themselves the highest competence value of fourteen points in MLG. Interestingly, all these differences will disappear in the binary logistic regression analyses in Section 5.5.5.

Leaving sociolinguistic factors like origin and language competence aside, there are some structural factors which may influence the variant's appearance. Such factors are the verb and the mode of the matrix clause of complement sentence compounds (cf. for the use of *mode* Footnotes 6 in Chapter 1 and 116 in this chapter and BARBIERS (2000: 191–193) for a possible influence of factivity), the syntactic role of relative markers, the position of relative clauses within their sentence compounds, or the type of subject (full NP or pronoun; 1st, 2nd, or 3rd person of the pronoun; cf. for this AUER 1998: 296–297). At this point, we will nevertheless only present the behavior of different clause types.

Table 5-33: Distribution of the two variants in dependent non-causal clauses with one verbal element separated by the type of clause (no Paraguayan or Bolivian tokens)

	complement clause	conditional clause	relative clause	Total
n	567	598	384	1549
ObjNP/PP-(particle-)verb	531	587	379	1497
	93.7%	98.2%	98.7%	96.6%
χ^2 (2, n=1549) = 24.9, p=0*** / Cramer's V: 0.13 / 0 cells (0%) with less than 5 expected tokens				
verb-ObjNP/PP(-particle)	36	11	5	52
	6.3%	1.8%	1.3%	3.4%

The distribution in Table 5-33 is highly significant, but again the strength of association is weak. The extraposed complement clauses show a much higher share of the marked variant (6.3%) than conditional and relative clauses (1.8% and 1.3%, respectively). As already mentioned, almost all tokens of the marked non-verb-final variant are superficially verb-second and thus they share a central characteristic with main clauses. In view of this, one could assume an iconic relationship between the surface shape and a low degree of syntactic integration since the surface shape may remind the speaker (and the listener) of independent verb-second main clauses (cf. Section 6.1.2). If this were indeed the case, one could use the share of superficial verb-second clauses in MLG as an indicator for the degree of syntactic (dis)integration of dependent clauses. This is exactly what we will do in Chapters 6 and 7. The question of whether the four types of informants behave similarly or differently with regard to the rare variant will be answered by Table 5-34.

Table 5-34: Distribution of two variants in dependent non-causal clauses with one verbal element separated by the informants' raising and scrambling behavior (no Paraguayan or Bolivian tokens; scrambl.=scrambling; Obj=ObjNP/PP; V=verb; pt.=particle)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (token)	1501	1435	187	470	208	527	1392
Obj-(pt.-)V	1450	1384	181	468	181	512	1342
	+0.14	+0.027	96.8%	99.6%	87%	97.2%	96.4%
	F (1,1499) = 30.9 p=0***	F (1,1433) = 40.8 p=0***	χ^2 (3, n=1393) = 67.5, p=0*** / Cramer's V: 0.22 / 0 cells (0%) with less than 5 expected tokens				
V-Obj(-pt.)	51	51	6	2	27	15	50
	+0.386	-0.203	3.2%	0.4%	13%	2.8%	3.6%

The distribution is highly significant and this time it shows a slightly higher strength of association. The non-verb-final variant is strongly concentrated among the Flemish-type informants, the informants who prefer the V2-VPR-variant in dependent clauses with two verbal elements. Although this group only contributes 208 tokens to the analysis (14.9% of 1,392 tokens), they produce more than half of the tokens of the variant in question (54%; 27 of 50 tokens).[144] Having identified this type of informant as the most productive, let us look at the informants who are least productive. These are the informants who prefer the NR-variant II. They contribute 470 tokens in total (33.8%), but only two tokens of the variant in question (4% of 50 tokens). As these two groups have opposing preferences with regard to verb projection raising and scrambling (cf. the line *features*), a positive setting for verb projection raising and a negative one for scrambling seem to constitute the decisive factors promoting the occurrence of the non-verb-final variant.

[144] The high concentration of the marked variant among the Flemish-type informants precludes the possibility of accounting for this variant by means of priming or translation errors since both phenomena would have a comparable effect on all informants.

If this conclusion is correct, the other two CLUSTERS should show intermediate shares since they both coincide with either extreme group in one of the two indexes. Table 5-34 confirms this hypothesis. The German I-type and the Dutch-type informants produce 3.2% and 2.8% of the rare variant, respectively. Importantly, due to the informants' origin, the difference between the two raising-friendly CLUSTERS is even bigger than it may appear. Only 26% of the tokens of the Flemish-type informants come from the US-American colony, the colony with the highest share of the rare variant (cf. Table 5-31), while this share is 45% for the Dutch-type informants. In spite of this, the Flemish-type informants have a share of the marked variant almost five times larger than the Dutch-type informants. This stresses once again the importance of having gauged the informants' general syntactic characteristics. The index values strengthen these distributional facts beyond any doubt. Informants that produce the marked variant have on average a raising value 0.246 points higher (0.386-0.14; 22% of the maximum span of 1.116 in these colonies) and a scrambling value 0.23 points lower (0.027-(-0.203); 18.9% of the maximum span of 1.218 in these colonies) than the informants that produce the default variant.

5.5.3 Structural description of the verb-object-sequence

The previous section has shown that Flemish-type informants like USA-2, who produced token (4-6) *weits dü nev daut hei haft den Stuhl abgefixt* (gloss: know you sure that he has-VERB1 the chair up-fixed-VERB2), are the ones, who produce the highest number of tokens such as (5-75a) *wann hei unterschrieft [0.4] diesen contrato [0.6] dann verliest der viel Geld* (gloss: if he signs-VERB […] this contract […] ~~then~~ loses he much money). Curiously, these informants sometimes produce the ObjNP/PP to the left of the governing verb as in (4-6) and sometimes to the right of it as in (5-75a). Both tokens agree, however, on the fact that the finite verb surfaces to the left of the ObjNP/PP. In spite of this, an analysis assuming that the finite verb is structurally in second position in both cases does not do justice to the data (cf. (5-84)). The assumption that the finite verb occupies the same position in both tokens is less controversial though.

In any case, Table 5-34 has shown that an explanation taking the informants' general syntactic preferences as point of departure is advisable. In order to do this, we have to apply the structural derivations developed in Section 3.2 for dependent clauses with two verbal elements (cf. (3-25) through (3-31)) to dependent clauses with one verbal element. We will do this in parallel in (5-83a-c). The first line in each step represents dependent clauses with two verbal elements, the second line dependent clauses with one verbal element (complementizers and SubjNPs are not represented).

(5-83)	a1.	**basic structure**	$[_{\text{CP}} \ldots [_{\text{IP}} \ldots [_{\text{VP1}} [_{\text{VP2}}$ den Stuhl abgefixt] haf] {t}]]
	a2.	*(VP(s) and IP head-final)*	$[_{\text{CP}} \ldots [_{\text{IP}} \ldots [_{\text{VP}}$ diesen Contrato unterschrief] {t}]]
	b1.	**gaining finiteness**	$[_{\text{CP}} \ldots [_{\text{IP}} \ldots [_{\text{VP1}} [_{\text{VP2}}$ den Stuhl abgefixt] t_a] haf$_a$-{t}]]
	b2.	*(verb(1) from V^0 to I^0)*	$[_{\text{CP}} \ldots [_{\text{IP}} \ldots [_{\text{VP}}$ diesen Contrato t_a] unterschrief$_a$-{t}]]

(5-83) c1. **verb projection raising** $[_{CP} \ldots [_{IP} [_{IP} \ldots [_{VP1}\ t_b\ t_a]$ haf$_a$-{t}] $[_{VP2}$ den Stuhl abgefixt$]_b]]$
c2. *(raising of VP(2) to IP)* $[_{CP} \ldots [_{IP} [_{IP} \ldots t_b$ unterschrief$_a$-{t}] $[_{VP}$ diesen Contrato $t_a]_b]]$

The parallel exemplification of the derivational steps corroborates the distributional facts of Table 5-34. The marked variant is the consequence of the raising of VP with the unscrambled ObjNP/PP and the trace of the moved verb. The existence of this trace is the decisive point. The verb has left VP and has been moved to the clause-final head position of IP prior to the raising of VP, thus causing the superficially final position of the ObjNP/PP. Structurally, however, the phonetically unrealized trace occupies the last position. Applying these derivational steps to clusters with two verbal elements, we end up with the V2-VPR-variant, which obviously does not feature the ObjNP/PP in final position, because the governing verb remains in VP2. The derivation in (5-83c2), therefore, depends crucially on the assumption of head-final functional phrases and constitutes counterevidence to HAIDER's (2010: 54–68) conviction that there are no such phrases in OV-languages like German. As these conclusions are far-reaching, we will dedicate the rest of this section to dispelling possible doubts. Section 5.5.4 will then present additional empirical facts supporting our analysis.

The first question one may ask is why verb projection raising without scrambling in clauses with one verbal element is so infrequent in comparison to verb projection raising without scrambling in clauses with two verbal elements. In the tokens selected for the calculation of the North American and Brazilian informants' raising propensity, the V2-VPR-variant has a share of 16% (212 of 1326 tokens), i.e. almost five times higher than the 3.4% of the verb-ObjNP/PP-variant (cf. Table 5-33). We assume that this difference is connected to different levels of parsing complexity. In KAUFMANN (2007: 198–202), it was shown that completely right-branching structures are more frequent when the dependent clause has more verbal elements. This means that the sequence *verb-ObjNP/PP* in clauses with one verbal element is less frequent than the comparable sequence *V1-ObjNP/PP-V2* in clauses with two verbal elements. And this right-branching sequence is less frequent than the comparable sequence *V1-V2-ObjNP/PP-V3* in clauses with three verbal elements (61.5% for these informants; 371 of 603 tokens; cf. Section 5.3). The reason for this rise in raising is that parsing-unfriendly left-branching structures in a language with head-final verb phrases become more complex with every additional phrase. These increasingly complex structures, however, can be broken up by raising embedded verb phrases, i.e. VP2 in clusters with two verbal elements and VP2 containing VP3 in clusters with three verbal elements (frequently with a second cycle raising VP3 out of VP2). Such parsing-facilitating verb projection raising, however, should remain latent when the speaker produces non-complex clauses with one verbal element. If they nevertheless apply verb projection raising in such clauses, they produce the variant we are interested in. One may call this a case of syntactic misfiring because it goes against ZWART's (1996: 233) conviction that "[i]n more complex verb clusters, tendencies tend to become rule".

The second point we need to discuss is connected to clauses with the V2-VPR-variant used for the calculation of the informants' raising propensity. All of these clauses were superficially verb-second, i.e. extant tokens with the sequence *adverb-V1-ObjNP/PP-V2* were not included (cf. point (c) of Section 4.1 and the first part of In-Depth Analysis 5.1.4). Could it therefore be that the sequence *verb-ObjNP/PP(-particle)* in clauses with one verbal element is simply verb-second, the result of the regular movement from V^0 to I^0 to C^0 in German main clauses? Three arguments speak against such an analysis: First, unlike causal clauses, complement, relative, and conditional clauses do not show a strong tendency to appear as dependent main clauses with an introductory element (cf. HAIDER's (2010: 4) comment above). Second, 23 of the fifty tokens in Table 5-34 are produced by informants who do not show a propensity for the V2-VPR-variant. Third, five of the 56 tokens of the variant in question (now including the Paraguayan and Bolivian tokens) are clearly not verb-second. The translation in (5-84), which has already been presented as (1-1), is one of them:

stimulus <2>	Spanish: **Juan no cree que conozcas bien a tus amigos** English: John doesn't think that you know your friends well
(5-84)	*[äh] Johann gleuf nich daut dü: gut kenns sine Frend* (Mex-26; m/34/MLG) [eh] John believes not that you well-ADVERB know-VERB <u>his</u> friends

If verb-second really was the reason for the marked sequence *verb-ObjNP/PP(-particle)*, we would assume that these five non-verb-second tokens were not produced by Flemish-type informants. This, however, is not the case. Three of the five tokens are produced by these informants, i.e. they partake in tokens like (5-84) to the same extent as in all other tokens with the marked sequence (the other 2 tokens come from a German I-type and a Dutch-type informant).

The last point to discuss concerns the Dutch-type informants, i.e. the informants, who prefer the VR-variant in dependent clauses with two verbal elements. If we again apply parallel derivations as in (5-83a-c), we obtain (5-85a-d) for Dutch-type informants:

(5-85)	a1.	**basic structure**	[$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ den Stuhl abgefixt] haf] {t}]]
	a2.	*(VP(s) and IP head-final)*	[$_{CP}$ … [$_{IP}$ … [$_{VP}$ diesen Contrato unterschrief] {t}]]
	b1.	**gaining finiteness**	[$_{CP}$ … [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ den Stuhl abgefixt] t$_a$] haf$_a$-{t}]]
	b2.	*(verb(1) from V^0 to I^0)*	[$_{CP}$ … [$_{IP}$ … [$_{VP}$ diesen Contrato t$_a$] unterschrief$_a$-{t}]]
	c1.	**scrambling**	[$_{CP}$ … [$_{IP}$ den Stuhl$_c$ [$_{IP}$ … [$_{VP1}$ [$_{VP2}$ t$_c$ abgefixt] t$_a$] haf$_a$-{t}]]]
	c2.	*(scrambling of ObjNP/PP)*	[$_{CP}$ … [$_{IP}$ diesen Contrato$_c$ [$_{IP}$ … [$_{VP}$ t$_c$ t$_a$] unterschrief$_a$-{t}]]]
	d1.	**verb projection raising**	[$_{CP}$ … [$_{IP}$ [$_{IP}$ den Stuhl$_c$ [$_{IP}$ … [$_{VP1}$ t$_b$ t$_a$] haf$_a$-{t}]] [$_{VP2}$ t$_c$ abgefixt]$_b$]]
	d2.	*(raising of VP(2) to IP)*	[$_{CP}$ … [$_{IP}$ [$_{IP}$ diesen Contrato$_c$ [$_{IP}$ … t$_b$ unterschrief$_a$-{t}]] [$_{VP}$ t$_c$ t$_a$]$_b$]]

In (5-85c2+d2), scrambling and raising neutralize each other causing absolute string-vacuity. Aside from not being able to show that a phonetically completely emptied VP is raised, the technical problems of (5-85d2) are even bigger than the ones in (5-83c2). In (5-83c2), one may still claim that the verbal trace in the raised VP is close to being properly governed by the moved verb. After all, the verb is in the head position of a functional phrase which contains the adjoined VP, i.e. it s-dominates the adjoined VP. In (5-85d2), however, one would need an additional mechanism to guarantee that the trace of the scrambled ObjNP/PP is properly governed too. This is virtually impossible though since the trace of the verb which governs the trace of the ObjNP/PP, is not a lexical head and the moved ObjNP/PP, which either lands in a Spec-position or is adjoined to a functional phrase below the adjoined VP, cannot antecedent-govern this trace either.

At least phonetically, there may be a way to check whether (5-85a2-d2) are possible in clauses with one verbal element. Assuming that particle verbs are small clauses (following BENNIS 1992 and ZWART 1996: 241), the complement clause in (5-77a) *kos nich sehen daut ik ha en nüet Kleid an* (gloss: can ∅ not see that I have-VERB a new dress on-PARTICLE) would be derived like (5-86a-c):

(5-86) a. **basic structure** *(VP and IP head-final)* $[_{CP} \ldots [_{IP} \ldots [_{VP} [_{SC} \text{ en nüet Kleid an}] \text{ ha}] \{\varnothing\}]]$

b. **gaining finiteness** *(verb from V^0 to I^0)* $[_{CP} \ldots [_{IP} \ldots [_{VP} [_{SC} \text{ en nüet Kleid an}] \text{ t}_a] \text{ ha}_a\text{-}\{\varnothing\}]]$

c. **verb projection raising** *(raising of VP to IP)* $[_{CP} \ldots [_{IP} [_{IP} \ldots \text{ t}_b \text{ ha}_a\text{-}\{\varnothing\}] [_{VP} [_{SC} \text{ en nüet Kleid an}] \text{ t}_a]_b]]$

An alternative derivation for scrambling-friendly Dutch type-informants would look like (5-87a-d). In the structure of (5-87d), one may even ponder the possibility that the particle licenses the trace of the moved ObjNP/PP:

(5-87) a. **basic structure** *(VP and IP head-final)* $[_{CP} \ldots [_{IP} \ldots [_{VP} [_{SC} \text{ en nüet Kleid an}] \text{ ha}] \{\varnothing\}]]$

b. **gaining finiteness** *(verb from V^0 to I^0)* $[_{CP} \ldots [_{IP} \ldots [_{VP} [_{SC} \text{ en nüet Kleid an}] \text{ t}_a] \text{ ha}_a\text{-}\{\varnothing\}]]$

c. **scrambling** *(scrambling of ObjNP/PP)* $[_{CP} \ldots [_{IP} \text{ en nüet Kleid}_c [_{IP} \ldots [_{VP} [_{SC} \text{ t}_c \text{ an}] \text{ t}_a] \text{ ha}_a\text{-}\{\varnothing\}]]]$

d. **verb projection raising** *(raising of VP to IP)* $[_{CP} \ldots [_{IP} [_{IP} \text{ en nüet Kleid}_c [_{IP} \ldots \text{ t}_b \text{ ha}_a\text{-}\{\varnothing\}]] [_{VP} [_{SC} \text{ t}_c \text{ an}] \text{ t}_a]_b]]$

If informants who prefer the VR-variant apply the same derivational steps in dependent clauses with a particle verb, we should find translations following the structure of (5-87d), i.e. something like *kos dü nich sehen daut ik en nüet Kleid ha an* (gloss: can you not see that I a new dress have-VERB on-PARTICLE). There is, however, only one translation that may constitute a possible example of this structure:

stimulus <33> English: **This is the journey I am inviting my mother on**

(5-88) *det's die Reis wo ik mine [0.4] Mutter friar mit* (USA-40; m/36/MLG)
this-is the journey where I my […] mother ?lead?-VERB with-PARTICLE
'This is the journey on which I am taking my mother'

***Fri**ar* in (18) could be a mispronunciation of the 1st person singular of *führen* ('lead'), i.e. *führ*. In this case, a kind of contamination of the root-final *r* in the onset of the word would have taken place.[145] Although this is a possible explanation and although *führen* ('lead') would fit semantically, we cannot be sure whether this is the right interpretation. It is clear, however, that the penultimate element in this token is a verb and the last element the particle of this verb. With regard to the derivation in (5-87c), this correctly suggests that it is not the entire small clause *[$_{SC}$ mine Mutter mit]*, which has been scrambled out of VP. It is rather the ObjNP *mine Mutter*, which has been scrambled out of the small clause and out of VP.

The assumed combination of scrambling and raising in (5-87a-d) suggests a Dutch-type informant. This is indeed the case. In spite of this, the unique token (5-88) and the somewhat comparable unique token (5-81) *Heinrik weit daut hei nicht kann rüt [0.6] üt diese- [0.4] üt det Land* (gloss: Henry knows ∅ that he ~~not~~ can-VERB out-PARTICLE […] ~~out this-~~ […] out the country), also produced by a Dutch-type informant, are no more than anecdotal evidence. In spite of the match in type of informant, we still have to answer the question of why this variant occurs only once or twice at best among the Dutch-type informants, the group responsible for 527 tokens in Table 5-34. This scarcity cannot be connected to a general aversion against raised sequences like *verb-ObjNP/PP(-particle)*. In the complement clause of sentence <4> *Can't you see that I am wearing a new dress*, for example, four of the 34 Dutch-type tokens with a particle verb are non-verb-final tokens as in (5-77a). This is, however, the expected marked variant for Flemish-type informants, not for Dutch-type informants. If the more proper variant for Dutch-type informants existed, one would expect eleven tokens with linearizations comparable to (5-87d) and (5-88).[146] Three possible explanations for the rarity of such tokens come to mind:

(i) One explanation could be that the ObjNP/PP and the particle in a small clause constitute such a coherent, mutually dependent unit that scrambling the ObjNP/PP on its own represents a less preferred option. (ii) Another explanation could be that the raising of completely pitted or almost completely pitted verb phrases (with just a particle) simply constitutes a less preferred option. This may be due to the almost complete lack of phonetic content. Raising- and scrambling-friendly Dutch-type informants may, therefore, find themselves in a lose-lose situation. If they follow their drive for scrambling, they cannot raise due to little or no phonetic material in the VP. If they follow their inclination for raising, they cannot scramble since this would reduce the phonetic material in the verb phrase beyond limits. With regard to clauses with two or more verbal elements, this is not an issue because the embedded main verb does not move to I^0, i.e. the raised VP contains a lexical verbal head and not just the trace of it. Thus, the reason for the probably ungrammatical status of (5-87d) may be that a VP has to have a certain phonetic weight in order to be eligible for raising. In the case of a

[145] This kind of metathesis happens frequently. Think, for example, of German ***fra**gen* ('ask') and ***for**schen* ('investigate'), both connected to Old High German ***for**sca* ('question'). The same story can be told for the Latin cognate ***per**contari* which developed into Spanish ***pre**guntar*, while Portuguese maintained the original sequence ***per**guntar*.

[146] The North American and Brazilian Flemish-type informants produced 31.3% of their marked variant in the complement clause of sentence <4> (5 of 16 tokens). As this variant is the fitting variant for these informants and as (5-88) would represent the fitting variant for Dutch-type informants, one expects – assuming a comparable share of 31.3% – the structure of (5-87d) in 10.6 of the 34 Dutch-type tokens in sentence <4>.

headless, i.e. verbless VP, this means that the VP must contain at least an ObjNP/PP. A verbal particle on its own does not seem to be enough. (iii) Things, however, may be even easier. Perhaps, the lack of proper binding of the trace of the ObjNP/PP is enough to explain the fact that tokens like (5-88) do not occur (more frequently).

5.5.4 Supporting evidence for the structural description

The focus of this section is the semantic content and the morphological shape of the argument of the dependent clauses in question. Tables 4-8 and 4-9 have shown that scrambling-unfriendly ObjPPs and scrambling-unfriendly indefinite ObjNPs significantly raise the chances of the unscrambled V2-VPR-variant. If the lack of scrambling is also decisive for the generation of the marked variant with the sequence *verb-ObjNP/PP(-particle),* this variant should also be sensitive to these characteristics.

Starting with the prepositional marking of indirect objects, we expect that the marked variant occurs more frequently with ObjPPs than with ObjNPs. Sentences <32> *The stories that he's telling the men are very sad* and <37> *I have found the book that I have given to the children* can be used in order to check this assumption, since these clauses show enough variation with regard to the marking and the position of the indirect object. Examples for sentence <32> have already been presented in (5-80a+b); here, we will give examples for sentence <37>:

stimulus <37> Spanish: **Encontré el libro que les di a los niños**
English: **I have found the book that I have given to the children**

(5-89) a. *ich ha daut [0.5] Bük gefungen [0.4] waut ik de Kinder gov* (Mex-2; f/52/MLG)
I have the […] book found […] that I the children gave-VERB

b. *ik ha daut Bük gefungen waut ik tu de Kinder gev* (USA-16; m/15/E>MLG-Ø)
I have the book found that I to the children give-VERB

c. *ik hat daut Bük gefungen waut ik gov no de Kinder* (USA-2; m/15/E>MLG-Ø)
I had the book found that I gave-VERB to the children

d. *ik hat de Bük gefunge waut ik ge- [0.4] waut ik gov to de Kinder* (Men-3; f/38/MLG)
I had the.REDUCED book found ~~that I gi-~~ […] that I gave-VERB to the children

We cannot add an example for the marked variant with the sequence *verb-ObjNP* since there is not a single token. Although Paraguayan tokens will not be included in the analysis, we have added a Paraguayan translation (cf. (5-88d)), since informant Men-3 performs an interesting repair. At first glance, one may think that she restarts the relative clause in order to put the ObjPP in the expected preverbal position as in (5-77c), but she actually only restarts in order to correct the tense of the verb. Table 5-35 offers the distributional facts for the North American and Brazilian translations of sentences <32> and <37>:

Table 5-35: Distribution of the two variants in relative clauses with one verbal element of sentences <32> and <37> separated by the type of object (no Paraguayan or Bolivian tokens; only definite ObjNPs/PPs)

	ObjNP	ObjPP	Total
n (token)	218	29	247
ObjNP/PP-verb	218	24	242
	100%	82.8%	98%
χ^2 (1, n=247) = 38.4, p=0*** / Phi: 0.39 / 2 cells (50%) with less than 5 expected tokens / Fisher's Exact: p=0***			
verb-ObjNP/PP	0	5	5
	0%	17.2%	2%

The distribution is highly significant both according to Pearson's Chi-Square and to Fisher's Exact. For these two relative clauses, it seems that only VPs with ObjPPs and not with ObjNPs can be raised, thus surfacing after the finite verb which has moved to I^0. With this result, we again have independent support for the hypothesis that, in addition to verb projection raising, it is the lack of scrambling that causes the marked sequence *verb-ObjNP/PP(-particle)*. In spite of this promising result, one must not forget that we have not yet been able to discount extraposition of the OPjPP as an alternative explanation for (5-89c+d).

For tokens like (5-82) *immer wann ik weggo von Hüs dann du ik immer daut Lich ütmeaken* (~~always~~ when I away-PARTICLE-go-VERB from home ~~then~~ ~~do~~ I always the light out-make), extraposition of *von Hüs* ('from home') was considered the most probable explanation due to the clause-final position of the ObjPP and to the obvious lack of raising in the sequence *particle-verb* in *weggo* ('go away'). Fortunately, the informants for most of these tokens can be characterized with regard to their behavior in verb clusters. Ten of the twelve classifiable informants are raising-unfriendly and scrambling-friendly German II-type informants. This share of 83.3% is markedly higher than this group's share of the marked variant analyzed in Section 5.5 (4%; 2 of 50 tokens; cf. Table 5-34). If extraposition explained tokens like (5-89c+d), one would expect many of them to come from German II-type informants.

For indefinite ObjNPs/PPs, the decisive test again comes from partly erroneous translations. Tokens with definite arguments have already been presented for sentence <32> in (5-80a+b). The examples in (5-90a+b) show preposed indefinite ObjNPs, while the translation in (5-90c) presents a clause-final indefinite ObjPP. Indefiniteness is either achieved by indefinite articles as in (5-90a+c) or by a phonetically not realized indefinite plural article as in (5-90b). The Paraguayan token in (5-90a) merely serves illustrative purposes; it does not enter the analysis. The examples in (5-91a+b) show indefinite ObjNPs on both sides of the verb. *Det* ('that') in (5-91b) is a relative particle since it does not coincide with the gender of *der Ohmtje* ('the man').

stimulus <32> Spanish: **Las historias que les está contando a los hombres son muy tristes**
English: **The stories that he is telling the men are very sad**

(5-90) a. *die: Geschichte waut hei nem Mann vertahlt is sehr trürig* (Men-39; f/36/MLG)
the story that he a.REDUCED man tells-VERB is very sad

b. *die Geschichten waut sie [2.0] [äh] Menschen vertahlen is sehr trürig* (Mex-71; f/37/MLG)
the stories that they […] [eh] people tell-VERB is very sad

c. *die Geschichten waut hei [0.5] vertahlt an em- an ne Männer*[147] *sin sehr trürig* (Mex-93; f/39/MLG)
the stories that he […] tells-VERB ~~to a-~~ to such.REDUCED men are very sad

stimulus <38> Spanish: **El hombre que provocó el accidente desapareció**
English: **The man who caused the accident has disappeared**

(5-91) a. *De Ohmtje waut da en accident hat [0.8] der is furtgekummen* (Mex-51; m/22/MLG)
the man that 'there' an.REDUCED accident has-VERB […] ~~he~~ is away-gone

b. *der Ohmtje det hat einen accident [0.5] is wajch* (USA-17; f/14/E>MLG-Ø)
the man that has-VERB an accident […] is away

Table 5-36 presents the distributional facts. The tokens are split between ObjNPs and ObjPPs. Due to the fact that more tokens are available for ObjNPs, a further separation by clause type could be introduced in this case.

Table 5-36: Distribution of the two variants in five dependent non-causal clauses with one verbal element separated by the definiteness of the ObjNP/PP and partly by the type of clause (no Paraguayan and Bolivian tokens; part=particle)

	ObjNPs				**ObjPPs**	
sentences	complement clauses <1> and <4>		relative clause <38>		complement clause <5> and relative clause <32>	
features	+definite	-definite	+definite	-definite	+definite	-definite
n	103	175	49	3	74	2
ObjNP/PP-(part-)verb	101	162	47	2	64	0
	98.1%	92.6%	95.9%	66.7%	86.5%	0%
	χ^2 (1, n=278) = 3.8 p=0.051$^{(*)}$ / Phi: 0.12 0 cells (0%) < 5		χ^2 (1, n=52) = 4.4 p=0.035* / Phi: 0.29 3 cells (75%) < 5 / Fisher's Exact: ns		χ^2 (1, n=76) = 11 p=0.001** / Phi: 0.38 2 cells (50%) < 5 / Fisher's Exact: p=0.023*	
verb-ObjNP/PP(-part)	2	13	2	1	10	2
	1.9%	7.4%	4.1%	33.3%	13.5%	100%

All distributions in Table 5-36 show a concentration of the marked variant in the tokens with indefinite ObjNPs/PPs. In the complement clauses with ObjNPs, the distribution shows a

[147] Informant Mex-93 starts out with *an em* ('to a'), which she then repairs into *an ne Männer* ('to such men'). As (5-90c) is the only token where an indefinite ObjPP surfaces after the verb in sentence <32>, it is important that this complement is indeed indefinite. For *an em*, the categorization of *em* as a reduced form of the indefinite article is unproblematic since cliticization of definite articles is not present in the Mennonite data set. The semantically singular *ne* in *an ne Männer* is more problematic. *Ne* seems to be a reduced form of the complex plural determiner *sone* ('such', a portmanteau of *soont* (SG *solch*) *eine* 'such a', cf. DUDEN 2006: 330–331), which does occur several times as a full form in the data set. In spite of the partially "definite" quality of *soont* in *sone*, the characterization of the entire ObjPP as indefinite is justified – firstly because the more important first attempt *an em* contains an indefinite article and secondly because it is precisely the "definite" part *soont* which is missing in *an ne Männer*.

strong statistical tendency. In the other two blocks the distributions are (highly) significant, but there are two or three cells with less than five expected tokens. In these cases, Fisher's Exact was applied and shows one non-significant result (relative clause of sentence <38> with ObjNPs) and one significant result (ObjPPs). In spite of the problematic reliability of the results, the fact that they all follow the same pattern gives us confidence that they are not accidental. Moreover, there is additional support. Comparing sentence <3> *Don't you see that I'm turning on the light* with sentence <4> *Can't you see that I am wearing a new dress*, one sees that the two sentence compounds share almost all characteristics except the definiteness of the ObjNP of the complement clause. Both compounds have an almost identical matrix clause and both complement clauses feature ObjNPs describing a concrete, non-animate concept. Tokens for sentence <4> were already given in (5-77a–c), an example for sentence <3> follows:

stimulus <3> Spanish: **¿No ves que estoy prendiendo la luz?**
English: Don't you see that I am turning on the light?

(5-92) *kos nich sehen daut ik daut [äh] Lich anmeak* (Mex-36; f/18/MLG)
~~can~~ Ø not see that I the [eh] light on-PARTICLE-make-VERB

We cannot present a token for the marked variant for sentence <3> because there simply is not a single one. Conversely, sentence <4> is among the sentences with the highest share of the marked variant. Table 5-37 presents the distributional facts:

Table 5-37: Distribution of the two variants in complement clauses with one verbal element of sentences <3> and <4> separated by the definiteness of the ObjNP (no Paraguayan and Bolivian tokens; part=particle)

	clause <3> +definite	**clause <4>** -definite	**Total**
n	88	167	255
ObjNP/PP-(part-)verb	88	154	242
	100%	92.2%	94.9%
χ^2 (1, n=255) = 7.2, p=0.007** / Phi: 0.17 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0.003**			
verb-ObjNP/PP(-part)	0	13	13
	0%	7.8%	5.1%

The distribution is highly significant (both Pearson's Chi-Square and Fisher's Exact), shows the same concentration of indefinite ObjNPs in the marked variant as in Table 5-36, and this time, there is just one cell with less than five expected tokens. Tables 5-35 through 5-37 have thus made it clear that scrambling-unfriendly definite ObjPPs and scrambling-unfriendly indefinite ObjNPs/PPs promote the occurrence of the marked variant. We, therefore, conclude that both verb projection raising and the lack of scrambling cause the rare and highly marked sequence *verb-ObjNP/PP(-particle)*. This feature combination explains the special role of raising-friendly and scrambling-unfriendly Flemish-type informants (cf. Table 5-34). There remains one fundamental problem though. As of now, Section 5.5 has only offered monofactorial analyses. This is problematic, since it does not control for possible influences of other factors. Section 5.5.5 will solve this problem by applying binary logistic regression analyses.

5.5.5 Binary logistic regression analyses of the verb-object-sequence

A binary logistic regression analysis is important because it allows us to calculate the influence of different independent variables at the same time. With regard to dependent clauses with one verbal element, the analysis is possible, because the dependent variable has only two levels, the sequences *ObjNP/PP-(particle-)verb* and *verb-ObjNP/PP(-particle)*. The following factors serve as possible predictor variables for the first analysis.

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of dependent clause (3 variants; contrasting variant *complement clause*): complement clause; conditional clause; relative clause

Type of complement (2 variants; contrasting variant *ObjNP*): ObjNP; ObjPP

Definiteness of ObjNP/PP (2 variants; contrasting variant *definite ObjNP/PP*): definite ObjNP/PP; indefinite ObjNP/PP

Type of verb (2 variants; contrasting variant *verb without particle*): verb without particle; verb with particle

Metrical variables

Age

Raising index

Scrambling index

In a first application, the informants' competences in MLG, SG, and the majority language were also added as independent variables. In spite of the significant results in Table 5-32, none of these variables was selected. As we have not obtained precise information for the language competence for all Brazilian and US-American informants (cf. the discussion above Table 2-2) and as especially the latter produce many tokens of the marked variant, the following regression analyses do not include these variables. The place of residence is not used either, because there is a strong relationship between the informants' origin and their general syntactic behavior, especially their raising behavior. There is not a single correlation between the three metrical variables *age*, *raising index*, and *scrambling index* reaching an r-value of 0.4.[148] The first analysis is based on the 1,392 tokens of Table 5-34 (50 tokens of the marked variant):

[148] For all binary logistic regression analyses, both correlation tests for the metrical variables and tests for multicollinearity for the metrical variables and the categorical variables with two levels were carried out. With regard to the latter ones, the VIF (Variance Inflation Factors) never approximated the critical value of 3.

Table 5-38: Binary logistic regression analysis (method: stepwise forward conditioned) for the sequence of verb and ObjNP/PP in complement, relative, and conditional sentence compounds with one verbal element with or without particle (no Paraguayan and Bolivian tokens)

scrambling index	**clause type**	**raising index**	**ObjNP/PP**
Wald: 37.2***	Wald: 29.5***	Wald: 28.4***	Wald: 14.3***
		raising (21.7***)	
			ObjPP (4.6***)
	complement clause		**ObjNP**
scrambling (0.03***)	conditional clause (0.21**) relative clause (0.13***)		

Four of the eight variables are selected as they significantly improve the "explained variance",[149] i.e. the chi-square-value of the omnibus-test of the model's coefficients increases with every step. The total "explained variance" is 27.6% (Nagelkerkes R-square: 0.276; Cox & Snell R-square: 0.073). The selected variables are shown in the four columns of Table 5-38. Below the indication of the Wald-value, the reader finds the contrastive variants of the categorical variable in the shaded central line. The contrastive variants and the metrical variables are given in bold print. Above the shaded line, the variants of the categorical variables and the metrical variables which further the appearance of the marked sequence *verb-ObjNP/PP(-particle)* are listed with the values of the exponential-function of the regression coefficient B. Below this line, the variants of the categorical variables and the metrical variables which hamper the appearance of the marked variant are provided. Variants of the categorical variables that do not exhibit a significant difference to the contrasting variant are located together with this variant (this happens, e.g., in Table 5-39).

The most powerful predictor variable is scrambling. The probability for a North American or Brazilian informant with a scrambling value of -0.6 to produce the marked variant is 33.3 times higher (1:0.03) than the probability for a North American or Brazilian informant with a scrambling value of +0.4. Furthermore, the occurrence of the marked variant is 21.7 times more probable for an informant with a raising value of +0.65 than for an informant with a raising value of -0.35. These values are indeed impressive in once more underlining the special role of raising-friendly and scrambling-unfriendly Flemish-type informants. Age, which showed a significant difference in Table 5-32 is not selected.

Along with these informant-related variables, two clause-related factors are selected. The probability for the occurrence of the marked variant decreases by a factor of 4.8 for

[149] We will always put the explained variance of binary logistic regression analyses in inverted commas since the used methods (Nagelkerkes R-square; Cox & Snell R-square) are so-called pseudo R-squareds, i.e. the interpretation of these R^2-values are more difficult than, for example, those of linear regression analyses. They can, however, be used to compare different models.

conditional clauses as compared to complement clauses (1:0.21). For relative clauses, this decrease is even more marked with 7.7 (1:0.13). Besides this, an (in)definite ObjPP increases the chances for the marked variant by a factor of 4.6 as compared to an (in)definite ObjNP. Unexpectedly though, definiteness is not selected. As this undermines our assumption in regard to the importance of the scrambling-unfriendly nature of indefinite arguments, we will test the informants' behavior with regard to complement clauses in a second, more focused analysis. After all, most tokens of the marked variant come from this clause type, i.e. the massive presence of generally hampering tokens with relative and conditional clauses may skew the data to a certain extent.

For the second analysis, two more structural factors, namely the mode (cf. Footnotes 6 in Chapter 1 and 116 in this chapter) and the verb of the matrix clause, were added since they will turn out to be of central importance for the distribution of complementizer deletion and correlates in Sections 7.1 and 7.2. Obviously, as we are now focusing on complement clauses, the variable *type of dependent clause* has to be removed. The independent variables for the second analysis are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of complement (2 variants; contrasting variant *ObjNP*): ObjNP; ObjPP

Definiteness of ObjNP/PP (2 variants; contrasting variant *definite ObjNP/PP*): definite ObjNP/PP; indefinite ObjNP/PP

Type of verb (2 variants; contrasting variant *verb without particle*): verb without particle; verb with particle

Verb of the matrix clause (6 variants; contrasting variant *weiten*): *weiten*; *sehen*; *sehen*$_{Modal}$; *glauben*; *sicher sene*; *gut sene*

Mode of the matrix clause (3 variants; contrasting variant *negated question*): negated question; negated declarative; non-negated declarative

Metrical variables

Age

Raising index

Scrambling index

Before presenting the results in Table 5-39, two more comments are necessary. First, tokens with non-negated interrogative matrix clauses had to be excluded, since their occurrence was too scarce. Second, the level for entering of independent variables was raised from the default value of p=0.05 to p=0.055, since scrambling misses the default value by a whisker (p=0.051$^{(*)}$). 476 tokens enter the analysis (33 tokens of the marked variant).

Table 5-39: Binary logistic regression analysis (method: stepwise forward conditioned) for the sequence of verb and ObjNP/PP in complement sentence compounds with one verbal element with or without particle (no Paraguayan or Bolivian tokens)

raising	**matrix clause**	**definiteness**	**ObjNP/PP**	**scrambling**
Wald: 22.7***	Wald: 22.6***	Wald: 7.2**	Wald: 7.1**	Wald: $3.7^{(*)}$
raising (62.8***)	-negated +question (77.6***)			
		indefinite ObjNP/PP (13.7**)	ObjPP (4.6**)	
	+negated +question +negated -question	**definite ObjNP/PP**	**ObjNP**	
				scrambling ($0.22^{(*)}$)

The "explained variance" in Table 5-39 is a little bit higher with 31.7% (Nagelkerkes R-square: 0.317; Cox & Snell R-square: 0.126). Five of the nine variables are selected. With regard to structural variables, both definiteness and prepositional marking are selected. The higher impact of definiteness (probability raise of 13.7 for indefinite ObjNPs/PPs as compared to definite ObjNPs/PPs) may be caused by the higher number of indefinite tokens (163 tokens) than of tokens with ObjPPs (56 tokens; probability rise of 4.6 as compared to ObjNPs). By far the strongest sentence-related structural factor, however, is the mode of the matrix clause. In comparison to a negated interrogative matrix clause, the chance of the occurrence of the marked variant with the sequence *verb-ObjNP/PP(-particle)* rises by a factor of 77.6 when the matrix clause is non-negated and declarative. We will see later on that this mode also furthers complementizer deletion and hampers the appearance of correlates (cf. Tables 7-11 and 7-39). This will be understood as a disintegration effect of this particular clause mode. As for the variant in question in the present section, a higher independence of the complement clause after a non-negated declarative matrix clause is a sensible explanation since the marked variant is superficially V2 in most cases.

With regard to the informants' characteristic, both raising and scrambling are selected. The impact of scrambling, however, is much lower than in Table 5-38. In any case, it is important to realize that the scrambling factor enters indirectly via the selection of the scrambling-sensitive variables *type of complement* and *definiteness of ObjNP/PP*. One may, therefore, conclude that the smaller impact of the informants' scrambling value in comparison to Table 5-38 is caused by the additional selection of definiteness. The raising index is the most powerful predictor variable in Table 5-39.

To wrap this section up, we will offer an analysis of South American causal clauses with one verbal element. This analysis is important because, with the exception of the Brazilian informants, no South American informants have entered the analyses of this section. If the results of the South American causal clauses are comparable to the ones found so far, this would again constitute important independent evidence for the overarching influence of the informants' general syntactic behavior.

5.5.6 Causal clauses in the South American colonies

So far, we have refrained from including causal clauses in the analyses. The reason for this is that MLG causal clauses behave differently from other types of dependent clauses. Table 5-40 shows that almost half of the causal clauses with one verbal element show the marked sequence *verb-ObjNP*. This is so because the introductory element *wegen(s)* (in South America also *wiel(s)*; both 'because'; cf. ELSPAß (2005: 84) for the causal connector *wegen* in other German varieties) has been largely reanalyzed as a coordinating element in the USA and Mexico (cf. Section 6.3 and KAUFMANN 2003a: 188–189). Thus, most informants there generate structural, not superficial V2-clauses.

Table 5-40: Distribution of the two variants in causal clauses with one verbal element in all colonies separated by the informants' origin (Obj=ObjNP; part=particle)

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n	153	319	23	171	135	129	930
ObjNP-verb	21	90	11	149	125	110	506
	13.7%	28.2%	47.8%	87.1%	92.6%	85.3%	54.4%
χ^2 (5, n=926) = 393.4, p=0*** / Cramer's V: 0.65 / 0 cells (0%) with less than 5 expected tokens							
verb-ObjNP	132	229	12	22	10	19	424
	86.3%	71.8%	52.2%	12.9%	7.4%	14.7%	45.6%

If almost three quarters of all tokens in Mexico (and even more in the United States) show the non-verb-final pattern, reanalysis seems to be the only possible explanation. We therefore have to reduce the scope of the following analyses to the South American colonies. Even there, however, the lowest share of the marked variant (Menno with 7.4%) is higher than the highest share for the non-causal clauses (the US-American Mennonites with 6.6%; cf. Table 5-31). If our hypothesis with regard to the iconic relationship between V2-clauses and more syntactic independence is correct, this high share of superficial V2-causal clauses (no non-V2-clauses such as (5-84) in Table 5-40) indicates that extraposed causal clauses are indeed more disintegrated than extraposed complement clauses, let alone (non-extraposed) relative and conditional clauses (cf. Sections 6.2 and 6.3). Four South American tokens of causal clauses are given in (5-93a+b) and (5-94a+b):

stimulus <24> English: **He is not coming because he doesn't have any time**

(5-93) a. *hei kemmt nich weils hei haft keine Tied* (Men-47; f/60/MLG)
he comes not because he has-VERB no time

b. *hei kemmt nich wegens hei keine Tied haft* (Men-22; f/34/MLG+E)
he comes not because he no time has-VERB

stimulus <23> Spanish: **No te puede escuchar porque está sacando las cosas de la maleta**
English: He can't listen to you because he is unpacking his luggage

(5-94) a. *dei kann di nich hiere wiels dei riemt grad die Koffer üt* (Fern-34; m/25/SG>MLG-91%)
he can you not hear because he packs-VERB ~~just~~ the suitcases out-PARTICLE

b. *hei kann [0.7] di nich hiere wiels hei sinen Koffer ütpackt*
(Fern-11; m/44/SG>MLG-79%)
he can [...] you not hear because he his suitcase out-PARTICLE-packs-VERB

The causal clauses in (5-94a+b) feature a particle verb, the ones in (5-93a+b) *han* ('have') as main verb. The two (a)-variants show the marked variant with the sequence *verb-ObjNP*, while the two (b)-variants represent the expected serialization. Table 10 shows the distribution of South American causal clauses with regard to the different types of informants.

Table 5-41: Distribution of two variants in causal clauses with one verbal element in the South American colonies separated by the informants' behavior in dependent non-causal clauses with two verbal elements (scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (token)	452	411	104	256	27	22	409
ObjNP-verb	390	352	87	231	15	18	353
	-0.174	-0.014	83.7%	90.2%	55.6%	81.8%	85.9%
	F (1,450) = 18.6 p=0***	F (1,409) = 8 p=0.005**	χ^2 (3, n=409) = 25.1, p=0*** / Cramer's V: 0.25 / 2 cells (25%) with less than 5 expected tokens				
Verb-ObjNP	62	59	17	25	12	4	58
	-0.053	-0.121	16.3%	9.8%	44.4%	18.2%	14.1%

The distribution is highly significant and virtually identical to the one found for complement, relative, and conditional clauses in Table 5-34. The highest concentration of the marked variant is again found among the Flemish-type informants, the lowest one among the German II-type informants. The other two CLUSTERS show intermediate shares. The results of the index values are also identical to the ones in Table 5-34. Informants that produce the marked variant have highly significantly higher raising values and highly significantly lower scrambling values. These coinciding results add one more piece of evidence for our assumptions because (i) we have now analyzed causal clauses and not complement, relative, or conditional clauses and (ii) we have now analyzed the data of different informants. 287 of the total of 458 tokens analyzed in Table 5-41 come from Bolivian and Paraguayan informants. The tokens of these informants were not included in Table 5-34. In spite of these differences, the behavior of the generally more SG-competent South American informants in less integrated causal clauses is comparable to the behavior of the less SG-competent North American (and Brazilian) informants in more integrated complement, relative, and conditional clauses.

For the binary logistic regression analysis of causal clauses, some more variables have to be excluded. The language competences are again not selected and were therefore disregarded in the final model. As the matrix clause is not as important in adverbial clauses as it is in complement clauses, features of this clause were also disregarded. Furthermore, there are no tokens with ObjPPs in this data set. Finally, the definiteness of the complements of the causal clauses will not be used as an independent variable, since the two indefinite ObjNPs *time* and *money* in sentences <21> *He is not coming because he doesn't have any time* and <22> *He doesn't have a car, because he has no money* co-occur with the main verb *han* ('have'). As this verb seems to behave differently from a verb like *listen* in sentence <23>, clear results with regard to definiteness cannot be expected. Aside from this, many informants used *nich* ('not') instead of the expected *kein* ('no') in these clauses (cf. tokens (6-29a+b)) thus increasing the chance of incorporation of the noun into *han* ('have').[150] This is, however, not a big problem, since a possible incorporation does not impede the unambiguous identification of the marked V2-variant. The five remaining independent variables are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of verb (2 variants; contrasting variant *verb without particle*): verb without particle; verb with particle

Metrical variables

Age

Raising index

Scrambling index

Table 5-42 presents the results for 409 tokens (58 tokens with the marked variant). 400 of these tokens come from sentences <21> through <24>:

Table 5-42: Binary logistic regression analysis (method: stepwise forward conditioned) for the sequence of verb and ObjNP in causal sentence compounds with one verbal element with or without particle in the South American colonies

raising index	**scrambling index**
Wald: 12.9***	Wald: 5.7*
raising (7.9***)	
	scrambling (0.28*)

[150] The fact that *nich* ('not') in MLG is often used where we would expect *kein* ('no') is also noted by SCHNITZSPAHN and RUDOLPH (1995: 83) in their SG text book for Paraguayan speakers of MLG. They judge *nich* instead of *kein* in SG as a MLG-based mistake. In SG, *nicht* normally negates the clausal proposition. In contrast, *kein* negates indefinite noun phrases or noun phrases without an article such as *keine Zeit*/*keine Tied* ('no time') in both SG and MLG. Whether MLG *nich* in (6-29a+b) functions as a determiner like *kein* or like a clause-negating particle is unclear.

Only the raising and the scrambling index are selected. As expected, an increase of the raising value of one point increases the chances for the marked variant by a factor of 7.9, while a decrease of one point of the scrambling value decreases these chances by a factor of 3.6 (1:0.28). The "explained variance" of Table 5-42 is much lower than in the other two regression analyses though. It is only 8.8% (Nagelkerkes R-square: 0.088; Cox & Snell R-square: 0.049). This low share is connected to the fact that only one clause-related structural factor entered the analysis (type of verb) and this factor was not selected.

The findings of Section 5.5 are resumed in Summarizing Box 5-1:

Summarizing Box 5-1: Coinciding behavior of raising-friendly informants in dependent clauses with one and two verbal element(s)

(i) Raising-friendly and scrambling-unfriendly Flemish-type informants, who prefer the V2-VPR-variant in dependent clauses with two verbal elements (*V1-ObjNP/PP-V2*), produce the marked sequence *verb-ObjNP/PP(-particle)* frequently.

(ii) The assumption that this marked sequence is the consequence of raising without scrambling is not only supported by the empirical fact mentioned in (i), but also by semantic and morphological facts of the complements of the relevant dependent clauses (definiteness, prepositional marking).

(iii) Raising- and scrambling-friendly Dutch-type informants, who prefer the VR-variant in dependent clauses with two verbal elements (*ObjNP/PP-V1-V2*), produce the marked sequence *verb-ObjNP/PP(-particle)* to a much lower extent.

(iv) As Dutch-type informants share their proneness for raising with the Flemish-type informants (the VR-variant is only differentiated by the position of the ObjNP/PP from the V2-VPR-variant, not by the sequence of the verbs), the significant difference in the share of the marked variant must be caused by the differing scrambling behavior of the two types of informants.

Having combined the analysis of the marked variant in dependent clauses with one verbal element with the analysis of the more robust variation in verb clusters with two verbal elements follows a demand by RIJKHOFF (2010: 223):

> Rare linguistic features should play in [sic!] important role in grammatical theory, if only because a theory that can account for both common and unusual grammatical phenomena is superior to a theory that can only handle common linguistic properties.

Section 5.5 does exactly this. It explains a common and a rare phenomenon by means of the same mechanisms. The occurrence of the rare variant is the consequence of the infrequent overgeneralization of verb projection raising without scrambling. The overgeneralization to dependent clauses with one verbal element demonstrates once again that verb clusters are but a superficial epiphenomenon in MLG. If the share of the marked non-verb-final variant rises in the future, an effect on the formation of new linguistic systems may follow. One possible consequence would be a change from OV to VO as in the history of English. Such a scenario may depend on LIGHTFOOT's (1999: 156) transparency principle, which connects syntactic reanalysis with a decrease of certain triggers in the linguistic input. Be this as it may, we can further enlarge the set of implicational relationships for the different types of Mennonite informants with the results of Section 5.5 (as before, squared brackets indicate that a variant is highly typical for a particular type of informant, but not the predominantly used one):

(5-95) German-type informants	ObjNP/PP-V1
	ObjNP/PP-V2-V1
	[ObjNP/PP-V3-V1-V2] [(ObjNP/PP-)V1-(ObjNP/PP-)V3-V2]
	[(ObjNP/PP-)V1-V2-(ObjNP/PP-)V4-V3]
(5-96) Flemish-type informants	[V1-ObjNP/PP]
	V1-ObjNP/PP-V2
	V1-V2-ObjNP/PP-V3
	V1-V2-V3-ObjNP/PP-V4
(5-97) Dutch-type informants	ObjNP/PP-V1
	ObjNP/PP-V1-V2
	[(ObjNP/PP-)V1-(ObjNP/PP-)V2-V3]
	[ObjNP/PP-V1-V2-V3-V4]

6. Syntactic Integration of Different Clause Types

In Chapter 4, we created the indexes for verb projection raising and scrambling. In Chapter 5, these indexes were applied to a variety of verbal complexes unrelated to index formation. A substantial part of the variation in these complexes could be explained by the informants' preferences with regard to raising and scrambling. Chapter 6 will now shift the focus and concentrate on two characteristics of the dependent clause, namely its finite verb (a modal verb or the temporal auxiliary *han*; 'have') and its type (causal, complement, relative, or conditional clause). These factors also influence the informants' choice of verb clusters and will, therefore, help to shed some light on the topic of clause linkage, i.e. on the different types of connection that exist between adjacent clauses.

The central hypothesis proposed in the present chapter and elaborated upon in Chapter 7 is that the choice of verb cluster is at least partly governed by the degree of syntactic integration of the dependent clause into the matrix clause (cf. MEIBAUER et al. (2013: 9–12) for a general discussion of the concept *(des)integration*). More particularly, we assume that a high frequency of the V2-VPR-variant indicates a low degree of syntactic integration, i.e. weak clause linkage. This hypothesis has – to our knowledge – so far not been pursued in any coherent way (but cf. KAUFMANN 2003a and KAUFMANN 2007 for first hints[151]) and is based on the fact that dependent clauses with the V2-VPR-variant share one crucial feature of independent main clauses. Their finite verb appears in second position. In the case of independent main clauses or unintroduced dependent clauses (e.g., by means of complementizer deletion), the finite verb occupies the head-initial position of CP – we call this structural V2 –, whereas the finite verb still occupies the head-final position of IP in the case of a V2-VPR-variant in a dependent clause. This position will be called superficial V2. ALTMANN (1997: 72) also mentions the possible positional coincidence of structural and superficial V2 calling it an "ambigue constellation". Such an ambigue constellation, however, only seems to exist in the derivational view of linguists. The Mennonite informants' behavior attests to an identical cause of both structural and superficial V2, namely a high degree of syntactic disintegration. The clearest evidence for this stems from the reanalysis of causal clauses with the V2-VPR-variant as structural V2-clauses (cf. Section 6.3) and the comparable behavior of structural V2 (complementizer deletion) and superficial V2 (V2-VPR-variant) in complement clauses (cf. In-Depth Analysis 7.1.4.3).

In the present chapter, we will analyze and measure the different degrees of syntactic (dis)integration by means of the tokens of the nine dependent clauses with two verbal elements that were used for the calculation of the raising and scrambling indexes in Chapter 4 (cf. Tables 4-3 and 4-7). The respective stimulus sentences are presented once more for the readers' convenience:

[151] The title of SAPP's (2011) book *The Verbal Complex in Subordinate Clauses from Medieval to Modern German* seems to promise such an approach, but none of his many enlightening, but mostly monofactorial analyses deals with different types of dependent clauses. Aside from this, he mostly pools the VR- and VPR-variants into one category.

Complement clauses

(6-1) a. <7> Peter is convinced *that* he **has understood** the book

b. <8> Are you sure *that* he **has repaired** the chair?

Conditional clauses

(6-2) a. <15> *If* he **has to sell** the house now, he will be very sorry

b. <16> *If* he **can solve** this problem, he is very smart

c. <17> *If* he really **killed** the man, nobody can help him

d. <18> *If* he **stole** the book, I won't trust him anymore

Relative clauses

(6-3) a. <35> Is this the film you **want to show** to all your friends?

b. <36> The doctor *who* **wants to see** my foot is very worried

c. <38> The man *who* **caused** the accident has disappeared

On the one hand, we will carry out monofactorial analyses of the 1,230 tokens of the sociolinguistically balanced basic distribution (cf. Table 4-2). The advantage of this distribution is that it is independent from the informants' age, sex, and origin. On the other hand, we will carry out binary logistic regression analyses with a subset of the 1,905 tokens used for index formation. With these analyses, we will be able to compare the influence of different independent variables.

Chapter 6 is structured as follows: Section 6.1.1 introduces the reader to theoretical aspects of clause linkage, subordination, and embedding. Up to now, we have preferred the less charged and thus more neutral term *dependent clause*. Here, however, it is crucial to offer a more detailed account. Section 6.1.2 will then present examples from SG that demonstrate the syntactic disintegration of dependent structural V2-clauses. In Section 6.2, the distribution of the basic cluster variants in the nine clauses used for cluster formation will be investigated. In doing so, we will be able to distinguish different degrees of syntactic integration for complement, relative, and conditional clauses. Finally, Section 6.3 will deal with causal clauses in North America and their reanalysis as structural V2-clauses.

6.1 Theoretical considerations with regard to dependent clauses

6.1.1 Clause linkage, subordination, and embedding

In her book about (non-)canonical subordinate clauses, AXEL-TOBER (2012: 5) writes: "In the present study, the three concepts 'dependent clause', 'subordinated clause', and 'subordinate clause' will be used synonymously."[152] Depending on the topic, such a seemingly underspecified approach need not pose a problem. So far, we have also covered all types of subordinate clauses using the all-purpose term *dependent clause*. In this section, however, we

[152] Translation by G.K.; the original reads: *In der vorliegenden Arbeit werden die drei Begriffe ‚unselbständiger Satz', ‚subordinierter Satz' und ‚Nebensatz' synonym gebraucht*.

will offer a more differentiated view of clause linkage, subordination, and embedding. This is necessary because we want to relate these theoretical concepts to the empirical fact that some speakers of MLG produce different types of verb clusters in order to distinguish ever so subtle differences in syntactic (dis)integration. Hence the scalar concept of syntactic (dis)integration has to be correlated with clause linkage, subordination, and embedding. LEHMANN (1988: 182) describes clause linkage in the following way:

> In the application of the term *clause linkage*, we will assume a broad concept of the clause which comprises any syntagm containing one predication. Syntactically, this means – apart from nominal clauses – the uppermost controller of dependency in the syntagm is a verbal form. Since a verbal form may be finite or non-finite, this includes nominalized clauses. Clause linkage, then, is a relation of dependency or sociation obtaining between clauses in this sense.

We will come back to the role of the verbal form in a moment. The other crucial point in this quote is dependency. In this study, we are concerned with this relation rather than with the relation of sociation (clausal coordination). Because of this, the concepts of subordination and embedding come to the fore. Of the former, LEHMANN (1988: 182; cf. also FABRICIUS-HANSEN 1992: 458) writes:

> *Subordination* may now be conceived as a form of clause linkage. If syntagms (clauses) X and Y are in a relation of clause linkage, then X is subordinate to Y iff X and Y form an endocentric construction Z with Y as the head.

As the MLG data set does not contain peripheral adverbial clauses (cf. FREY 2011), non-restrictive/appositive or continuative relative clauses, or free *daß*-clauses, the relation of subordination holds true for all MLG dependent clauses. Subordination, however, is still a rather poorly defined concept (cf., e.g., PITTNER 1999: 202). The delimitation between subordination and embedding in particular is not always clear. In her seminal paper, FABRICIUS-HANSEN (1992: 464–465), who follows LEHMANN (cf., e.g., LEHMANN 1984: 146), defines the scope of subordination and embedding in the following way:

> Das heißt, Subordination kann als eine Relation angesehen werden, die zwischen Teilsätzen – Klauseln – als solchen besteht und nicht voraussetzt, daß der untergeordnete Satz in den übergeordneten Satz eingebettet sei in einer spezifischen syntaktischen Position (oder Funktion), die auch von einem nichtsatzförmigen Syntagma gefüllt werden könnte (wobei jedoch nicht ausgeschlossen werden soll, daß die Unterordnung sich als syntaktische Einbettung manifestiert).[153]

All embedded clauses are thus subordinated, but not all subordinated clauses are embedded. For FABRICIUS-HANSEN (1992: 466–469), who equates complete integration and embedding with her concept of indisputable subordination ("*indiskutable Subordination*"; cf. also AXEL-TOBER (2012: 22) for the synonymous use of embedding and integration), this prototypical type of subordination only holds true if the subordinated clause satisfies five conditions, four of which are linked to the matrix clause: (i) Verb-final position, (ii) phonological integration

[153] Translation by G.K.: This means that subordination can be seen as a relation that holds true between clauses and that does not presuppose that the subordinated clause is embedded in a specific syntactic position (or function) of the superordinated clause that can also be filled with a non-clausal syntagm (however, the possibility that subordination coincides with embedding is not excluded).

into the matrix clause, (iii) syntactic-topological position within the matrix clause, (iv) semantic integration into the matrix clause, and (v) pragmatic subordination to the matrix clause. For our purposes, the topological position within the matrix clause and the semantic integration into the matrix clause are crucial. The position of the finite verb and the pragmatic subordination of the subordinated clause are – in our opinion – (direct) consequences of these two factors. Phonological integration is not the focus of our analysis. We, therefore, do not (yet) have anything to say about this factor.

With regard to semantic integration, FABRICIUS-HANSEN (1992: 467–468) distinguishes between argument subordination – this applies to the complement clauses in the MLG data set –, operator subordination – this applies to the conditional and causal clauses in the MLG data set –, and restrictor subordination – this applies to the relative clauses in the MLG data set. With regard to the topological position, the subordinated clause must – according to FABRICIUS-HANSEN – either occupy the topological prefield or the topological midfield, or it must be an attributive clause adjacent to its head. With this, extraposed clauses in the postfield no longer belong to the category of indisputably subordinated clauses. Complement clauses and causal clauses in the MLG data set thus do not belong to this core category. A different taxonomy is present in MATTHIESSEN and THOMPSON (1988: 282–283), who refer to HALLIDAY's grouping:

> Halliday and grammarians working within the systemic tradition distinguish for English between 'embedding', which includes essentially clauses embedded as restrictive relative clauses and subject and object complements, and clause combining or clause complexing in Halliday's terms. Halliday recognizes a number of different types of clause combining. In terms of the degree of interdependence, he distinguishes between paratactic combining, 'parataxis', and hypotactic combining, 'hypotaxis'. Parataxis includes coordination, apposition, and quoting. *Hypotaxis* includes essentially clause combining involving non-restrictive relative clauses, clauses of reported speech, and the clause combinations we exemplified in Figure 1.

It is important to realize that contrary to FABRICIUS-HANSEN's (1992) grouping, embedding and subordination are not co-extensive in HALLIDAY's taxonomy, not even partly. Subordination is a subset of clause combining and refers crucially to clauses that are traditionally called adverbial clauses (cf. MATTHIESSEN & THOMPSON 1988: 277 – Figures 1 and 2). Defining HALLIDAY's term *clause enhancing*, MATTHIESSEN and THOMPSON (1988: 283–284) write:

> Enhancing hypotaxis refers to hypotactic clause combining involving some kind of circumstantial relation like condition, reason, purpose and other kinds of cause, time, space, manner, and means: One clause enhances another clause circumstantially.

Aside from this, two points in MATTHIESSEN and THOMPSON (1988: 282–283) are important: First, topological positions are not mentioned. This is probably due to the fact that HALLIDAY, MATTHIESSEN, and THOMPSON deal with English and not with German. Second, there is a strong sense of different degrees of interdependence in clause combining. FABRICIUS-HANSEN (1992) and many others have extended this model of scalarity to the realm of what they consider subordinated and embedded clauses (cf., e.g., REIS 1997; AUER 1998: 303–304; and

LANGACKER 2009: 328). AXEL-TOBER (2012: 25) makes it clear that this constitutes a breach with a central conviction of much work in the generative frame. She states that "[t]he difference to the generative approach is evident. In that approach, there are no degrees of embedding, there is just a binary opposition of clauses that are [+embedded] and clauses that are [-embedded]."[154] FABRICIUS-HANSEN (1992: 465) describes the scalar concept of subordination in the following way:

> Es muß sich z.B. nicht unbedingt so verhalten, daß eine Klausel einer anderer [sic!] Klausel entweder subordiniert oder auch nicht subordiniert ist. Es könnte vielmehr eine mehr oder weniger starke oder ausgeprägte Subordinationsbeziehung zwischen ihnen bestehen. Das heißt, man könnte, wie König/Auwera (1988) andeuten, mit Davison (1979), Lehmann (1984, 1988) u.a. den Subordinationsbegriff als skalar betrachten oder im Rahmen einer Prototypen-Theorie verstehen.[155]

FREY (2011: 72) confirms this view, but he comments on integration rather than subordination:

> Thus, using a graded concept of integration it can be said that PACs [peripheral adverbial clauses; G.K.] are less integrated than central adverbial clauses and, obviously, more integrated than continuative wh-relative clauses and free *dass*-clauses.

This scalar view of subordination, integration, and embedding is frequently connected to the vertical position of the dependent clause in the tree structure, and to its horizontal position in clausal topology. The following equation may thus be established: The higher up in the structural tree, the further away from (the verbal core of) the matrix clause. A visible consequence of this equation is the ordering in the postfield if more than one dependent clause is present. In spite of their importance, we will dwell neither on the question of how many structural positions there are in the postfield nor on the question of whether we have to assume additional positions to the right of the postfield (cf., e.g., HAIDER 1995). The reason for this is that we are predominantly interested in showing how speakers of MLG signal different degrees of syntactic (dis)integration linguistically. With regard to the pre-verbal area of unintroduced main and dependent clauses, one can assume a comparable equation for the difference between the strongly integrated prefield and the strongly disintegrated pre-prefield.

As the degree of syntactic (dis)integration constitutes the crucial concept of the empirical analyses in Sections 6.2 and 6.3 and in Chapter 7, and as syntactic (dis)integration will be defined both by means of the topological position of the dependent clause and by its semantic integration into the matrix clause, four examples for the application of scalarity will be given. The first one comes from LEHMANN (1988: 190), the second from FABRICIUS-HANSEN (2011:

[154] Translation by G.K.; the original reads: *Die Unterschiede zum generativen Ansatz sind evident: Dort gibt es keine Einbettungsgrade, sondern nur eine binäre Opposition zwischen [+eingebetteten] und [-eingebetteten] Sätzen*.

[155] Translation by G.K.: For example, it need not be the case that a clause is either subordinated or not subordinated to another clause. It may rather be the case that there is a stronger or weaker or a more or less pronounced relation of subordination between them. This means that one could consider the concept of subordination as scalar in the sense of Davison (1979) and Lehmann (1984, 1988), etc., as König/Auwera (1988) suggest, or in the frame of the theory of prototypes.

21), the third from FREY (2011: 71), and the fourth from HAIDER (2010: 225). LEHMANN deals with relative clauses in Latin, FABRICIUS-HANSEN and FREY with adverbial clauses in German, HAIDER with relative and complement clauses in German.

> Here the first relative clause is appositive, which gives it a place somewhere in the first half of the continuum of hierarchical downgrading. The second relative clause is restrictive, thus dependent on the head noun, but still not governed by anything and therefore not at the rightmost pole of Figure 1. However, the first relative clause is on a fairly low syntactic level, modifying an NP governed by the predicate. The second relative clause is on an even lower level, if we determine levels by counting nodes from the root of a constituent structure diagram.

> Im Sinne von Sæbø (i.Dr.) wäre dann anzunehmen, dass ein instrumentaler bzw. (ereignis)elaborierender *indem*-Satz wie (16a), der ein konstitutives Teilereignis des jeweiligen Obersatzereignisses beschreibt, direkt an die Matrix-VP, unterhalb der Tempusprojektion und unterhalb des Subjekts, angeschlossen wird, um die Unifizierung der beiden Ereignisbeschreibungen zu gewährleisten, während temporale *indem*-Sätze an die temporale Projektion oberhalb des Subjekts und die kausale Variante noch weiter oben adjungiert werden.[156]

> A PAC [peripheral adverbial clause; G.K.] which follows the matrix clause is adjoined to ForceP. The analysis of right-dislocation of elements which are IP-internally licensed is still highly controversial. However, it would be rather implausible to assume that a right-dislocated central adverbial clause is attached as high as to ForceP. Given this observation and since there is no parenthetical niche for a PAC between the main clause and the dislocated central adverbial clause, it is expected that a right-dislocated central adverbial clause will precede a PAC […].

> The immediate reaction to this fact is easy to guess, but misleading: one might think that the difference is as simple as Reinhart's (1980, 1983) claim that argument clauses are attached closer to their base position than non-argumental clauses. But this cannot be entirely correct. As emphasized above (noted first in Haider 1992/2000), extraposed relative clauses precede extraposed argument clauses (2d). Therefore it is impossible that extraposed argument clauses are adjoined lower than extraposed relative clauses.

The last two quotes nicely express the connection of structural depth and topological position.[157] In view of this apparently stable relation, it comes as a surprise that FABRICIUS-HANSEN (1992: 469) considers extraposition a minor deviation from the category of indisputably subordinated clauses:

> Eine relativ unbedeutende Abweichung von der obigen Variante prototypischer Unterordnung bieten Fälle, die sich nur dadurch von den oben-erwähnten unterscheiden, daß der untergeordnete Satz extraponiert ist und somit keine volle topologische Integration stattfindet […].[158]

While the assumed effect of extraposition in the case of relative clauses in MLG was at least empirically inconclusive (cf. In-Depth Analysis 5.1.1), we will see below that the behavior of

---

[156] Translation by G.K.: In the sense of Sæbø (in print), one would have to assume that an instrumental or event-elaborating *indem*-clause as (16a), which describes a constitutive part of the respective event of the superordinated clause, is adjoined directly at the matrix VP, below the tense projection and below the subject. This is necessary in order to guarantee the unification of the two event descriptions. Temporal *indem*-clauses, on the other hand, will be adjoined to the tense projection above the subject, while the causal variant will be adjoined even higher.

[157] As already mentioned, it need not concern us here whether complement clauses are extraposed or whether they are base generated in the postfield as HAIDER 1995 (251 and 266) assumes. FREY (2011), too, claims that peripheral adverbial clauses in the prefield are base generated there, while central adverbial clauses are moved to this position.

[158] Translation by G.K.: A relatively minor deviation from the above mentioned variant of prototypical subordination is represented by cases that only differ from the above mentioned clauses in the fact that the subordinated clause is extraposed and thus not entirely integrated topologically.

extraposed complement and causal clauses leaves no room for negating a major effect of extraposition into the postfield. Extraposition in MLG decisively influences the linearization of verbal and non-verbal elements in the extraposed clause (cf. Sections 6.2 and 6.3).[159]

This empirical fact is not surprising in view of many syntactic phenomena that clearly show that the prefield and the midfield of a German clause are structurally more integrated than the postfield: First, the prefield must almost always be phonetically realized in a declarative clause regardless of whether this condition is met by an adverb, an NP, a PP, or a CP. In contrast to this, the postfield can remain empty. Granted, some types of dependent clauses can only appear in the postfield, for example continuative relative clauses or consecutive clauses, but precisely this fact demonstrates the disintegratedness of the postfield since these clauses are strongly disintegrated. Contrary to this, strongly integrated constituents such as ObjNPs are never allowed in the postfield. Second, the prefield and the midfield of a German clause represent base positions of the X-bar-schema. The prefield is mostly identified with the specifier position of CP, while the midfield contains specifier and complement positions of IP and VP. The postfield, however, is – at least according to STERNEFELD (2008: 289–290) – always an adjoined position. Further syntactic reflexes of the higher degree of integration of the prefield and the midfield are easily found. In the case of the prefield, one could mention the fact that disintegrated V2-causal clauses with *weil* (‘because’) are ungrammatical in this position, even in varieties which allow them in the postfield (cf. examples (6-9) and (6-10) below).[160] For the midfield, the impossibility of having V2-“relative” clauses in this position constitutes a relevant case (cf. examples (6-13) and (6-14) below). Third, with regard to semantics, BLÜHDORN (2013: 215) shows that postposed temporal clauses allow more readings than preposed ones. Importantly, the readings that are not available in the prefield are precisely the foregrounded ones, i.e. those which are less integrated. With regard to the MLG data set, we can thus state a first integration hierarchy:

(6-4) extraposed (causal and complement) clauses < non-extraposed (relative and conditional) clauses

The sign < is to be read as less integrated. In the MLG data set, complement and causal clauses occupy the postfield, i.e. they are supposed to be extraposed. Conditional and relative

---

[159] The second deviation, which FABRICIUS-HANSEN (1992) underestimates in our opinion, is the presence of correlates. She does not only assume a disintegrating effect, while we will discover an integrating effect; she also regards the influence of correlates as not too big, while Table 4-1 has shown and Sections 7.1 and 7.3 will show that the syntactic effect of correlative elements is substantial. FABRICIUS-HANSEN (1992: 471) writes: “*Der Unterschied zwischen korrelativer Argument-Subordination und entsprechender integrierter Argument-Subordination ist jedoch beim näheren Hinsehen nicht so groß, wie er erscheinen könnte; denn die Nicht-Besetzung einer Leerstelle läßt sich semantisch eventuell wie eine Anapher deuten, d.h. als eine freie Variable […]*.” [Translation by G.K.: However, upon closer inspection, the difference between correlative argument subordination and integrated argument subordination is not as big as it may appear. The reason for this is that the non-occupation of an empty position could be semantically interpreted as an anaphora, i.e. as a free variable […].]

[160] A comparable piece of evidence can be found in English. A sentence like **Because here comes my bus, I’m leaving* (cf. NEWMEYER 2003: 692 – Footnote 9) is impossible. The sentence *I’m leaving because here comes my bus* (NEWMEYER’s 2003: 692 – example (25a); cf. also HOOPER & THOMPSON 1973: 466), however, is perfectly OK.

clauses, on the other hand, either appear in the prefield or as part of a nominal constituent in the midfield. The restrictive relative clauses of the stimulus sentences <36> and <38> (cf. (6-3b+c)) have definitely not been extraposed into the postfield and if the restrictive relative clause in sentence <35> (cf. (6-3a)) has been extraposed, this extraposition has occurred string-vacuously. In this respect, it is important that STERNEFELD (2008: 379) assumes obligatory extraposition of restrictive relative clauses. This extraposition, however, is supposed to occur locally, i.e. within the relevant DP. With regard to conditional clauses, the presence of resumptive elements in the matrix clause and especially some few disintegrated conditional clauses in the pre-prefield may skew the picture. Because of this, we will frequently carry out two analyses in Section 6.2, one with these tokens and one without.

We can now move on from the question of topological positions of dependent clauses to the question of their semantic integration into the matrix clause. FABRICIUS-HANSEN's (1992: 467–468) distinction between argument subordination, operator subordination, and restrictor subordination does not seem to have any distinctive power since all three types are listed as belonging to her most prototypical category, case A. She (1992: 470) does, however, make a distinction later in the paper when comparing the consequences of a possible elimination of the subordinate clause. In the case of a non-present complement clause, she argues that the sentence compound may become ungrammatical. In the case of a non-present adverbial clause, however, she only sees a possible change in modality of the matrix clause or in the scope characteristics of operators in the matrix clause. Finally in the case of a non-present restrictive relative clause, she either notes a rather marginal change in denotation of the referent NP or a more context-dependent status of the matrix clause. The decreasing importance of the dependent clause for the understanding of the matrix clause may be translated into an increase in semantic independence. This independence is supposed to be biggest in case of restrictive relative clauses and smallest in complement clauses. LEHMANN (1984: 147) distinguishes complement clauses from adverbial and relative clauses in a comparable way:

> Das Phänomen des Anschlusses von Nebensätzen ist nicht auf RSe [relative clauses; G.K.] beschränkt; auch zwischen der Protasis und der Apodosis eines Konditionalsatzgefüges besteht das eigentümliche Interdependenzverhältnis, das wir für einen angeschlossenen RS und seinen Hauptsatz anzunehmen haben. Zwar sind die Rollen von Haupt- und Nebensatz klar verteilt; trotzdem hängt nicht nur der Nebensatz vom Hauptsatz ab, sondern auch der Haupt- vom Nebensatz. Und dieses letztere nicht in der Weise, wie etwa ein Matrixsatz von dem Objektsatz, den er enthält, abhängt: daß er nämlich ohne ihn syntaktisch unvollständig ist; sondern so, daß der Hauptsatz semantisch auf den Nebensatz bezogen ist.[161]

[161] Translation by G.K.: The linkage phenomenon of subordinate clauses is not restricted to relative clauses. The peculiar interdependency, which we assume for a conjoined relative clause and its matrix clause, also exists between protasis and apodosis of conditional sentence compounds. Although the roles of main clause and subordinate clause are clearly distributed, it is not only the subordinate clause that depends on the main clause, but also the main clause that depends on the subordinate clause. And this latter dependency is different from the dependency of a matrix clause on an embedded object clause. This dependency is connected to syntactic incompleteness, not to the fact that the main clause is related semantically to the subordinate clause.

On the surface, LEHMANN's statement seems to contradict FABRICIUS-HANSEN's (1992: 470) statement, but this is a misimpression. Both statements actually coincide; they merely adopt different perspectives on the same topic. FABRICIUS-HANSEN stresses grammaticality, while LEHMANN focusses on the semantic contribution of dependent clauses. With regard to introducing elements, EISENBERG (2013b: 325) describes a further semantic difference between complement and adverbial clauses stating that the introducing element in an adverbial clause has a proper lexical meaning, which the complementizer of a complement clause lacks. Aside from this, he (2013b: 313) also assumes that the introducing element of an adverbial clause connects two clauses with two independent propositions. The proposition of a complement clause, however, is not independent; it always forms part of the proposition of the entire sentence compound. Trying to relate these differences to a more syntactic point of view, the following comment by REIS (1997: 126) becomes crucial:

> *Gliedsätze* besetzen je bestimmte phrasale Positionen in der Projektion des Kopfs V_b [matrix verb; G.K.] von S_b [matrix clause; G.K.] und tragen je bestimmte Relationen zu ihm (Adjunktsätze zur Ereignisvariable des Kopfs, Komplementsätze zu seinem Thetaraster); insofern sind sie von V_b 'direkt lizensiert' (Haider 1995: 262). Die Basisposition von *Komplementsätzen* ergibt sich dabei aus den Bedingungen für Thetarollenzuweisung: Sie müssen von V_b l-markiert bzw. strikt regiert sein. *Gliedteilsätze* von S_b (Relativsätze, Vergleichssätze, etc.) wiederum sind ausgezeichnet durch ein Antecedens in S_b, zu dem sie in einer bestimmten (restriktiven, explikativen, o.ä.) Beziehung stehen. Haider nennt sie hinsichtlich V_b 'indirekt lizensiert' […].[162]

With this definition, almost all relevant clauses in the MLG data set can be ranked with regard to semantic integration. Complement and adverbial clauses (conditional and causal clauses) are directly licensed by the main verb of the matrix clause, whereas relative clauses are only indirectly licensed and thus less integrated. Complement clauses are distinguished from adverbial clauses by the fact that they are l-marked or strictly governed by the main verb of the matrix clause. With regard to semantic-structural integration, this represents the most intimate relationship. As we have already seen that adverbial clauses can be grouped into more integrated central and less integrated peripheral adverbial clauses, it stands to reason that such a ranking also exists within these two groups. This would be important since both adverbial clauses in the MLG data set, i.e. conditional and causal clauses, belong to the group of central adverbial clauses. Fortunately, DIESSEL and HETTERLE (2011: 24; cf. also NEWMEYER 2003: 692) establish such a ranking:

> The paper shows that causal clauses tend to be less tightly integrated into complex sentences than other semantic types of adverbial clauses. In contrast to temporal and conditional clauses, causal clauses typically include the same verb forms and arguments as ordinary main clauses, are usually placed after the semantically associated clause, and are commonly expressed by a separated into-

[162] Translation by G.K.: *Complement* and *adverbial clauses* occupy specific phrasal positions in the projection of the head V_b [matrix verb; G.K.] of S_b [matrix clause; G.K.] and exhibit specific relations with it (adverbial clauses with the event variable of the head, complement clauses with its theta grid). Due to this, they are 'directly licensed' by V_b (Haider 1995: 262). The base position of *complement clauses* results from the assignment conditions of theta roles: They must be l-marked by V_b or strictly governed by it. *Attributive clauses* of S_b (relative clauses, comparative clauses, etc.) are characterized by an antecedent in S_b to which they relate in a specific way (restrictive, explicative, or the like). With regard to V_b, Haider calls them 'indirectly licensed' […].

> nation unit. Taken together these features suggest that causal clauses are only loosely combined with the associated main clause; they are commonly realized by constructions that exhibit the same morphosyntactic properties as main clauses and thus may be analyzed as coordinate sentences rather than adverbial clauses.

Although DIESSEL and HETTERLE use topological position as one criterion thus mixing topology with other characteristics, we feel justified to use their analysis in order to establish a second integration hierarchy:

(6-5) relative clause < causal clause < conditional clause < complement clause

In Sections 6.2 and 6.3, where we will compare the frequency of the V2-VPR-variant in these four clause types, we will see that the actual ranking from least integrated (most V2-clauses) to most integrated (least V2-clauses) looks like (6-6) (cf. (6-24) for a more quantified version of this hierarchy):

(6-6) extraposed causal clause < extraposed complement clause < relative clause < conditional clause

This means that the topological hierarchy in (6-4) must be qualified as more decisive than the semantic hierarchy in (6-5). The partial ranking of the extraposed causal and complement clauses on the one hand and the non-extraposed relative and conditional clauses on the other hand remain stable. What changes is that both extraposed clause types, i.e. causal and complement clauses, migrate further to the left of the hierarchy, the side signaling syntactic disintegration.

Obviously, in order to neatly distinguish the influence of the more semantic criterion in (6-5) from the influence of the topological criterion in (6-4), it would be necessary to compare the same clause type in different surface positions. Alas, we will not be able to offer this kind of comparison in any coherent way. The reason for this is that the number of stimulus sentences would have to be much higher in order to carry out such a comparison. For such a long translation task, it would have been impossible to find enough Mennonite informants.[163] The only possibility to compare the same clause type in different positions is offered by integrated conditional clauses in the prefield and disintegrated conditional clauses in the pre-prefield. Here, a significant difference is indeed measurable (cf. Section 7.3.4.2). Aside from this, it would have been interesting to include peripheral adverbial clauses like concessive clauses. In this way, one could have seen whether such a clause type would occur more frequently with the V2-VPR-variant than, for example, conditional clauses (preferably in the postfield), a central adverbial clause type. Again, each further clause type would have led to ten more stimulus sentences (cf. Section 2.2). Such a comparison is, therefore, also not possible. What is possible is the demonstration of the fact that dependent V2-clauses do indeed offer themselves as a measuring stick for syntactic (dis)integration. This will be achieved in Section 6.1.2.

[163] HATCH and LAZARATON (1991: 29) explain this problem in a convincing way: “Efficiency isn’t everything. If the method you use is dull or frightening or boring or takes too long, it’s unlikely that your subjects (Ss) will be motivated to perform as well as they might.”

6.1.2 Verb second and syntactic disintegration

For good reasons, the syntactic and semantic independence of prototypical main clauses is hardly ever questioned. A first crucial piece of evidence for this independence is that the illocutionary force of main clauses is typically higher than that of dependent clauses (cf., e.g., FABRICIUS-HANSEN 1992: 468). There are, for example, certain illocution-related modal particles in SG that exclusively appear in main clauses (cf., e.g., EISENBERG 2013b: 236). Secondly, main clauses are – in contrast to prototypical dependent clauses – not intonationally integrated into other clauses. Thirdly and most importantly for us, the central syntactic correlate for the independence of main clauses is the second position of the finite verb. This last characteristic is so fundamental that KELLER (1993: 245) quoting KÜPER argues that dependent clauses that feature the finite verb in second position indicate illocutionary force by means of iconicity:

> Küper nennt die Hauptsatzstellung [of the finite verb; G.K.] in diesem Zusammenhang einen "machtvollen" illokutiven Indikator (Küper 1991: 146) und weist zu Recht auf die Ikonizität dieses Konstruktionstyps hin: "Größere illokutive Selbständigkeit und größeres illokutives Gewicht […] wird […] ausgedrückt durch das syntaktische Mittel der Hauptsatzstellung" (Küper 1991: 150)."[164]

TRUCKENBRODT (2006) also links illocutionary force to V2 both in root and in embedded clauses, but he makes it very clear that V2 is not the source of illocutionary force, but its consequence. Discussing embedded clauses, he (2006: 301) argues that an epistemic context index triggers the movement of the finite verb from the head position of IP to the head position of CP:

> I argued that embedded V-to-C clauses have an additional attachment to the matrix clause, due to the interpretation of their context index <Epist>, the trigger of V-to-C.

We will not discuss the theoretical important question of whether V2 is the cause or the consequence of (syntactic) disintegration. Be this as it may, it does not come as a surprise that EISENBERG (2013b: 314 and 337) questions the very status of non-root V2-clauses as dependent clauses, claiming that such clauses are syntactically strongly disintegrated. Unfortunately, however, things are not always as clear-cut as they appear. One must, for example, state a certain mismatch between some verb-final clauses and syntactic or pragmatic disintegration. In terms of syntax, FREY (2011: 44–45; cf. also FABRICIUS-HANSEN 1992: 463) mentions the case of continuative *wh*-relative clauses and free *daß*-clauses:

> At least two different explications of the notion [of subordination; G.K.] are common. According to the first one, a subordinate clause can be seen as a constituent of the superordinated clause fulfilling the role of an argument or of an adverbial/attribute. The other explication takes subordination as syntactic dependency. It is assumed that in German, a dependent clause is characterized by

[164] Translation by G.K.: In this context, Küper calls the main clause position [of the finite verb; G.K.] a "powerful illocutive indicator" (Küper 1991: 146). He is also right in pointing out the iconicity of this construction type: "A higher degree of illocutive independence and a higher degree of illocutionary weight […] is expressed […] by the syntactic means of main clause position (Küper 1991: 150)."

> the clause-final position of the verb. Sentences like the ones in (7) [a continuative *wh*-relative clause and a free *daß*-clause; G.K.] illustrate that these two explications are not equivalent […].

For pragmatics, Auer (1998: 301) points to a frequent mismatch in complement sentence compounds with certain matrix verbs:

> […] wenn der abhängige Satz relativ assertierend ist, dann ist die syntaktische Form des voll markierten Komplementsatzes ein un-ikonisches Abbildungsverfahren für die beteiligten kognitiven und kommunikativen Abläufe. Der Inhalt des Objektsatzes ist oft pragmatisch wichtiger als der Matrixsatz, aber die kanonische Syntax des eingeleiteten Nebensatzes dreht diese Relevanzabstufung um: syntaktische Überordnung konfligiert mit geringer pragmatischer Relevanz, größere pragmatische Relevanz mit syntaktischer Unterordnung.[165]

With regard to complement clauses and conditional clauses, one possible solution for this mismatch is the deletion of the introducing element. This leads to dependent V2-clauses in the case of complement clauses (cf. Section 7.1) and to dependent V1-clauses in the case of conditional clauses. With regard to causal clauses, a comparable disintegration effect can be achieved by introduced V2-causal clauses as in (6-8) (the following discussion is based on Keller's (1993: 227–232) examples (1) and (2) and his detailed analysis of V2-causal clauses):

(6-7)	*Peter ist nicht gegangen, weil er Kopfschmerzen hat*	
	Peter is not gone because he headaches has-VERB	
reading I	'Peter has not gone, because he has a headache'	[> Peter is still here]
reading II	'Peter has not gone because of a headache [but because […]]'	[> Peter is not here anymore]
(6-8)	*Peter ist nicht gegangen, weil er hat Kopfschmerzen*	
	Peter is not gone because he has-VERB headaches	
	'Peter has not gone, because he has a headache'	[> Peter is still here]

Example (6-7) with the finite verb in the final position is ambiguous. The negation particle *nicht* can negate the main verb of the matrix clause, i.e. the speaker is negating the fact that Peter has gone (i.e. Peter is still here). *Nicht*, however, can also negate the reason presented in the causal clause, i.e. the speaker is not negating the fact that Peter has left, but the apparently incorrect assumption of his motive for going (i.e. Peter has indeed gone, but the reason for his going was not a headache). In contrast, example (6-8) with the finite verb in second position only allows the first reading, in which the main verb of the matrix clause is negated. The disallowance of the second reading, the negation of the cause, makes it clear that V2-causal clauses cannot be in the scope of elements located in the matrix clause. This is a clear

[165] Translation by G.K.: […] if the dependent clause is relatively assertive, the syntactic form of the fully marked complement clause represents an un-iconic display method for the cognitive and communicative processes involved. Pragmatically, the content of the complement clause is frequently more important than the matrix clause. In spite of this, the canonical syntax of the introduced dependent clause turns the relevance gradation around. Syntactic superordination conflicts with little pragmatic relevance, whereas greater pragmatic relevance conflicts with syntactic subordination.

semantic correlate of syntactic disintegration.[166] An additional syntactic indication for the disintegration of V2-causal clauses is the previously mentioned fact that, unlike causal clauses following their matrix clause, preposed causal clauses in Spec/CP cannot feature the verb in second position, i.e. although (6-9) needs a focal stress on *Kopfschmerzen* ('headache') in order to be possible in SG, (6-10) is definitely impossible (cf. Haider (2010: 227 – (5b)) for comparable facts in complement sentence compounds):

(6-9)	*Weil er Kopfschmerzen hat, ist Peter nicht gegangen*	
	because he headaches has-VERB is Peter not gone	
reading I	'Peter has not gone, because he has a headache'	[> Peter is still here]
reading II	'Peter has not gone because of a headache [but because […]]'	[> Peter is not here anymore]

(6-10)	**Weil er hat Kopfschmerzen, ist Peter nicht gegangen*	
	because he has-VERB headaches is Peter not gone	
	'Peter has not gone, because he has a headache'	[> Peter is still here]

Another example for the effect of V2 in SG is the restrictive or non-restrictive reading of extraposed "relative" clauses:

(6-11)	*Die Linguisten sind gute Forscher, die viele Artikel publizieren*
	the linguists are good researchers who many articles publish-VERB
reading I	'The linguists, who publish many articles, are good researchers'
reading II	'Those linguists who publish many articles are good researchers'

(6-12)	*Die Linguisten sind gute Forscher, die publizieren viele Artikel*
	the linguists are good researchers they publish-VERB many articles
	'The linguists, who publish many articles, are good researchers'

Although the second clause in example (6-12) with the finite verb in the second position is not a prototypical relative clause – Sternefeld (2008: 383) calls it a continuative relative clause with typical V2-position; Gärtner (2001) regards it as an integrated V2-clause –, i.e. although *die* in this clause is to be analyzed as an anadeictic personal pronoun rather than a relative pronoun (non-anadeictic *sie* would also be possible), the difference between (6-11) and (6-12) is telling. Example (6-11) allows for both a restrictive reading (with contrastive stress on *die* in *die Linguisten*; 'the linguists'; cf. Sternefeld (2008: 379) for the facts of stress in these contexts) or a non-restrictive, appositive reading. Example (6-12) however, for which a contrastive stress on *die* would sound markedly odd, only allows for the non-restrictive reading. This means that the second clause of (6-12) cannot restrict the referential extension of the set of persons referred to in the NP *die Linguisten* in the first clause. The reason for this is that the two clauses are syntactically independent, i.e. somewhat comparable to example (6-8), the possibility of an interpretative interaction between the two clauses is restricted. A V2-clause cannot be subordinated to another clause and therefore cannot directly

[166] Altmann (1997: 75; cf. also Lenerz 1984: 100) corroborates this view by writing that V2-causal clauses are not only not integrated into the matrix clause with regard to intonation, but that they also have their own focus-background-structure equaling the matrix clause with regard to information value.

modify an element of this clause. LARREW (2005: 326) confirms this conclusion citing KÜPER, who also mentions the fact that restrictive relative clauses cannot appear with the finite verb in second position.[167] Aside from this, a sentence compound like (6-13), the non-extraposed version of (6-11), is possible, while (6-14), the non-extraposed version of (6-12), is impossible since a V2-clause cannot appear in the topological midfield of another clause (cf. GÄRTNER 2001: 98).

(6-13)	*die Linguisten, die viele Artikel publizieren, sind gute Forscher*
	the linguists who many articles publish-VERB are good researchers
reading I	'The linguists, who publish many articles, are good researchers'
reading II	'Those linguists who publish many articles are good researchers'

(6-14)	**die Linguisten, die publizieren viele Artikel, sind gute Forscher*
	the linguists they publish-VERB many articles are good researchers
	'The linguists, who publish many articles, are good researchers'

Non-restrictive "relative" clauses can only appear within another clause in the form of a main clause parenthesis as in (6-16), an example taken from DUDEN (2006: 1044). Such a parenthesis is not localized in the topological midfield though.

(6-15)	*Volker, der gerne angelt, hat gestern zwei Fische gefangen*
	Volker who gladly fishes-VERB has yesterday two fish caught
	'Volker, who likes to fish, caught two fish yesterday'

(6-16)	*Volker – er angelt gern – hat gestern zwei Fische gefangen*
	Volker he fishes-VERB gladly has yesterday two fish caught
	'Volker – he likes to fish – caught two fish yesterday'

Obviously, both with regard to V2-causal clauses and with regard to apparent V2-relative clauses, the question arises whether these clauses should be considered part of the matrix clause occupying its postfield or whether they simply form an independent second main clause whose connection to the first clause is semantic rather than syntactic. In view of this, it is important to note that there are also clear disintegration effects in V-final dependent clauses representing an intermediate position between absolute dependence (indisputably subordinated clauses) and absolute independence (prototypical main clauses). Consider, for example, the intriguing change of meaning achieved by the insertion of a modal particle in a verb-final relative clause as in (6-18):

[167] LARREW (2005: 326) writes: "*Küper (1991) begründet in seinem Aufsatz zur Wortstellung in Nebensätzen die These, dass die Nebensätze, die die Aussage des Hauptsatzes einschränken – als solche nennt er Konditionalsätze, Temporalsätze und restriktive Relativsätze – nicht mit Verbzweitstellung gebildet werden können (vgl. Küper 1991, 145f.).*" [Translation by G.K.: In his article about word order in subordinate clauses, Küper (1991) justifies the hypothesis that subordinate clauses that restrict the proposition of main clauses – he mentions conditional, temporal, and restrictive relative clauses – cannot be constructed with the finite verb in second position (cf. Küper 1991, 145f.).]

(6-17) *Die Bayern-Fans, die arrogant sind, gehen mir auf die Nerven*
the Bayern-supporters who arrogant are-VERB go me on the nerves
reading I ‘The supporters of Bayern Munique, who are arrogant, get on my nerves’
reading II ‘Those supporters of Bayern Munique who are arrogant get on my nerves’

(6-18) *Die Bayern-Fans, die ja arrogant sind, gehen mir auf die Nerven*
the Bayern-supporters who PARTICLE arrogant are-VERB go me on the nerves
‘The supporters of Bayern Munique, who are arrogant, get on my nerves’

Just like examples (6-11) and (6-13), the relative clause in (6-17) can be either read with a restrictive or a non-restrictive meaning. Although the restrictive reading is the preferred reading for (6-17), the non-restrictive reading is possible and due to the huge amount of money available to this club not too far from the truth. This changes radically once the modal particle *ja* in (6-18) is added. With this particle, the speaker signals shared knowledge of speaker and listener with regard to the proposition of the relative clause. This epistemic and thus illocutionary element makes the restrictive reading of the relative clause impossible (cf. also MEIBAUER et al. 2013: 11). Interestingly, disintegration in this case is neither the cause nor the consequence of V2 as in (6-8) or in (6-12), but either the cause or the consequence of the insertion of a modal particle (cf. BLÜHDORN (2012: 259–260) and FREY (2011: 56–59) for more examples). Since these particles are predominantly found in independent main clauses, it only combines with a relatively independent non-restrictive relative clause.

In view of examples (6-7) through (6-18), it is important to stress one crucial difference between these SG sentence compounds and the translations in the MLG data set. In the SG sentence compounds discussed, the different positions of the finite verb and the insertion of a modal particle cause, or are the consequence, of semantic or interpretational changes. This is not the case in the MLG translations since all of them are based on the same stimulus sentences. However, an important relation between the MLG translations and the SG examples is the fact that in both of them, the finite verb appears in second position every now and then. As we have shown that structural V2 indicates disintegration in SG and, as we will be able to show that the Mennonite informants use both structural and superficial V2 in the same contexts (cf. In-Depth Analysis 7.1.4.3), we assume that syntactically disintegrated clauses combine with V2 in SG and in MLG even though semantic differences can only be found in SG, not in MLG.

6.2 Complement, relative, and conditional clauses

The possibility to produce different cluster types offers speakers of MLG a choice SG does not offer. If speakers of SG want to indicate different degrees of clausal (dis)integration, the only verb-related options they have are dependent V1/V2-clauses. By deleting subordinating elements in conditional and complement clauses or by turning subordinating elements into coordinating elements (e.g., causal *weil* in (6-8); ‘because’), speakers of SG can position the finite verb in the head position of CP, i.e. structurally in the second position (in the case of conditional clauses with a phonetically empty prefield).[168] Speakers of MLG also have this option at their disposal (cf. Section 7.1), but they can achieve a comparable V2-effect by other means as well, namely by producing tokens with the V2-VPR-variant. This exclusive option grants us an empirical look at clausal (dis)integration in Sections 6.2 and 6.3 and later on in Chapter 7. It need not be mentioned that verb cluster variation is not an exclusive characteristic of MLG. Speakers of Flemish or Swiss German, for example, or writers of Early New High German also show(ed) much variation in this respect. It is therefore astonishing that there is virtually no research whatsoever about a possible influence of different clause types on verb cluster preferences (cf., however, KAUFMANN 2003a and KAUFMANN 2007 for first hints).

For the following analyses, we will use two types of data. The first type is the sociolinguistically balanced basic distribution introduced in Chapter 4. The advantage of this data set is that it guarantees a structural characterization of the occurrence of the basic cluster variants since the non-structural factors *age*, *sex*, and *origin* were controlled for. The second data set is a subset of all tokens that were used for index formation. These data will be analyzed by means of binary logistic regression analyses. The disadvantage of this method is that one can only analyze dependent variables with two levels. The advantage is that one does not have to control for the factors *age*, *sex*, and *origin* as they can be included in the model as independent variables. The three basic cluster variants are given once again for sentence <8>:

stimulus <8> Spanish: **¿Estás seguro que él arregló la silla?**
English: **Are you sure that he has repaired the chair?**

(6-19) a. *bis dü sicher daut der den Stuhl ge- abgefixt haf* (Bol-4; m/44/MLG)
are you sure that he the chair ~~fi-~~ fixed-VERB2 has-VERB1

b. *bis dü sicher daut her [0.3] daut hei haf de Stuhl [1.3] fertigemeakt* (USA-66; m/16/E>MLG-43%)
are you sure ~~that he-~~ […] that he has-VERB1 the.REDUCED chair […] ready-made-VERB2

c. *bist dü sicher daut her den Scho- Stuhl haft fertiggemeakt* (USA-32; f/37/MLG)
are you sure that he the ~~cha-~~ chair has-VERB1 ready-made-VERB2

Token (6-19a) represents the NR-variants (cf., e.g., tokens (4-38a+b) for the visible difference between these two variants), while tokens (6-19b) and (6-19c) illustrate the V2-VPR-variant and the VR-variant, respectively. The occurrence of the three basic variants in the basic

---

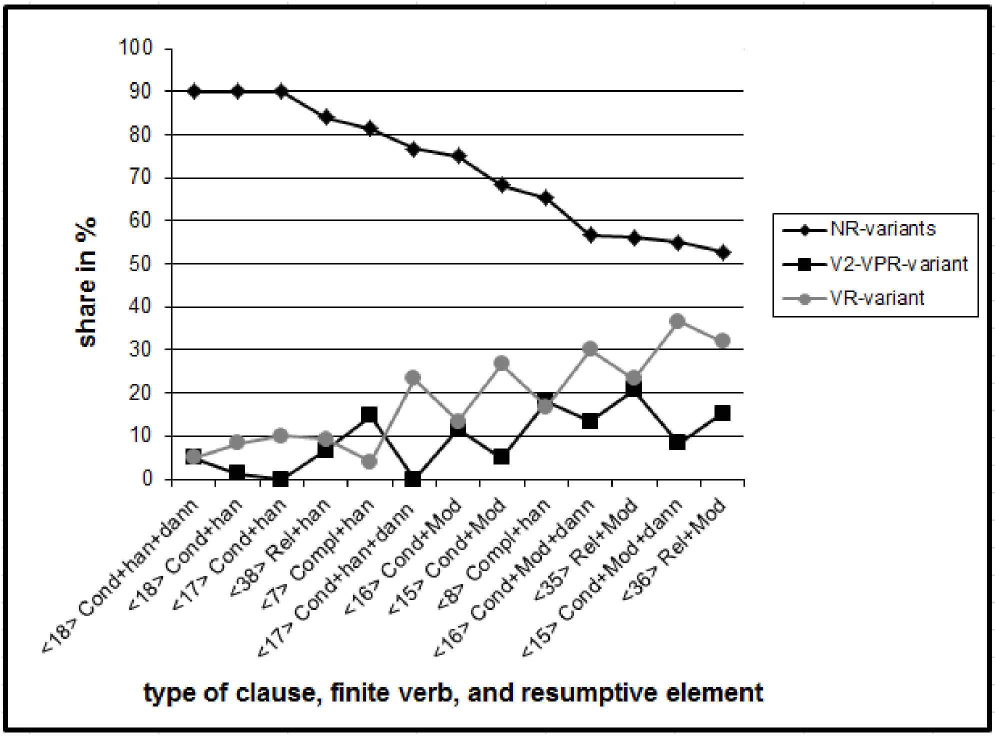
168 Aside from this type of deletion, the frequent lack of the finite temporal auxiliaries *sein* ('be') and *haben* ('have') in written German of the seventeenth, eighteenth, and nineteenth century is relevant here. VON POLENZ (1994: 278; cf. also HÄRD (1981: 88) and BREITBARTH (2005) for the more general auxiliary drop in Early Modern German) refers to ADMONI and states that the suppression of these verbs may have been used to indicate the lack of independence of subordinate clauses: "*Nach der Erklärung Admonis diente diese Satzbaumode dem Zweck, in komplexen Satzgefügen die Unselbständigkeit des Nebensatzes hervorzuheben: „Dies setzt die Nebensätze funktional-strukturell fast auf die gleiche Stufe wie die Infinitiv- und Präpositionalkonstruktionen und macht sie in noch höherem Grade als durch die Schlußstellung der finiten Verbalform der strukturellen Stütze von seiten des Hauptsatzes bedürftig.*"" [Translation by G.K.: According to Admoni, this syntactic fashion was applied in order to stress the dependency of subordinate clauses: "With regard to function and structure, this puts subordinate clauses almost on a par with infinitival and prepositional constructions and makes them even more dependent on the main clause than the final position of the finite verb."]

distribution is presented in Table 6-1 and illustrated in Figure 6-1. Both representations bring together the information of Tables 4-3 and 4-7. As before, the four conditional clauses are separated into those sentence compounds where the matrix clause features the resumptive element *dann* (‘then’) and those without this resumptive element (cf. especially (4-19a+b)). With this separation, Table 6-1 and Figure 6-1 enable us to gauge the influence of three structural factors, namely clause type, type of finite verb, and – for conditional clauses – the presence of a resumptive element. Due to this reduced number of factors, the comparisons carried out in this section are of a rather crude nature. Chapter 7 will offer more refined analyses for two of the three clause types, namely complement clauses (cf. Sections 7.1 and 7.2) and conditional clauses (cf. Section 7.3). These analyses will include additional factors such as the type of finite verb in the matrix clause in complement sentence compounds and the type of clausal subjects in conditional sentence compounds.

Table 6-1: Distribution of the basic cluster variants in nine dependent clauses with two verbal elements in five Mennonite colonies (Obj=ObjNP/PP)

	n	**NR-variants**	**V2-VPR-variant**	**VR-variant**
sequence		Obj-V2-V1	V1-Obj-V2	Obj-V1-V2
<18> conditional clause + *han* + *dann*	60	54 90%	3 5%	3 5%
<18> conditional clause + *han*	60	54 90%	1 1.7%	5 8.3%
<17> conditional clause + *han*	60	54 90%	0 0%	6 10%
<38> relative clause + *han*	150	126 84%	10 6.7%	14 9.3%
<7> complement clause + *han*	150	122 81.3%	22 14.7%	6 4%
<17> conditional clause + *han* + *dann*	60	46 76.7%	0 0%	14 23.3%
<16> conditional clause + modal verb	60	45 75%	7 11.7%	8 13.3%
<15> conditional clause + modal verb	60	41 68.3%	3 5%	16 26.7%
<8> complement clause + *han*	150	98 65.3%	27 18%	25 16.7%
<16> conditional clause + modal verb + *dann*	60	34 56.7%	8 13.3%	18 30%
<35> relative clause + modal verb	150	84 56%	31 20.7%	35 23.3%
<15> conditional clause + modal verb + *dann*	60	33 55%	5 8.3%	22 36.7%
<36> relative clause + modal verb	150	79 52.7%	23 15.3%	48 32%

Figure 6-1: Basic distribution of verb clusters in thirteen clausal constellations (cf. Table 6-1; Cond=conditional; Rel=relative; Compl=complement; Mod=modal verb)



The share of the NR-variants serves as an ordering device for both Table 6-1 (column *NR-variants*) and Figure 6-1 (upper black graph). When contrasting the NR-variants with the raised V(P)R-variants, thus focusing on verb projection raising, it turns out that the most powerful factor seems to be the type of finite verb. This is not the main interest of Chapter 6, but it is not surprising either since this factor has been frequently shown to affect verb cluster formation. The NR-variants are especially frequent in subordinate clauses with the temporal auxiliary *han* ('have'). All clauses that exhibit a share higher than 80% feature this auxiliary (first block in Table 6-1). The lowest share of the seven clauses with *han* is 65.3% (complement clause of sentence <8>).[169] In contrast, just two clauses with a modal verb exhibit shares above 60%[170] and the four clauses with a share of less than 60% all feature a modal verb (last block of Table 6-1). Due to this difference, the temporal auxiliary *han* can be said to hamper verb projection raising.[171] This result coincides with the facts for Swiss

[169] One must not forget however that the actual share of the NR-variants in the conditional clauses of sentence <17> is roughly 10% lower and thus comparable to the complement clause of sentence <8>. The reason for this is that the non-V2-VPR-variant with the sequence *adverb-V1-ObjNP-V2* was excluded from the basic distribution (cf. point (c) in Section 4.1).

[170] Again, the actual share of the NR-variants in the conditional clause of sentence <15> is somewhat lower, roughly 5%, since the two variants with the sequences *adverb-V1-ObjNP-V2* and *ObjNP-V1-adverb-V2* were excluded (cf. again point (c) in Section 4.1).

[171] A statistical comparison between the clauses featuring *han* ('have') and the clauses featuring a modal verb can be carried out for the conditional clauses (sentences <15> through <18> with or without resumptive elements) and for the relative clauses of sentences <36> and <38>. The tokens of sentence <35> were not considered because their relative marker functions as an object, not as a subject. The clauses with *han* feature the NR-variants in 85.6% of the tokens (334 of 390 tokens), while the clauses with modal verbs do so in 59.5% of

German, Dutch, and Early New High German (cf., e.g., Seiler 2004: 371; Penner 1990: 168; Lötscher 1978: 10; Zwart 1996: 233; Barbiers 2005: 248–255; and Ebert 1981: 228).[172] One explanation for this differing behavior could be the fact that temporal auxiliaries contain little semantic content. With regard to verbs of main clauses, Lehmann (1988: 204 – Figure 4) regards these auxiliaries as more grammaticalized than modal verbs. It may be due to this that an early appearance of modal verbs, but not of temporal auxiliaries, is important for parsing.

In order to make the most of the extant data set, we will now carry out a binary logistic regression analysis with regard to verb projection raising. In this analysis, we will not just use the tokens of the basic distribution, but almost all tokens that were employed in index formation. Because of this, the three sociolinguistic variables *age*, *sex*, and *origin*, which were controlled for in the basic distribution, enter the model aside from the structural factors *clause type* and *type of finite verb*. In order to make the analysis more coherent, all tokens of sentences <15> and <17> were excluded due to the presence of adverbs. In total, there are 1,548 tokens; 556 of them feature one of the two raised cluster variants. The five independent variables are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of finite verb (2 variants; contrasting variant *han*): *han*; modal verb

Clause type (3 variants; contrasting variant *relative clause*): relative clause; complement clause; conditional clause

Origin (6 variants; contrasting variant *Brazil*): Brazil; USA; Mexico; Bolivia; Menno (Paraguay); Fernheim (Paraguay)

Metrical variable

Age

The presence of resumptive elements cannot be used as an independent variable since they only occur in conditional sentence compounds. Table 6-2 presents the results of the binary logistic regression analysis (cf. the discussion of Table 5-38 and Footnotes 148 and 149 for further explanations of this method):

---

the cases (232 of 390 tokens) (χ^2 (1, n=780) = 67, p=0*** Phi: -0.29 / 0 cells with less than 5 expected tokens (VPR- and VR-variant pooled together)). The exclusion of the two somewhat problematic variants in the conditional clauses of sentences <15> and <17> (cf. Footnotes 169 and 170 in this chapter) should not skew this picture, because one of them features a modal verb and the other one the temporal auxiliary *han*.

[172] This result is also in accordance with the comment in Schnitzspahn and Rudolph's (1995: 47) SG language course book for Paraguayan speakers of MLG. Discussing modal verbs, they write: "*Stellung im Nebensatz: immer am Ende des Satzes*" [translation by G.K.: Position in the subordinate clause: always at the end of the clause]. No such comment can be found with regard to the temporal auxiliary *haben* ('have').

Table 6-2: Binary logistic regression analysis (method: stepwise forward conditioned) for verb projection raising in dependent clauses with two verbal elements (NR-variants vs. V(P)R-variants)

origin	**type of finite verb**	**clause type**	**age**
Wald: 292***	Wald: 157.5***	Wald: 69***	Wald: 50.9***
USA (12.1***)	modal verb (13.4***)		
Mexico (3.4***)		complement clause (3.6***)	
Brazil Bolivia	***han***	**relative clause**	
		conditional clauses (0.55***)	**age** (0.96***)
Menno (0.15***) Fernheim (0.09***)			

The only variable that is not selected is the informants' sex. The four selected predictor variables "account" for more than half of the extant variation, precisely for 51.9% (Nagelkerkes R-square: 0.519; Cox & Snell R-square: 0.379). The informants' origin is the first variable selected and has the highest impact. The probability for the two raised cluster variants in the US-American colony is 12.1 times higher than in Brazil, while it is 11.1 times lower (1:0.09) in Fernheim. In spite of these huge differences, both structural variables are selected too, i.e. both of them improve the model. After the discussion of Table 6-1 it should not come as a surprise that the type of finite verb is more important (cf. the widely differing Wald-values of *type of finite verb* and *clause type* in Table 6-2). A modal verb's probability to appear in a raised cluster variant is 13.4 times higher than that of the temporal auxiliary *han*. For complement clauses, the increase in probability is much lower at 3.6. Conditional clauses reduce the probability by 1.8 (1:0.55). The last factor selected is age. A thirty-year old informant is 1.5 times more likely ($(1{:}0.96)^{10}$) to produce a raised variant than a forty-year old informant. This suggests that verb projection raising in MLG constitutes an innovation that is probably gaining more and more ground. It is important to realize that nothing changes in this regression analysis if we take out the 289 conditional clauses with a resumptive element in the matrix clause and the 28 disintegrated conditional clauses (cf. Section 7.3 for detailed analyses). This means that the reduced model selects the same four variables and that the variants' behavior with regard to the contrast variant does not change in any significant way.

In order to evaluate the role of scrambling, the two raised variants, i.e. the scrambled VR-variant and the unscrambled V2-VPR-variant, will be contrasted. This second round of comparisons is necessary, if we want to understand the precise connection of the V2-VPR-variant and syntactic (dis)integration. The reader must not forget that the finite verb will always follow the non-finite verb if verb projection raising does not take place, i.e. unraised cluster variants cannot possibly surface as V2-clauses. Raising, however, is only a necessary, not a sufficient condition for V2-clauses. Only the combination of raising and the lack of scrambling can, but still need not lead to the V2-VPR-variant (cf. the non-V2-VPR-variant discussed in the first part of In-Depth Analysis 5.1.4).

Comparing the two raised variants in Table 6-1 and Figure 6-1, clause type seems to be more important than the type of finite verb.[173] Eight of the thirteen clauses show a clear preference for either the VR-variant or the V2-VPR-variant (shaded cells in the respective columns). In seven of these eight clauses, all of them conditional and relative clauses, the VR-variant is preferred over the V2-VPR-variant.[174] Furthermore, one can see that three of the four conditional clauses show a higher share of the VR-variant if the resumptive element *dann* ('then') is present in the matrix clause. The exception to this is sentence <18>. The only clause showing a clear preference for the V2-VPR-variant is the complement clause of sentence <7>. The question now arises why complement clauses, but not relative and conditional clauses, show a tendency to further the appearance of the V2-VPR-variant.[175] According to the assumption that dependent V2-clauses indicate a low degree of syntactic integration, relative and conditional clauses have to be considered more integrated than complement clauses.

Before drawing such far-reaching conclusions, we should, however, support the possibly defective monofactorial analysis with a multifactorial binary logistic regression analysis. Unfortunately, we cannot include the clauses from the second approach to scrambling, the one using the sequence of ObjNPs and adverbs (cf. Section 4.3.3). The reason for this is that most of these tokens stem from sentences <15> and <17>, precisely the sentences not considered in the regression analyses. Aside from this, many tokens of this approach feature one or three verbal elements (cf. Table 4-11). This leaves us with 556 tokens that feature one of the two raised cluster variants (219 with the V2-VPR-variant). The independent variables entering the model are identical to the ones in Table 6-2.

---

[173] At this point, we group the clauses according to their introductory element. There is, however, a significant difference between the two complement clauses with regard to the preference for either the V2-VPR-variant or the VR-variant. Sections 7.1 and 7.2 will show that this difference stems from the different shapes of the matrix clauses in sentences <7> and <8>. The conditional and relative clauses do not show a significant internal difference with regard to the two raised cluster variants. The reader will obtain a more detailed analysis of conditional sentence compounds in Section 7.3.

[174] Again, the complete absence of the VPR-variants in the conditional clause of sentence <17> (with or without the resumptive element *dann*) is a consequence of the exclusion of the non-V2-VPR-variant with the sequence *adverb-V1-ObjNP-V2*. If included, the share of the non-V2-VPR-variant would not exceed 10% though, i.e. it would still be lower than the share of the VR-variant. The same is true for the conditional clause of sentence <15>. In this case, the share of the VPR-variants would rise by 5%. In addition, the share of the VR-variant would also rise a little bit due to the tokens with the scrambled sequence *ObjNP-V1-adverb-V2*. Therefore, the relative distribution between the VPR-variants and the VR-variants would not change either.

[175] Only analyzing dependent clauses with *han* in the raised cluster variants, the complement clauses of sentences <7> and <8> show 49 tokens with the V2-VPR-variant (61.3% of the 80 raised tokens). This share is higher than that of the relative clause of sentence <38> (10 tokens, i.e. 41.7% of 24 raised tokens) and that of the conditional clause of sentence <18> with or without resumptive elements (4 tokens, i.e. 33.3% of 12 raised tokens). The distribution, however only reaches a statistical tendency: χ^2 (2, n=116) = 5.2, p=0.073$^{(*)}$ / Cramer's V: 0.21 / 0 cells with less than 5 expected tokens. Tokens of sentence <17> were again excluded. This is especially important here since none of them features the finite verb in second position.

Table 6-3: Binary logistic regression analysis (method: stepwise forward conditioned) for scrambling in dependent clauses with two verbal elements (VR-variant vs. V2-VPR-variant)

clause type	**origin**	**age**
Wald: 29.4***	Wald: 12.9***	Wald: 4.3*
complement clause (3***)		
relative clause conditional clauses	**Brazil** USA Bolivia Menno Fernheim	
	Mexico (0.48**)	**age** (0.99*)

Three of the five variables are selected as they significantly improve the model. They "explain" only 10.8% of the extant variation though (Nagelkerkes R-square: 0.108; Cox & Snell R-square: 0.08). This low share is due to the multitude of structural factors which are sensitive to scrambling, but cannot be included here since they are clause type specific. They will, however, be included in Chapter 7. Despite the low share, the central role of the V2-VPR-variant of indicating clausal disintegration is illustrated by the fact that clause type is the predictor variable selected first. There is no difference between relative and conditional clauses, but the probability that complement clauses appear together with the V2-VPR-variant is three times higher than for relative clauses.

The second selected factor is origin. The fact that its contribution is much weaker than in verb projection raising (cf. Table 6-2) is expected since there was no significant difference in the monofactorial analysis carried out with regard to scrambling (cf. Table 4-18). Only the Mexican colony lowers the probability of the V2-VPR-variant by a factor of 2.1 (1:0.48). This does not mean that Mexican informants do not use the V2-VPR-variant to indicate clausal disintegration – they definitely do this –, it just means that they use the VR-variant more frequently than the informants of the other colonies. The US-American colony, which shows the highest absolute share of the VR-variant, is very close to being separated from the contrastive variant *Brazil* as well (p=0.105).[176] Age is selected last and its impact is rather weak, much weaker than its impact on verb projection raising in Table 6-2. The probability for the V2-VPR-variant to appear instead of the VR-variant is 1.1 times higher for a thirty-year old informant than for a forty-year old informant ($(1{:}0.99)^{10}$).

With these results, verb projection raising, but not scrambling, is once again proven to be a syntactic mechanism that separates colonies and informants in a non-haphazard way. Furthermore, it becomes clear that the type of finite verb is important in order to set the stage for the use of cluster variants as indicators of different degrees of clausal disintegration, since they strongly further or hamper the appearance of the derived verbal sequence *verb1-verb2*.

[176] If we take out the ninety conditional clauses with a resumptive element in the matrix clause and the eighteen disintegrated conditional clauses, the variable *origin* is no longer selected. Clause type and age are still selected and behave in the same way.

However, once this sequence is achieved, the type of finite verb does not play a role anymore and the clause type takes over. As clause type was selected in both regression analyses and as complement clauses lead to higher probabilities of raised variants in general and of the V2-VPR-variant in particular, the effect of disintegration in this clause type is clearly visible. Complement clauses have a higher probability to appear with the sequence *verb1-verb2* (cf. Table 6-2) and they use this higher share to produce a higher share of the V2-VPR-variant (cf. Table 6-3).[177]

So far, we have contrasted the NR-variants with the raised variants in order to tackle verb projection raising and we have contrasted the VR-variant and the V2-VPR-variant in order to tackle scrambling. Our major intention, however, is to highlight the unique V2-characteristic of the V2-VPR-variant. In order to do this, we have to contrast the non-V2-variants, i.e. the NR-variants and the VR-variant, and the V2-VPR-variant. Table 6-4 does this. The 1,548 analyzed tokens (219 tokens with the V2-VPR-variant) and the five independent variables are identical to the ones used in Table 6-2. Aside from this, the conditional clauses of sentences <17> and <18> are once more not included.

Table 6-4: Binary logistic regression analysis (method: stepwise forward conditioned) for the V2-characteristic in dependent clauses with two verbal elements (NR-variants/VR-variant vs. V2-VPR-variant)

origin	**clause type**	**type of finite verb**	**age**
Wald: 74.2***	Wald: 43.9***	Wald: 26.5***	Wald: 25.6***
USA (2.9***)	complement clause (4.2***)	modal verb (3.8***)	
Brazil Mexico Bolivia	**relative clause**	***han***	
	conditional clauses (0.64*)		**age** (0.97***)
Menno (0.25**) Fernheim (0.1***)			

The four selected tokens "account" for 21.6% of the variation (Nagelkerkes R-square: 0.216; Cox & Snell R-square: 0.121). Origin is the first selected variable, but it loses some of its predictive power in comparison to Table 6-2. Mexico is not distinguished from the contrast variant Brazil anymore and the distinctive power of the US-American colony is much smaller (2.9 instead of 12.1). Both clause type and type of finite verb are selected, but clause type reveals an overall stronger predictive power. This nicely illustrates our assumption that verb projection raising, which strongly depends on the type of finite verb, crosses the ball, but scrambling, which strongly depends on clause type, buries it in the net.

[177] For all tokens with *han* ('have') in Table 6-2, the two complement clauses have a share of 31.2% of the raised V(P)R-variants, the relative clause has one of 15.5%, and the two conditional clauses have one of 11.3% (ratio: 2.8 : 1.4 : 1). The share of the V2-VPR-variant is 19.2% in the complement clauses, 6.8% in the relative clause and 3.8% in the conditional clauses (ratio: 5.1 : 1.8 : 1). This means that the clausal spread of the V2-VPR-variant is more accentuated than the one of the two raised variables together.

The probability of the V2-VPR-variant rises by 4.2 in a complement clause as compared to a relative clause. Conditional clauses diminish this chance slightly by 1.6 (1:0.64). This difference disappears when we take out the 289 tokens with conditional clauses and resumptive elements and the 28 tokens with disintegrated conditional clauses. This is a clear indication for the integrative power of resumptive elements. Although disintegrated conditionals will be shown to co-occur frequently with the V2-VPR-variant, the vast majority of excluded tokens feature resumptive elements. Without them, more V2-conditional clauses surface and this causes the indistinctiveness between relative and conditional clauses. Modal verbs further the chance of the V2-VPR-variant, but like in the case of the US-American colony, the factor is much smaller than in Table 6-2 (3.8 instead of 13.4). Finally, the probability that the V2-VPR-variant is used is 1.4 times higher in younger informants in the case of a ten-year difference ($(1:0.97)^{10}$).

Combining the effect of these four factors, we can conclude that the chance of the V2-VPR-variant appearing in a complement clause with a modal verb produced by a thirty-year old US-American informant is 64.8 times higher (2.9 x 4.2 x 3.8 x 1.4) than the chance of its appearance in a relative clause with the temporal auxiliary *han* produced by a forty-year old Brazilian informant. In spite of the clear-cut results in Table 6-4, there may be a certain danger that some of these differences are model-dependent, stemming from the overarching influence of the informants' origin or from the fact that we did not include important informant-related information such as the informants' language competences or their raising and scrambling behavior. We will, therefore, offer two more regression analyses. If the results from these analyses remain stable with regard to the factor *clause type*, this will strongly support the hypothesis that there is a connection between a low degree of syntactic integration and a high share of the V2-VPR-variant.

In the first analysis, we investigate only the tokens of Flemish- and Dutch-type informants from the US-American and the Mexican colony. We restrict the analysis in this way in order to find out whether these raising-friendly North American informants also indicate different degrees of syntactic integration with the help of different probabilities for the V2-VPR-variant. The informants under analysis are responsible for 370 of the 556 tokens with raised cluster variants (66.5%) although they only produce 488 of the total of 1,548 tokens (31.5%). Among the 488 tokens, there are 118 translations with the NR-variants, 226 with the VR-variant, and 144 with the V2-VPR-variant. The tokens are produced by informants with an average raising value of +0.447 and an average scrambling value of +0.022. By way of comparison, the 1,548 tokens from Table 6-4 were produced by informants with a dramatically lower raising value of +0.058 and a comparable scrambling value of +0.001. The usual five independent variables enter the model of Table 6-5.

Table 6-5: Binary logistic regression analysis (method: stepwise forward conditioned) for the V2-characteristic in dependent clauses with two verbal elements produced by raising-friendly North American informants (NR-variants/VR-variant vs. V2-VPR-variant)

clause type	**age**	**type of finite verb**
Wald: 39.5***	Wald: 11.5**	Wald: 10.7**
complement clause (4.7***)		modal verb (2.9**)
relative clause		***han***
conditional clauses (0.48**)	**age** (0.97**)	

The three selected variables "account" for 16.6% of the variation (Nagelkerkes R-square: 0.166; Cox & Snell R-square: 0.116). The factor *origin* is not selected anymore, probably because only the tokens of raising-friendly informants in two raising-friendly colonies are included. The decisive result of Table 6-5 is that this restricted data set is even more discriminate with regard to clause type than the data set of Table 6-4. While the influence of age is identical, the probability for the V2-VPR-variant to appear in complement clauses is now 4.7 times higher than in relative clauses (4.2 in Table 6-4), while it is 2.1 times lower in conditional clauses (1:0.48; 1.6 in Table 6-4). Furthermore, the impact of modal verbs is only 2.9, while it was 3.8 in Table 6-4.[178] Thus, the profile of the factor *clause type* has been sharpened. Informants that predominantly produce the V2-VPR-variant are precisely the informants that put it to a functional use most effectively. This special role of raising-friendly informants will be a recurrent theme in the rest of this book (cf. especially In-Depth Analysis 7.2.4.2 and Section 8.2.3).

The second analysis tampers with two variables that could be said to represent something like noise. The basic question is what happens if we add the factors that are responsible for the V2-VPR-variant, i.e. the informants' raising and the scrambling index. Does their artificially created impact wipe out the effects of the other variables? As there are more changes in the independent variables used for this model, we will present all of them:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of finite verb (2 variants; contrasting variant *han*): *han*; modal verb

Clause type (3 variants; contrasting variant *relative clause*): relative clause; complement clause; conditional clause

[178] Just like in Table 6-4, the only change in the model, if we exclude the 105 conditional clauses co-occurring with a resumptive element and the 22 disintegrated conditional clauses, is that the difference between relative and conditional clauses disappears.

Metrical variables

Age
Competence in MLG
Competence in the majority language (English, Spanish, or Portuguese)
Competence in SG
Raising index
Scrambling index

One of the additional changes is that the competences in MLG, in SG, and in the majority language are added. Moreover, the factor *origin* has to be excluded, since this factor correlates strongly with most of the metrical variables (the exceptions are *age* and *scrambling*). Between the six metrical variables, there is only one correlation that surpasses an r-value of 0.4. The raising index correlates negatively with the competence in SG at -0.51**, i.e. informants with a high competence in SG raise less frequently than informants with a low competence in SG. This correlation is not ideal, but we do not consider a co-variance of 26% excessive. Table 6-6 presents the results for the 1,273 tokens (169 tokens of the V2-VPR-variant), for which all information with regard to the informants' language competences and syntactic behavior are available:

Table 6-6: Binary logistic regression analysis (method: stepwise forward conditioned) for the V2-characteristic in dependent clauses with two verbal elements (NR-variants/VR-variant vs. V2-VPR-variant)

raising index	**scrambling index**	**clause type**	**type of finite verb**
Wald: 155.6***	Wald: 139.4***	Wald: 42.6***	Wald: 32.1***
raising (257.3***)			
		complement clause (8.5***)	modal verb (8.6***)
		relative clause	***han***
		conditional clauses (0.54*)	
	scrambling (0.003***)		

The four selected tokens "account" for 55.4% of the extant variation (Nagelkerkes R-square: 0.554; Cox & Snell R-square: 0.301). Quite unsurprisingly, the bulk of this substantial share is due to the raising and the scrambling index. After the selection of these two variables, 48.4% of the variation is already accounted for. We will not discuss this huge impact, since it is artificial, i.e. it stems from the fact that the appearance of the V2-VPR-variant was used for the measurement of the two indexes. The important point of Table 6-6 is that unlike sex, unlike the language competences, and unlike age, both structural factors, i.e. clause type and type of finite verb, still improve the model in a significant way. Both the profile of complement clauses and that of modal verbs are strongly sharpened, i.e. in comparison to the figures of Table 6-4, the rise in the probability of the V2-VPR-variant is much bigger (8.5 and 8.6 instead of 4.2 and 3.8, respectively). Even the diminishing effect of conditional clauses is somewhat stronger at 1.9 (1:0.54; 1.6 in Table 6-4). The robustness of the results in Tables 6-4 through 6-6 (cf. also Tables 6-11 and 6-12) allow us to establish the following hierarchy with regard to clausal (dis)integration:

(6-20) extraposed complement clause << relative clause < conditional clause

This hierarchy is to be read as in (6-4) through (6-6). The complement clauses used in the process of index formation are profoundly more disintegrated and thus show many more superficial V2-clauses than the relative clauses. The relative clauses for their part are slightly more disintegrated than the conditional clauses. As we will see in Sections 7.1 and 7.2 that most complement clauses of the MLG data set are more affine to the V2-VPR-variant than the two clauses used for index formation, we feel confident in claiming that the first part of the hierarchy in (6-20) is valid for MLG in general. Complement clauses are syntactically less integrated than relative and conditional clauses. This part of the hierarchy can also be assumed for Afrikaans. Stell (2011: 180) writes that his analyses show "that *dat*-clauses are most likely to have V2, followed by *w*-clauses and other clauses […]". Unfortunately, it is not entirely clear, what the labels *w*-clauses and other clauses precisely refer to, but in any case, the isolated position of *dat*-clauses is decisive for the comparison with MLG.

We are a little less sure about the second part of the hierarchy in (6-20), since we will see in Section 7.3 that the pooling of sentence compounds with or without resumptive elements and the small share of disintegrated conditional clauses may have skewed the results. Obviously, the same is true for the three relative clauses, which are not entirely homogenous either (e.g., with regard to the function of the relative marker). We will not dedicate much space to relative clauses in the rest of this book (but cf. Excursus 7.2.2.1 and Section 8.2.2), but one conclusion by Axel (2007) about Old High German is confirmed by the MLG data set and may widen the distance in integration between relative and conditional clauses. Axel (2007: 85) writes that "[t]he preposing of the finite verb is dispreferred in those cases where the finite verb would appear directly to the right of a relative or adverbial subordinator […]." In our case, direct adjacency can only happen in relative clauses in which the relative marker functions as a subject. If such a clause features the V2-VPR-variant – not a case of preposing of the finite verb in our opinion –, the constellation mentioned by Axel follows automatically as in (6-21a):

stimulus <36> English: **The doctor who wants to see my foot is very worried**
Spanish: **El doctor que quiere ver mi pie está muy preocupado**

(6-21) a. *de Doktor waut will min Fut sehen is sehr bekümmert* (USA-6; m/20/E>MLG-79%)
the doctor that.RELATIVE MARKER wants.VERB1 my foot see.VERB2 is very worried

b. *de Doktor waut da will: minen Fuut sehen is sehr besorgt* (Mex-26; m/34/MLG)
the doctor that 'there'.RELATIVE MARKER wants.VERB1 my foot see.VERB2 is very worried

The V2-VPR-variant is more frequent in MLG relative clauses in which the relative marker functions as an object. In this case, the relative marker is followed by the subject in the MLG data set preventing the seemingly dispreferred adjacency of relative marker and finite verb as in (6-21a). As two of the three relative clauses used for index formation feature relative markers in the subject function, the actual share of relative clauses with the V2-VPR-variant may be higher thus enlarging the difference in comparison to conditional clauses. The translation in (6-21b) exhibits an interesting way to avoid the adjacency of relative marker and finite verb. Informant Mex-26 inserts the particle *da* (etymologically the locative adverb 'there'), which exclusively occurs when the relative marker functions as a subject and can, therefore, be classified as an underspecified subject pronoun (cf. the discussion in Section 8.2.2). Twelve of the thirteen tokens that feature the complex relative marker *waut da* and a raised cluster variant occur with the V2-VPR-variant. As this is the marked raised variant in relative clauses, the insertion of *da* in (6-21b) may indeed function as a device with which to avoid the adjacency of relative markers and finite verbs. Despite this highly interesting topic, we will now leave the realm of complement, relative, and conditional clauses and turn to extraposed causal clauses, by far the most disintegrated type of dependent clauses in the MLG data set.

6.3 Causal clauses in the North American colonies

So far, we have only analyzed causal clauses from the South American colonies. Section 5.1.4 dealt with sentences <26> *He needs glasses, because he can't see the blackboard* and <27> *I will give him a good grade, because he has read the book*, and revealed that South American informants treat causal clauses in the same way they treat non-causal clauses. Raising-unfriendly German-type informants produce the NR-variants more frequently than raising-friendly Flemish- and Dutch-type informants, while scrambling-friendly German II- and Dutch-type informants produce more tokens of the scrambled VR-variant than scrambling-unfriendly German I- and Flemish-type informants (cf. Tables 5-16 and 5-17). South American causal clauses with one verbal element were the focus of Section 5.5.6. In that section, it could be shown that the rare non-verb-final variant is produced most frequently by Flemish-type informants and least frequently by German II-type informants (cf. Table 5-41). This follows the same pattern found in North American and Brazilian non-causal clauses with one verbal element (cf. Table 5-34).

The question now is how North American informants treat causal clauses. It was claimed on several occasions that most of these informants have reanalyzed causal clauses as structural V2-clauses. We have, however, not yet offered conclusive analyses for this assumption. Section 6.3 will close this gap. With regard to causal clauses with two verbal elements, Section 6.3.1 will show that there remain only few superficial V2-clauses with the V2-VPR-variant. The vast majority are structural V2-clauses with the finite verb in the head position of CP. Section 6.3.2 will then investigate causal clauses with one verbal element. Both these sections are token-based. Section 6.3.3 will then adopt an informant-based point of view, i.e. it will identify two groups of informants, one that apparently has completed the assumed reanalysis and one that has not (yet) done so. The behavior of these two groups will then be checked in other syntactic contexts.

6.3.1 Sentences <26> and <27>: Causal clauses with two verbal elements

If the North American informants really treat causal clauses differently than other clause types, the distribution among the four CLUSTERS and the indexes for verb projection raising and scrambling should not be able to explain the extant variation. The tokens in (6-22a-f) and (6-23a-c) illustrate the existing cluster variants in sentences <26> and <27>:

stimulus <26> English: **He needs glasses, because he can't see the blackboard**
Spanish: **(Él) Necesita lentes porque no puede ver el pizarrón**

(6-22) a. *ihm fehlt ne Brill wejen her die Waundtofel nich sehen kann* (USA-36; m/28/E>MLG-71%)
him lacks a glass because he the blackboard not see-VERB2 can-VERB1

b. *hei oder sei [0.4] soll ne Brill bruuken wegens der nich die: Wandtofel sehen kann* (Mex-30; f/42/MLG)
he ~~or~~ ~~she~~ […] ~~should~~ a glass use because he not the blackboard see-VERB2 can-VERB1

c. *her fehlt ne Brill wejens her nich die blackboard kann sehen* (USA-75; m/17/E>MLG-64%)
he lacks a glass because he not the blackboard can-VERB1 see-VERB2

d. *ihm fehlt ne Brill weil hei nich kann de:r [0.6] Wondtofel sehen* (USA-79; m/68/MLG)
him lacks a glass because he not can-VERB1 the.DAT […] blackboard see-VERB2

e. *ihm fehlt ne Brill wejen hei kann nich die Waundtofel sehen* (USA-1; f/29/MLG)
him lacks a glass because he can-VERB1 not the blackboard see-VERB2

f. *dei bruukt die Brill wegen andersch kann her daut gar nich sehen waut da an der Wandtafel is* (Mex-21; m/45/MLG)
he needs the glass because ~~otherwise~~-ADVERB can-VERB1 he-SUBJECT that ~~at-all~~ not see-VERB2 ~~that~~ ~~'there'~~ ~~on the blackboard~~ ~~is~~
'He needs glasses because otherwise he cannot see the things which are on the blackboard'

stimulus <27> English: **I will give him a good grade, because he has read the book**

(6-23) a. *ik will ihm e gute Grod geben because her daut Bük gelest haft* (USA-30; m/39/S>MLG-∅)
I want him a good grade give because he the book read-VERB2 has-VERB1

b. *ik wer ihm en guten [2.7] Grade gewen wejens hei die*[179] *Bük haf gelest* (USA-66; m/16/E>MLG-43%)
I will him a good […] grade give because he the.REDUCED book has-VERB1 read-VERB2

c. *ik wer den ne gute Grade gewen wejen der haft daut Bük gelest* (USA-69; m/29/E>MLG-71%)
I will him a good grade give because he has-VERB1 the book read-VERB2

Token (6-22a) represents the scrambled NR II-variant, while token (6-22b) represents the unscrambled NR I-variant. Interestingly, in this case the informant's vacillation with regard to

[179] In (6-23b), the change from the expected neuter form *daut* to the phonetically light form *die* in *die Bük* ('the book') is a second counterexample to the assumption that definite articles in scrambled ObjNPs tend to be phonetically heavy (cf. the first part of Excursus 4.6.1).

the sex of the pronoun (*hei oder sei*; ‘he or she’) is surprising since the interviewer used the masculine pronoun in the stimulus sentence. In any case, due to its unique occurrence and due to the fact that there is no negation particle in sentence 27 (cf. (6-23a)), we will not distinguish the two NR-variants in the following analyses. Tokens (6-22c) and (6-23b) represent the scrambled VR-variant. The translation in (6-22d) displays the definitely unscrambled non-V2-VPR-variant, while (6-22e), already presented as (1-12), and (6-23c) either illustrate the unscrambled V2-VPR-variant or structural V2-clauses. A first strong indication for the latter assumption comes from the extant prefield in (6-22f). The translation of informant Mex-21 deviates strongly from the stimulus sentence and will, therefore, not be included in the following analyses. Nevertheless, his deviation makes it clear that he treats causal clauses as structural V2-clauses since the adverb *andersch* (‘otherwise’) is topicalized and surfaces in front of the finite verb *kann* (‘can’), which itself surfaces in front of the subject pronoun *her* (‘he’). Due to the fact that the finite verb appears in front of the subject pronoun, it must occupy the head position of CP. Thus, *andersch* can only occupy Spec/CP, i.e. the prefield in a topological perspective.

As Table 5-40 has shown that the US-American informants produce more V2-causal clauses than the Mexican informants, we will carry out separate analyses. In Section 5.1.4, we briefly indicated the distribution of the North American tokens separately for sentences <26> and <27>. Here, we will pool the translations of the two clauses. One consequence of this is that some tokens of sentence <26> that were excluded in Section 5.1.4 can be included in Tables 6-7 and 6-8. Such tokens are, for example, translations with a missing negation particle. Table 6-7 presents the US-American distribution:

Table 6-7: Distribution of the basic cluster variants in the causal clauses of sentences <26> and <27> in the USA separated by the informants’ raising and scrambling behavior (definite ObjNPs; finite verb *han* or modal verb; scrambl.=scrambling)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	114	115	2	17	25	69	113
NR-variants	4	5	0	1	1	2	4
ObjNP-V2-V1	+0.298	+0.172	0%	5.9%	4%	2.9%	3.5%
	ns	ns	χ^2 (9, n=113) = 58.9, p=0*** / Cramer’s V: 0.42 / 13 cells (81.3%) with less than 5 expected tokens				
‘V2-VPR-variant’	105	105	1	16	24	63	104
V1-ObjNP-V2	+0.393	+0.038	50%	94.1%	96%	91.3%	92%
VPR-variant II	1	1	1	0	0	0	1
neg-V1-ObjNP-V2	+0.012	-0.183	50%	0%	0%	0%	0.9%
VR-variant	4	4	0	0	0	4	4
ObjNP-V1-V2	+0.409	+0.1	0%	0%	0%	5.8%	3.5%

Table 6-7 exhibits a conspicuous absence of variation. The ‘V2-VPR-variant’ accounts for 92% of all tokens. In view of this, it does not come as a surprise that there is hardly any difference between the four CLUSTERS with regard to this variant. The apparent drop in the share of the German I-type informants need not concern us, since this CLUSTER contributed only two tokens. The fact that raising-unfriendly German II-type informants and scrambling-friendly Dutch-type informants behave similarly to raising-friendly and scrambling-unfriendly Flemish-type informants supports the assumption that most US-American informants treat causal clauses differently from complement, conditional, and relative clauses.

The few non-V2-tokens nevertheless adhere to our expectations, i.e. they are produced by informants that treat all four dependent clause types more or less alike. The four tokens with the scrambled VR-variant are found exclusively among raising- and scrambling-friendly Dutch-type informants, whereas the one token of the unscrambled non-V2-VPR-variant (labeled *VPR-variant II*) comes from a scrambling-unfriendly German I-type informant. Finally, raising-unfriendly informants produce 5.3% of the NR-variants (1 of 19 tokens), while this share is slightly smaller for raising-friendly informants (3.2%; 3 of 94 tokens). It is these rare non-V2-tokens that cause the highly significant distribution. The result is not very reliable though because there are many cells with less than five expected tokens. The low reliability is confirmed by the fact that the indexes do not show significant differences. As the index values are of more importance, the assumption of reanalysis of causal clauses in the United States in supported. Table 6-8 presents the distribution for the Mexican tokens:

Table 6-8: Distribution of the basic cluster variants in the causal clauses of sentences <26> and <27> in Mexico separated by the informants' raising and scrambling behavior (definite ObjNPs; finite verb *han* or modal verb; scrambl. = scrambling)

	raising index	**scrambl. index**	**German I informants**	**German II informants**	**Flemish informants**	**Dutch informants**	**Total**
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	147	146	8	53	24	55	140
NR-variants	35	34	2	21	2	9	34
ObjNP-V2-V1	+0.07	+0.105	25%	39.6%	8.3%	16.4%	24.3%
	F (3,143) = 4.7, p=0.004**	F (3,142) = 2.9, p=0.036*	χ^2 (6, n=140) = 19.2, p=0.024* / Cramer's V: 0.21 / 9 cells (56.3%) with less than 5 expected tokens				
'V2-VPR-variant'	109	108	6	32	21	44	103
V1-ObjNP-V2	+0.219	+0.05	75%	60.4%	87.5%	80%	73.6%
VPR-variant II	1	1	0	0	1	0	1
neg-V1-ObjNP-V2	+0.386	-0.479	0%	0%	4.2%	0%	0.7%
VR-variant	2	3	0	0	0	2	2
ObjNP-V1-V2	+0.68	+0.206	0%	0%	0%	3.6%	1.4%

Table 6-8 represents an intermediate stage between the South American distribution in Tables 5-16 and 5-17 and the US-American distribution in Table 6-7. Like in the United States, the tokens with the NR-variants show a concentration in the two German-type CLUSTERS (37.7% (23 of 61 tokens) as compared to 13.9% (11 of 79 tokens) for the raising-friendly CLUSTERS). Like in the United States, the two tokens with the scrambled VR-variant come from the scrambling-friendly Dutch-type CLUSTER, while the unscrambled non-V2-VPR-variant (again labeled *VPR-variant II*) is produced by a scrambling-unfriendly Flemish-type informant. The most important similarity, however, is that the vast majority of tokens again feature the ‘V2-VPR-variant’. This concentration is less marked though, i.e. 26.4% of the tokens – as opposed to 8% in the USA – still signal that causal clauses are not uniformly V2-clauses.

The most important stochastic difference to the US-American situation is that not only the frequency distribution, but also both indexes in Mexico show significant differences. As expected, the raised variants are produced by informants with a higher raising value than the NR-variants. The scrambling values for the NR-variants, the non-V2-VPR-variant, and the VR-variant are also inconspicuous. It is the high scrambling value of the ‘V2-VPR-variant’ that sticks out suggesting that the Mexican colony is also en route to reanalysis. The value of +0.05 is comparable to that of the US-American informants, which is +0.038, but much higher than the South American values of -0.147 and -0.143, respectively (cf. Table 5-16 and 5-17). This difference can only be explained by a high number of scrambling-friendly US-American and Mexican informants that contribute to the pool of tokens of the supposedly unscrambled ‘V2-VPR-variant’. It is important to realize, however, that this does not necessarily mean that scrambling-friendly informants have stopped scrambling all of a sudden. They may still scramble, but their scrambling does not have a visible effect if the finite verb occupies the head position of CP, a position which surfaces to the left of both unscrambled and scrambled ObjNPs/PPs. We will come back to this point in the discussion of Table 6-12.

In order to capture the process of reanalysis of causal clauses more precisely, we will offer two figures that focus on the NR-variants, the most frequent non-V2-variants. These variants account for 42% of all CLUSTER-based tokens in all colonies in sentences <26> and <27> (200 of 476 tokens). The first figure is the share of tokens from the German-type informants in one colony among all causal clauses of that colony. This figure tells us how raising-unfriendly a particular colony is. The second figure is the share of causal clauses with the NR-variants in one colony among all German-type causal clauses of that colony. This figure tells us how raising-unfriendly the raising-unfriendly German-type informants really are. In South America, 196 of 223 tokens stem from the two German-type CLUSTERS (87.9%); 153 of these 196 tokens feature the NR-variants (78.1%).[180] In Mexico, 61 of the 140 tokens are produced by German-type informants (43.6%); 23 of these 61 tokens display the NR-variants (37.7%). In the United States, nineteen of the 113 tokens are produced by German-type informants (16.8%); only one of these nineteen tokens features a NR-variant (5.3%).

[180] In the Paraguayan colonies, 96.7% of the tokens come from the raising-unfriendly German-type informants (117 of 121 tokens); 83.8% of these tokens feature the NR-variants (98 of 117 tokens). In Brazil, these shares are 77.5% (69 of 89 tokens) and 76.8% (53 of 69 tokens); in Bolivia, 76.9% (10 of 13 tokens) and 60% (6 of 10 tokens).

Beginning with South America and proceeding north to Mexico and then to the United States, the share of tokens that come from the raising-unfriendly German-type informants steadily declines (87.9% – 43.6% – 16.8%). Parallel to this, the raising-unfriendly German-type informants seem to become more and more raising-friendly, because their share of the NR-variants also declines steadily. This figure starts at 78.1% and drops to 37.7% and finally to 5.3%. The hedging expression *seem to become more and more raising-friendly* is used deliberately since the behavioral difference between Mexican and US-American German-type informants is independent from their raising behavior. While the South American German-type informants exhibit a very low raising value of -0.206 (-0.26 in Paraguay; -0.14 in Brazil, -0.037 in Bolivia), there is no significant difference between Mexican informants in Table 6-8 and US-American informants in Table 6-7. German-type informants from Mexico have a raising value of -0.051, those from the USA one of -0.008. These comparable figures suggest that the difference in causal clauses is caused by the fact that there are more US-American structural V2-causal clauses than Mexican ones.

Dividing the share of tokens with the NR-variants in all German-type causal clauses in one colony by the share of these tokens in all causal clauses in this colony, we obtain another interesting piece of information. This calculation yields a ratio of 0.89 for South America (78.1% : 87.9%; Paraguay: 0.87; Brazil: 0.99; Bolivia: 0.78), one of 0.86 for Mexico (37.7% : 43.6%), and one of 0.32 for the USA (5.3% : 16.8%). The outstanding US-American ratio can be translated in the following way. The demise of causal clauses featuring the NR-variants produced by the German-type informants is roughly three times faster than the demise of German-type informants in general. In South America and in Mexico, the speed of the two processes is roughly comparable. This again points to a more advanced process of reanalysis in the US-American colony.

Comparing the tokens with the non-V2-VPR-variant and the tokens with the 'V2-VPR-variant' offers another interesting insight. These variants appear ten and 123 times in sentence <26>, respectively (only tokens with negation particles). Eight of the 34 South American tokens (23.5%) feature the negation particle *nich* in front of both verbal elements as in (6-22d) and not between them as in (6-22e). In Mexico and the USA, the comparable shares are 2% and 2.1%, respectively (1 of 51 and 1 of 48 tokens). The highly significant difference between the North and South American tokens demonstrates once again that most finite verbs in North American causal clauses occupy the head position of CP (χ^2 (1, n=133) = 16.8, p=0*** / Phi: 0.36 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0***; cf. also KAUFMANN (2003a: 188–189) for the superficial position of adverbs and negation particles in various clause types). This conclusion is based on the fact that *nich* is an element which normally does not raise together with the verb phrase in verb projection raising (cf. Footnote 263 in Chapter 7, but also the counterexample in (3-35)). This means that the negation particle in (6-22d) and (6-22e) probably occupies the same structural position although it superficially surfaces in different positions.

Assuming that a high share of superficial and/or structural V2-clauses is an indication for a low degree of syntactic integration, the results hitherto presented are evidence for the claim that causal clauses are the least integrated clause type in the MLG data set. We can, therefore, enlarge the integration hierarchy established in (6-20) indicating the huge difference between causal and complement clauses by tripling the sign <, which is again to be read as less integrated:

(6-24) extraposed causal clause <<< extraposed complement clause << relative clause < conditional clause

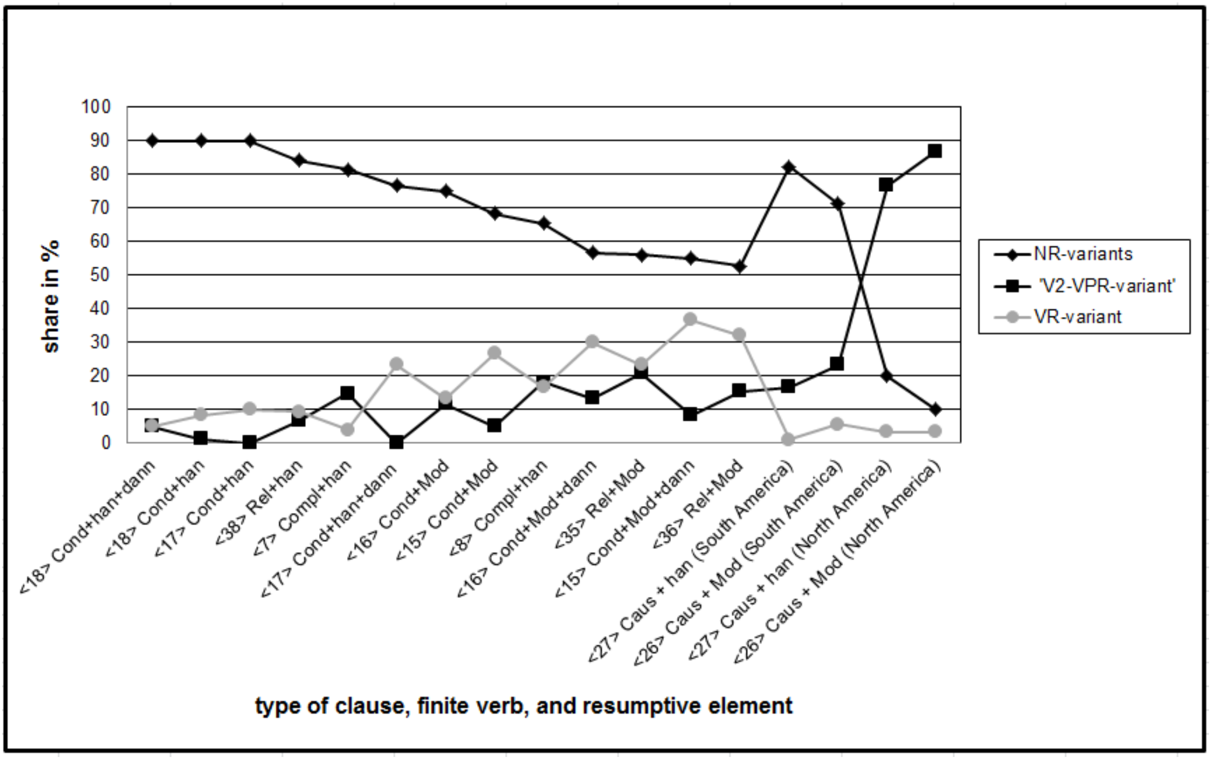
In order to illustrate the enlarged hierarchy in (6-24), a sociolinguistically balanced basic distribution for the causal clauses in sentences <26> and <27> was calculated according to the criteria established in Section 4.1. This means that Bolivian tokens and tokens displaying the non-V2-VPR-variant were excluded. From each of the five remaining colonies, thirty tokens were considered. In most cases, it was possible to select five tokens randomly for each of the six age-gender-subgroups. If this was not possible, additional tokens from the same colony were added. Unlike in Section 4.1, no tokens needed to be counted twice. Table 6-9 presents the basic distribution separated for the North and South American data:

Table 6-9: Basic distribution for the causal clauses of sentences <26> and <27> separated by the informants' continental origin

	South America		**North America**	
	sentence <26> **modal verb**	sentence <27> ***han***	sentence <26> **modal verb**	sentence <27> ***han***
n (tokens)	90	90	60	60
NR-variants	64	74	6	12
ObjNP-V2-V1	71.1%	82.2%	10%	20%
	ns		ns	
'V2-VPR-variant'	21	15	52	46
V1-ObjNP-V2	23.3%	16.7%	86.7%	76.7%
VR-variant	5	1	2	2
ObjNP-V1-V2	5.6%	1.1%	3.3%	3.3%

The share of the NR-variants is bigger in causal clauses with *han* ('have') than in causal clauses with modal verbs in both North and South America. Both differences are not significant though. For the North American data, this is expected since most tokens of the 'V2-VPR-variant' are assumed to represent structural V2-clauses. In this case, the type of finite verb cannot possibly make a difference. For the result in South America, the lack of a significant difference is somewhat surprising though because reanalysis has not yet taken place (more than 70% of the tokens still feature the NR-variants) and modal verbs proved to be much more raising-friendly than *han* (cf. Table 6-2). However, our astonishment may be premature since the insensitivity of South American causal clauses to the type of finite verb may signal a structural reanalysis in its initial stages. Figure 6-2 enlarges Figure 6-1 by the North and South American causal clauses of sentences <26> and <27>:

Figure 6-2: Basic distribution of verb clusters in seventeen clausal constellations (cf. Tables 4-3, 4-7, and 6-9; Cond=conditional; Rel=relative; Compl=complement; Caus=causal; Mod=modal verb)



Concentrating on the new information on the right-hand side of Figure 6-2, it becomes clear that causal clauses do not combine with the VR-variant. Regardless of whether we look at the North or the South American tokens and regardless of whether we look at sentence <26> or sentence <27>, the share of the VR-variant illustrated by the grey graph lies between 1.1% and 5.6% and is thus lower than the share in any other clausal constellation. The closest approximation can be found in the complement clause of sentence <7>, which exhibits a share of 6%. In order to explain these low shares, one may argue that a special structural characteristic of causal clauses suppresses scrambling. One such possible characteristic is mentioned by IATRIDOU and KROCH (1992: 17):

> Recall that CP-recursion turned out to be blocked in adjuncts, sentential subjects, relative clauses, and complex NPs, all standard island contexts in which extraction is blocked because the embedded CP is not the governed argument of a verb.

One may understand a recursive CP as increasing syntactic integration. Applying this criterion to the MLG data set, more integrated complement clauses with recursive CPs could be distinguished from less integrated causal clauses without recursive CPs. This could then explain the lower share of the VR-variant in causal clauses. After all, although the share of the VR-variant in the complement clause of sentence <7> is somewhat comparable to the shares in the two causal clauses, the share of the complement clause of sentence <8> is much higher with 16.7%. However, this explanation would not account for the big differences between causal clauses on the one hand and relative and conditional clauses on the other hand.

According to IATRIDOU and KROCH (1992: 17), all these clause types lack recursive CPs. A more convincing explanation may, therefore, be that it is not a clause-internal structural difference, which causes the differing shares of the VR-variant, but the overall lower degree of integration of causal clauses in comparison to complement, relative, and conditional clauses. This low degree furthers the appearance of main clause characteristics like verb second thus making the scrambled VR-variant a dispreferred option.

Another point which may draw the readers' attention in Figure 6-2 is the fact that the graph of the 'V2-VPR-variant' does not jump between the non-causal clauses and the South American causal clauses of sentences <26> and <27>. The South American shares for these clauses seem to be surprisingly low at 23.3% and 16.7%, respectively, when compared to the shares of 20.7% and 18% found for the relative clause in sentence <35> and the complement clause of sentence <8>. Have we not just assumed that causal clauses are by far the least integrated clause type? Should the South American causal clauses, therefore, not exhibit much higher shares of the 'V2-VPR-variant'? One must not forget however that all non-causal clause types in Figure 6-2 contain both North and South American tokens. Taking out the North American tokens, the share of the V2-VPR-variant for the relative clause of sentence <35> drops from 20.7% to 12.2%. The share of the complement clause in sentence <8> drops even more dramatically from 18% to 5.6%. These figures are markedly lower than the shares for the two South American causal clauses. The expected jump, therefore, exists; it is just hidden by pooling the North and South American tokens in non-causal clauses.

If we run binary logistic regression analyses on the South American tokens using the data in Table 6-2 and adding the tokens of the causal clause of sentence <27> (again excluding all clauses with adverbials or negation particles, i.e. sentences <15>, <17>, and <26>), the supposed jump becomes visible. We will start by contrasting the NR-variants and the raised V(P)R-variants. The independent variables used for these 890 tokens (130 tokens with the V(P)R-variants) are the same as in Table 6-2:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Type of finite verb (2 variants; contrasting variant *han*): *han*; modal verb

Clause type (4 variants; contrasting variant *relative clause*): relative clause; causal clause; complement clause; conditional clause

Origin (4 variants; contrasting variant *Brazil*): Brazil; Bolivia; Menno (Paraguay); Fernheim (Paraguay)

Metrical variable

Age

Table 6-10 presents the results of this regression analysis:

Table 6-10: Binary logistic regression analysis (method: stepwise forward conditioned) for verb projection raising in dependent clauses with two verbal elements in the South American colonies (NR-variants vs. V(P)R-variants)

origin	**type of finite verb**	**clause type**	**age**
Wald: 71.7***	Wald: 34.8***	Wald: 24***	Wald: 15.2***
	modal verb (13.9***)	causal clauses (7.6***)	
		complement clause (2.9*)	
Brazil Bolivia	***han***	**relative clause** conditional clause	
			age (0.97***)
Menno (0.14***) Fernheim (0.13***)			

Realizing that the four selected predictor variables and their impact hierarchy are identical to those of Table 6-2, it becomes clear that the calculated models for verb projection raising are very stable. This is definitely not a matter of course since all North American tokens from Table 6-2 have been excluded in Table 6-10 and a causal clause has been added. The four selected variables "explain" 29.6% of the variation (Nagelkerkes R-square: 0.296; Cox & Snell R-square: 0.167). The Paraguayan colonies and older people again diminish the probability of the appearance of raised cluster variants by a factor of 7.7 for Fernheim (1:0.13), 7.1 for Menno (1:0.14), and 1.4 for a ten-year age difference ((1:0.97)[10]). Modal verbs and causal clauses heighten this probability strongly (factors of 13.9 and 7.6); complement clauses do so more moderately (factor of 2.9).

The only differences to Table 6-2 are on the one hand the fact that clause type turns out to be almost as powerful a predictor as the type of finite verb. This is due to the inclusion of the strongly disintegrated causal clause of sentence <27>. On the other hand, conditional clauses now behave like relative clauses. The reason for this is that raised variants are rather scarce in the South American colonies in these two clause types. In absolute terms, we can only compare clauses with the temporal auxiliary *han* ('have'), since there are no causal or complement clauses with modal verbs in this data set. The raised variants in the causal clause make up for 17.9%. This share drops to 8.5% for complement clauses, 3.1% for relative clauses, and 2.5% for conditional clauses.

The lack of modal verbs in causal and complement clauses also leads to a problematic skewing effect if we compare only the two raised variants. Due to this, this variable has to be taken out for the second regression analysis, the one dealing with scrambling (130 tokens; 76 tokens of the V2-VPR-variant). As type of finite verb was not selected in Table 6-3, this exclusion should not constitute too big of a problem though. Only one of the remaining four independent variables is selected. As expected, this is clause type, which "explains" 21.1% of the extant variation (Nagelkerkes R-square: 0.211; Cox & Snell R-square: 0.157). The disintegration of causal clauses by means of the V2-VPR-variant is dramatically confirmed.

The probability for this variant is 25.3*** times higher in the causal clause of sentence <27> than in relative clauses. For complement clauses, this figure is $2.9^{(*)}$ and only shows a statistical tendency. Relative clauses and conditional clauses behave similarly again.

As in section 6.2, we will conclude by contrasting the non-V2-variants (NR-variants and VR-variant) with the V2-VPR-variant. Here, the type of finite verb can again be used as an independent variable. Table 6-11 presents the result for the 890 tokens (76 tokens with the V2-VPR-variant):

Table 6-11: Binary logistic regression analysis (method: stepwise forward conditioned) for the V2-characteristic in dependent clauses with two verbal elements in the South American colonies (NR-variants/VR-variant vs. V2-VPR-variant)

origin	**clause type**	**type of finite verb**	**age**
Wald: 37.9***	Wald: 24.5***	Wald: 13.4***	Wald: 5.3*
	causal clauses (11.7***)	modal verb (7.3***)	
Bolivia ($2.1^{(*)}$)	complement clause ($3.3^{(*)}$)		
Brazil	**relative clause** conditional clause	***han***	
			age (0.98*)
Menno (0.21***) Fernheim (0.2***)			

Once again, the model is stable in spite of the differences to Table 6-4 (exclusion of North American tokens; inclusion of tokens from sentence <27>). The four selected variables "explain" 19.1% of the variation (Nagelkerkes R-square: 0.191; Cox & Snell R-square: 0.084). The unique role of causal clauses is confirmed. They heighten the probability of a V2-VPR-variant by a factor of 11.7 in comparison to relative clauses. The factor of complement clauses is 3.3, but again this difference only reflects a statistical tendency. Once again, there is no difference between relative and conditional clauses. The higher probability for Bolivian V2-clauses of 2.1 is also based on a statistical tendency. The other results do not differ from Table 6-4. Modal verbs raise the probability of the V2-VPR-variant by a factor of 7.3, while the Paraguayan colonies and older people diminish its probability. The corresponding factors are five for Fernheim (1:0.2), 4.8 for Menno (1:0.21), and 1.2 for a ten-year age difference ((1:0.98)[10]).

Returning to Figure 6-2, one clear jump can be easily detected. It is the huge leap between South and North American causal clauses. The crossing of the graphs of the NR-variants and the 'V2-VPR-variant' illustrates the dramatic syntactic change, which occurred in North America and which makes most regression analyses impossible since we would compare two different things in most of them, i.e. superficial and structural V2-clauses. The only sensible comparison is the one between non-V2-clauses and V2-clauses, since the latter ones are assumed to indicate syntactic disintegration regardless of whether they feature the V2-VPR-variant or a structural V2-clause. For the US-American and the Mexican colony, 925 tokens can be analyzed, 278 of them represent V2-clauses.

Table 6-12: Binary logistic regression analysis (method: stepwise forward conditioned) for the V2-characteristic in dependent clauses with two verbal elements in the North American colonies (NR-variants/VR-variant vs. V2-VPR-variant/structural V2-clause)

clause type	**origin**	**type of finite verb**	**age**
Wald: 145.3***	Wald: 24.6***	Wald: 12.2***	Wald: 9.5**
causal clauses (35.8***)			
complement clause (4.4***)	USA (2.4***)	modal verb (2.8***)	
relative clause	**Mexico**	***han***	
conditional clause (0.56*)			**age** (0.98**)

The four selected variables “explain” 35.3% of the variation (Nagelkerkes R-square: 0.353; Cox & Snell R-square: 0.249). The comparison with the South American results from Table 6-11 confirms our hunch that causal clauses function differently from causal clauses in North America. In South America, clause type was only the second selected variable. In contrast to this, clause type in North America is not only the first predictor variable selected, its impact also outperforms the remaining three variables. Clause type alone accounts for 29.7% of the variation. As expected, the probability for a V2-clause in the causal clause of sentence <27> rises by a spectacular factor of 35.8 in comparison to relative clauses. Aside from this, the other three clause types are also distinguished more clearly in North than in South America. Complement clauses raise the probability of a V2-clause by a highly significant factor of 4.4; conditional clauses diminish it significantly by 1.8 (1:0.56). In South America, there was no difference between relative and conditional clauses and the difference of complement clauses to relative clauses only represented a statistical tendency. The North American result is thus comparable to that of Table 6-5 confirming the stability of the model for raising-friendly informants even if a clause type is included which behaves in a dramatically different way.

The clearest indication for the reanalysis of causal clauses in North America comes from the type of finite verb though. In South America, the probability of the V2-VPR-variant rises by a factor of 7.3 when a modal verb appears instead of the temporal auxiliary *han* (‘have’) (cf. Table 6-11). In North America, this factor shrinks to 2.8. Furthermore, the ratio between the Wald-value of clause type and type of finite verb is 1.8 in South America (24.5 : 13.4), whereas it is 11.9 in North America (145.3 : 12.2). If the majority of V2-causal clauses in North America are structural V2-clauses, the lack of much sensitivity to the type of finite verb is expected. Structural V2 does not depend on the type of finite verbs. The last two predictor variables do not generate any new information. US-American and younger informants have a higher probability of producing V2-clauses than Mexican and older informants.

Even if we accept the reality of the dramatic difference between North and South American causal clauses, we could still challenge the assumption that the V2-VPR-variant has been reanalyzed into a structural V2-clause. Would it not make more sense – one may think – to assume that the North American speakers of MLG just do what many speakers of colloquial varieties in Germany do? These speakers sometimes produce dependent causal clauses introduced with *weil* (‘because’) with the finite verb in the final position and sometimes they produce *weil*-clauses with the finite verb in the second position. Although this may seem like a possible explanation for the MLG data set, three reasons speak against it.

First, causal clauses with the finite verb in the second position are said to be especially frequent in colloquial German if they are epistemic (cf. KELLER 1993 and FABRICIUS-HANSEN 1992: 474). The causal sentence compounds in the MLG data set, however, are non-epistemic and due to this, the facts from Germany cannot explain the high share of V2-causal clauses in the North American colonies. Second, there are still some North American causal clauses where the finite verb does not appear in either last or second position. Granted, the number of nine tokens that either feature the VR-variant or the non-V2-VPR-variant is not high, but it is sufficient to show that verb projection raising and scrambling still play a small role in North American causal clauses. Third, the analysis of causal clauses in South America in Section 5.1.4 and partly in Mexico in Table 6-8 shows that – unlike in the US-American colony – both the raising and the scrambling index are still good predictors for the found variation. This indicates that in most parts of the MLG-speaking world, true examples of the V2-VPR-variant still exist. This strongly suggests that it is precisely this variant, which represents the starting point of reanalysis (cf. ELSPAß (2005: 84–85) for a comparable analysis of the development of V2-causal clauses in European German).

In spite of these arguments, it is nevertheless a curious fact that the US-American Dutch-type informants do not produce the VR-variant more frequently. This apparently incoherent behavior is even more puzzling, since the US-American colony has by far the highest share of the VR-variant in the clauses used for index formation (USA: 46.8%; Mexico: 34.8%; South America: 7.5%). Furthermore, Dutch-type informants constitute the majority of speakers in the US-American colony (USA: 62.5%; Mexico 37.8%; South America: 5.5%; cf. Table 4-18). If US-American Dutch-type informants treated causal clauses as they treat other clause types, we would expect a comparatively high share of the VR-variant. Quite unexpectedly though, even the Brazilian colony, where Dutch-type informants only represent 9.8% of the speakers, produces the VR-variant in causal clauses slightly more frequently than the US-American colony (5.6% (5 of 89 tokens) vs. 3.5% (4 of 113 tokens; cf. Table 6-7)). The answer to this riddle is again connected to the low degree of syntactic integration of causal clauses. The Dutch-type informants’ desire to mark this weak clause linkage iconical by means of V2-clauses seems to be stronger than their propensity to scramble. As far-fetched as this hypothesis may sound, we will be able to offer evidence for this marked behavior from other clause types as well (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3).

If we are on the right track with this reasoning, two things must have happened in the US-American colony. First, the preferred appearance of weakly integrated causal clauses as V2-clauses caused the share of the V2-VPR-variant to soar, while the share of the VR-variant dropped. This meant that causal clauses were treated differently from other clause types.[181] In any case, Dutch-type informants were forced to act in a highly atypical way. This incoherent behavior may have been the straw that broke the back of the V2-VPR-variant in causal clauses. If Dutch-type informants wanted to return to a more coherent behavior, there was just one way out for them. They had to reanalyze causal clauses with the V2-VPR-variant as structural V2-clauses. In this way, they could kill two birds with one stone. They could continue scrambling and nevertheless indicate the weak integration of causal clauses by producing them as V2-clauses. This scenario probably explains the seemingly contradictory constellation that most US-American and many Mexican informants are scrambling-friendly Dutch-type informants, who nevertheless produce very few tokens of the scrambled VR-variant in causal clauses. Summarizing Box 6-1 repeats the most important steps of this reanalysis in a condensed form:

Summarizing Box 6-1: The reanalysis of causal clauses with the V2-VPR-variant into structural V2-clauses

(i) Due to their semantic independence from the matrix clause and their extraposed position, causal clauses represent the least integrated clause type in the MLG data set.

(ii) In a speech community with a lot of variation in the serialization of verbal elements, speakers may want to indicate syntactic disintegration by dependent V2-clauses since the second position of the finite verb is a prototypical main clause characteristic. As verb projection raising and scrambling exist as syntactic options in MLG, the application of the first and the non-application of the second offers an easy way to do so.

(iii) This, however, creates two problems:

(a) From a theoretical point of view, the marked rise of tokens of the V2-VPR-variant in causal clauses leads to an increasing derivational distance between deep and surface structure, hampering an easy string-to-structure mapping (cf. LIGHTFOOT's *transparency principle* and STERNEFELD's (2008: 318) explicit warning against too many transformations between D- and S-structure). Reanalysis of the V2-VPR-variant as structural V2-clauses may have been the answer to this problem.

(b) From an empirical point of view, raising- and scrambling-friendly Dutch-type informants will either have to opt for scrambling or for indicating syntactic disintegration by producing clauses with the unscrambled V2-VPR-variant. The reanalysis of clauses featuring the V2-VPR-variant as structural V2-clauses may again have been the answer to this problem, since Dutch-type informants can scramble in structural V2-clauses without turning them into non-V2-clauses.

(iv) As a consequence of reanalysis, the subordinating element of causal clauses does not surface in the head position of CP anymore. This position is now occupied by the finite verb. The former subordinating element surfaces in a clause-external position like *und* ('and') or *aber* ('but').

(v) With the finite verb occupying the head position of CP and the causal connector surfacing clause-externally, a prefield exists into which the speaker can and sometimes must position either topical or focal constituents thus further increasing the illocutionary force of the V2-causal clause.

[181] Such a syntactic distinctiveness may have been a decisive precondition for reanalysis. LIGHTFOOT (1999: 184) speaks of a morphological distinctiveness with regard to the reanalysis of the English modal verbs into modal particles.

6.3.2 Causal clauses with one verbal element

In this section, causal clauses with one verbal element will be analyzed. The South American translations of such clauses were already investigated in Section 5.5.6. It is again four sentences, which make up for the bulk of 467 of a total of 482 North American tokens. These sentences are presented once again:

(6-25) **stimulus <21>** He is not coming, *because* he doesn't **have** any time

(6-26) **stimulus <22>** He doesn't have a car, *because* he **has** no money

(6-27) **stimulus <23>** He can't listen to you, *because* he **is unpacking** his luggage

(6-28) **stimulus <24>** He is not here, *because* he **is helping** your father out

Two tokens of sentence <21> represent the relevant variants found in these causal clauses:

stimulus <21> Spanish: **No va a venir porque no tiene tiempo**
English: He is not coming, because he doesn't have any time

(6-29) a. *her wird nich kommen weils her nich Tied haf* (Mex-14; f/44/MLG+SG)
he will not come because he no time has-VERB

b. *her wird nich kommen wejens her haf nich Tied* (Mex-1; m/27/MLG)
he will not come because he has-VERB no time

Token (6-29a) presents a causal clause with the finite verb in final position, while the translation in (6-29b) features the verb in the second position.[182] As already mentioned in the discussion of Table 5-41, a possible incorporation of the possibly bare noun *Tied* ('time') into the verb *han* ('have') does not impede the unambiguous identification of the two variants (cf. Footnote 150 in Chapter 5 for the role of *nich* in (6-29a+b)). Table 6-13 presents the data for both colonies together:

Table 6-13: Distribution of two variants in causal clauses with one verbal element in the North American colonies separated by the informants' raising and scrambling behavior (scrambl.=scrambling; Obj=ObjNP; V=verb; part.=particle)

	raising index	scrambl. index	German I informants	German II informants	Flemish informants	Dutch informants	Total
features			-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling	
n (tokens)	460	460	30	121	87	202	440
Obj-(part.-)V	107	103	9	48	14	28	99
	+0.116	+0.042	30%	39.7%	16.1%	13.9%	22.5%
	F (1,458) = 31.6, p=0***	ns	χ^2 (3, n=440) = 32.1, p=0*** / Cramer's V: 0.27 / 0 cells with less than 5 expected tokens				
V-Obj(-part.)	353	357	21	73	73	174	341
	+0.29	+0.04	70%	60.3%	83.9%	86.1%	77.5%

[182] None of the non-verb-final tokens analyzed in this section features an adverb or a negative particle in front of the finite verb, i.e. the finite verb always surfaces in second position.

Although the frequency distribution is highly significant in both the North and the South American translations (cf. Table 5-41), the results differ substantially. First of all, the North American spread is slightly smaller in absolute terms (24.7% (86.1% - 60.3%) as compared to 34.6% (44.4% - 9.8%) in South America). There are, however, two more marked differences: (i) While the spread in North America stems from high percentages that lead to a low ratio of 1.4 (86.1% : 60.3%), the South American spread results from low percentages that cause a much higher ratio of 4.5 (44.4% : 9.8%). (ii) The South American Flemish-type informants clearly behave differently from all other types of informants, while the North American Flemish-type informants do not exhibit such a singular behavior. The two raising-friendly North American CLUSTERS, for example, have comparable shares of the non-verb-final variant in spite of their opposite scrambling behavior. These facts are also reflected in the North American index values. Only the raising index shows a highly significant difference, the values of the scrambling index are virtually identical. In the South American colonies, both indexes showed highly significant differences. We can thus conclude again that the majority of North American informants do not treat causal clauses as they treat other clause types.

In spite of this, 22.5% of the tokens in Table 6-13 still show the finite verb in the final position. This is clear evidence that the informants who produce these tokens have not yet reanalyzed causal clauses as structural V2-clauses. There are, therefore, two types of informants in North America. Interestingly, the share of 22.5% (Mexico: 26.8%; USA: 14.4%) is comparable to the share of 18.2% of non-V2-tokens in sentences <26> and <27> (Mexico: 26.4%; USA: 8%), which feature two verbal elements (CLUSTER-based tokens of Tables 6-7 and 6-8 pooled together). This comparability strengthens the reanalysis hypothesis, because the complexity (seen as a function of the number of verbal elements) does not play a role in causal clauses. This was very different in North American complement, conditional, and relative clauses with one verbal element (cf. Section 5.5).

6.3.3 Informants with or without a reanalyzed grammar for causal clauses

This section will group the informants according to their behavior in causal clauses with two verbal elements. The sentences used for grouping are:

(6-30)	**stimulus <25>**	He is crying, *because* he **has to eat** salad every day
(6-31)	**stimulus <26>**	He needs glasses, *because* he **can**'t **see** the blackboard
(6-32)	**stimulus <27>**	I will give him a good grade, *because* he **has read** the book
(6-33)	**stimulus <28>**	I am very hungry, *because* I **have**n't **had** lunch yet

Unlike in Section 5.1.4, all four sentences can be used, because the only question we are interested in is whether the finite verb surfaces in the second position or not. The problem of not being able to distinguish between the VPR- and the VR-variant in the causal clauses of sentences <25> and <28> due to a possible incorporation of the bare noun into the main verb is of no importance. Four translation variants are given for sentence <25>:

stimulus <25> Spanish: **Está llorando porque tiene que comer ensalada todos los días**
English: He is crying, because he has to eat salad every day

(6-34) a. *her rohrt wejens hei [0.5] jeder Tag Salot ete mut* (Men-15; f/20/MLG)
he weeps because he […] every.NOM day salad eat-VERB2 must-VERB1

b. *hei rohrt wejens hei mut jeder [0.9] Tag Salot ete* (Bol-1; m/30/MLG+S)
he weeps because he must-VERB1 every.NOM […] day salad eat-VERB2

c. *hei rohrt weils hei alle Tag mut Greens ete* (Bol-4; m/44/MLG)
he weeps because he all days must-VERB1 <u>greens</u> eat-VERB2

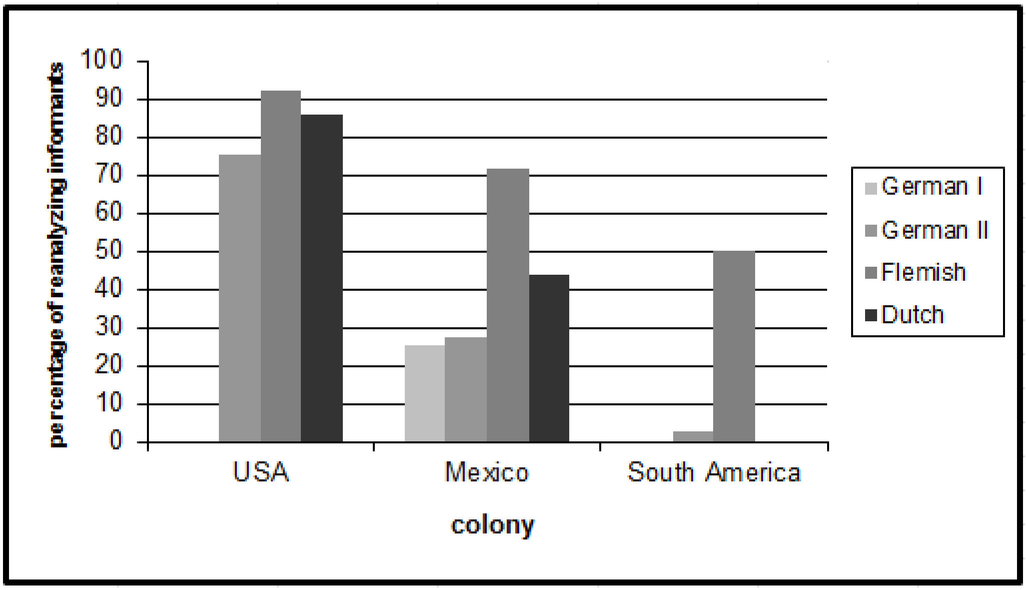
d. *hei hielt weils hei jeden Tag [0.4] Salot mut ete* (Men-18; m/19/MLG)
he weeps because he every day […] salad must-VERB1 eat-VERB2

Token (6-34a) features the NR I-variant, the one in (6-34b) either the unscrambled V2-VPR-variant or a structural V2-clause. Token (6-34c) presents the unscrambled non-V2-VPR-variant and token (6-34d) the scrambled VR-variant. On the base of the informants' behavior in terms of the four causal clauses, two groups are formed. If informants translated one or more of the four clauses with the finite verb not surfacing in second position, they were considered as not having reanalyzed causal clauses. These informants are labeled non-reanalyzing informants. In this case, the number of translated clauses did not play a role; one non-V2 clause was enough to qualify for this group. The informants that translated at least three of the four clauses and translated all of them with the finite verb in the second position were considered to have reanalyzed causal clauses. These informants are labeled reanalyzing informants. Informants who only translated one or two of the four causal clauses, all of them with the finite verb in the second position, were excluded from the analysis as unclear cases. Table 6-14 and Figure 6-3 show the shares of informants of the reanalyzing group in three colony types (USA, Mexico, and South America) and four CLUSTERS.

Table 6-14: Share of reanalyzing informants separated by their origin and by their raising and scrambling behavior

	German I informants	**German II informants**	**Flemish informants**	**Dutch informants**
features	-raising -scrambling	-raising +scrambling	+raising -scrambling	+raising +scrambling
USA	0 out of 1 0%	6 out of 8 75%	12 out of 13 92.3%	30 out of 35 85.7%
all CLUSTERS: χ^2 (3, n=57) = 6.5, p=0.088$^{(*)}$ / Cramer's V: 0.34 / 4 cells (50%) with less than 5 expected tokens **Flemish- versus Dutch-type informants**: ns				
Mexico	1 out of 4 25%	8 out of 29 27.6%	10 out of 14 71.4%	14 out of 32 43.8%
all CLUSTERS: χ^2 (3, n=79) = 8, p=0.047* / Cramer's V: 0.33 / 2 cells (25%) with less than 5 expected tokens **Flemish- versus Dutch-type informants**: χ^2 (1, n=46) = 3, p=0.084$^{(*)}$ / Phi: 0.26 / 0 cells with less than 5 expected tokens				
South America Bolivia, Brazil, Paraguay	0 out of 31 0%	2 out of 79 2.5%	5 out of 10 50%	0 out of 6 0%
all CLUSTERS: χ^2 (3, n=126) = 41.2, p=0*** / Cramer's V: 0.57 / 4 cells (50%) with less than 5 expected tokens **Flemish- versus Dutch-type informants**: χ^2 (1, n=16) = 4.4, p=0.037* / Phi: 0.52 / 3 cells (75%) with less than 5 expected tokens / Fisher's Exact: p=0.093$^{(*)}$				

Figure 6-3: Reanalyzing causal clauses: Distribution of origin and type of speaker (cf. Table 6-14)



The results in Table 6-14 are clear-cut. Comparing the share of reanalyzing informants for each of the four CLUSTERS, the distribution in the US-American colony shows a statistical tendency, the Mexican colony a significant difference, and the South American colonies a highly significant difference. Besides these differences, however, there is also a unifying aspect. In all colonies, it is the Flemish-type informants who are most prone to uniformly produce V2-causal clauses. However, the difference between the Flemish-type CLUSTER and the CLUSTER with the second-highest share is just 6.6% in the USA (Dutch-type informants; 92.3% - 85.7%), while it is 27.6% in Mexico (Dutch-type informants; 71.4% - 43.8%), and 47.5% in the South American colonies (German II-type informants; 50% - 2.5%).[183] The different role of the Flemish-type informants can be clearly seen in Figure 6-3.

Just comparing the raising-friendly Flemish- and Dutch-type CLUSTERS, there is no significant difference in the US-American colony. In Mexico, a weak statistical tendency exists, while the difference in the South American colonies is significant. This means that in the South American colonies, the seemingly reanalyzing informants are almost exclusively found in the scrambling-unfriendly Flemish-type CLUSTER. This is important since it shows that the Flemish-type informants produce many more V2-causal clauses than the Dutch-type informants. With this, one can conclude that South American informants – unlike North American informants and especially unlike US-American informants – treat causal clauses in the same way in which they treat other clause types; they still produce the V2-VPR-variant and not structural V2-clauses.

[183] The sociolinguistic distribution of the results is likewise telling. In the predominantly reanalyzing US-American colony, eight of the ten non-reanalyzing informants are men (5 of them younger men). This difference is significant (χ^2 (1, n=58) = 4.4, p=0.037* / Phi: 0.27 / 0 cells with less than 5 expected tokens). In the predominantly non-reanalyzing Brazilian colony, all four reanalyzing informants are women (3 of them younger women; χ^2 (1, n=56) = 4, p=0.045* / Phi: 0.27 / 2 cells (50%) with less than 5 expected tokens / Fisher's Exact: ns). Both distributions confirm the leading role of (younger) women in linguistic change from below (cf. LABOV 2001: 279–280).

Looking at the 1,905 clauses used for index formation (cf. Section 4.1) from the point of view of reanalyzing and non-reanalyzing informants, offers another way to illustrate the reanalysis in the North American colonies.

Table 6-15: Distribution of the basic cluster variants in the complement, conditional, and relative clauses used for index formation separated by the informants' origin and by their behavior in causal clauses

	USA		**Mexico**		**South America** Bolivia, Brazil, Paraguay	
	reanalyzing	non-reanalyzing	reanalyzing	non-reanalyzing	reanalyzing	non-reanalyzing
n (tokens)	261	57	202	295	49	908
NR-variants	65	27	83	161	24	802
ObjNP-V2-V1	24.9%	47.4%	41.1%	54.6%	49%	88.3%
NR vs. V2-VPR vs. VR	χ^2 (2, n=318) = 11.5, p=0.003** / Cramer's V: 0.19 / 0 cells with less than 5 expected tokens		χ^2 (2, n=497) = 9.8, p=0.007** / Cramer's V: 0.14 / 0 cells with less than 5 expected tokens		χ^2 (2, n=957) = 91.5, p=0*** / Cramer's V: 0.31 / 2 cells (33.3%) with less than 5 expected tokens	
V2-VPR-variant	68	10	38	35	18	40
V1-ObjNP-V2	26.1%	17.5%	18.8%	11.9%	36.7%	4.4%
V2-VPR vs. NR/VR	ns		χ^2 (1, n=497) = 4.6, p=0.032* / Phi: 0.1 / 0 cells with less than 5 expected tokens		χ^2 (1, n=957) = 85.4, p=0*** / Phi: 0.3 / 1 cells (25%) with less than 5 expected tokens / Fisher's Exact: p=0***	
VR-variant	128	20	81	99	7	66
Obj-V1-V2	49%	35.1%	40.1%	33.6%	14.3%	7.3%

The distributions of the cluster variants in all colony types are highly significant (cf. the line *NR vs. V2-VPR vs. VR*). This changes, however, when one only compares the V2-VPR-variant and the other two variants grouped together (cf. the line *V2-VPR versus NR/VR*). The difference is not significant in the United States (ratio of 1.5; 26.1% : 17.5%). The difference in Mexico is significant, but it is not highly significant and only shows a weak association (ratio of 1.6 for the V2-VPR-variant; 18.8% : 11.9%). Only the difference in the South American colonies is highly significant (ratio of 8.3; 36.7% : 4.4%). Aside from the difference in significance, the much higher ratio in South America shows that the supposedly reanalyzing informants do not only produce many more V2-tokens in causal clauses, but also in the other three clause types. From this, we can again conclude that South American causal clauses still feature the V2-VPR-variant. In contrast to this, the grouping of the North American informants into reanalyzing and non-reanalyzing informants hardly plays a role in their behavior with regard to non-causal clause types. This means that they produce the V2-VPR-variant in complement, conditional, and relative clauses, but most of them produce structural V2 in causal clauses.

Another important question is how the reanalyzing and the non-reanalyzing informants fare with regard to causal clauses with one verbal element. For complement, conditional, and relative clauses with one verbal element, we have seen that North American and Brazilian informants show the marked variant in non-causal clauses very rarely, but much more frequently than Bolivian and Paraguayan informants, who hardly ever produce it (cf. Table 5-31). With regard to causal clauses with one element, the South American colonies showed a robust number of V2-clauses (cf. Section 5.5.6). Interestingly, the factors favoring V2-causal clauses in South America were the same as in the case of the North American and Brazilian non-causal clauses (+raising; -scrambling). Now, if reanalysis correctly describes the North American behavior with regard to causal clauses, there should be none or very few non-V2-tokens in the reanalyzing group. Table 6-16 furnishes the relevant information:

Table 6-16: Distribution of two variants of causal clauses with one verbal element separated by the informants' origin and by their behavior in causal clauses with two verbal elements

	USA		**Mexico**		**South America** Bolivia, Brazil, Paraguay	
	reanalyzing	non-reanalyzing	reanalyzing	non-reanalyzing	reanalyzing	non-reanalyzing
n (tokens)	113	25	102	174	20	441
ObjNP-Verb	5	15	12	68	10	389
	4.4%	60%	11.8%	39.1%	50%	88.2%
	χ^2 (1, n=138) = 51, p=0*** / Phi: 0.61 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0***		χ^2 (1, n=276) = 23.3, p=0*** / Phi: 0.29 / 0 cells with less than 5 expected tokens		χ^2 (1, n=461) = 24, p=0*** / Phi: 0.23 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0***	
Verb-ObjNP	108	10	90	106	10	52
	95.6%	40%	88.2%	60.9%	50%	11.8%

Again, all three colony types show a highly significant distribution. But the proportions between the reanalyzing and the non-reanalyzing groups are very different. In the US-American colony, the informants who have not reanalyzed causal clauses with two verbal elements show the verb-final variant in clauses with one verbal element 13.6 times more often than the informants who we suppose have reanalyzed causal clauses (60% : 4.4%). In Mexico, this ratio drops to 3.3 (39.1% : 11.8%), and in the South American colonies it drops even further to 1.8 (88.2% : 50%). This means that the further south we go, the smaller the behavioral difference between reanalyzing and non-reanalyzing informants is with regard to causal clauses with one verbal element. A small difference between the two groups can be taken as a further indication for the assumption that reanalysis has not yet taken place. Furthermore, the supposedly reanalyzing informants in the South American colonies show a difference of 50% between their behavior in causal clauses with two verbal elements (100% of V2-clauses) and causal clauses with one verbal element (50% of V2-clauses). Reanalyzing informants in the US-American colony, however, produce V2-clauses regardless of complexity, i.e. regardless of the number of verbal elements. Their difference between clauses with one and clauses with two verbal elements is just 4.4% (100% - 95.6%).

Due to the results presented in Section 6.3, we are confident in claiming that most North American Mennonites, especially the ones from the US-American colony, have reanalyzed introduced causal clauses with the V2-VPR-variant as structural V2-clauses. For these informants, the finite verb does not only surface in second position, but occupies the head position of CP. In traditional descriptions of German, this position forms the left bracket of the clause separating the prefield (first position) from the midfield. If we analyze the reanalysis of causal clauses in the North American colonies not as an isolated fact, but as a possible forerunner of further comparable changes (the next candidate could be complement clauses), we may see glimpses of a general tendency towards a more paratactical structure. With regard to other emigrant languages, this tendency has been mentioned by GONZO and SALTARELLI (1983: 192):

> There are, indeed, similarities between pidgin languages, interlanguage systems and emigrant languages. All exhibit a large borrowed lexicon, a reduction of redundant code distinctions such as gender and number, and a reduction in sentence embedding.

In our view, the North American complementizer *wejen(s)* ('because') has turned into a clause-external conjunction for most speakers. This means that the hypotactical causal sentence compounds have turned into paratactical sentence compounds signaling "a reduction in sentence embedding."

7. Clause Linkage in Complement and Conditional Sentence Compounds

In Chapter 6, we were able to show that the type of dependent clause influences the informants' use of verb clusters. A higher degree of syntactic disintegration as, for example, in extraposed complement clauses correlates with a larger share of the V2-VPR-variant. Although Chapter 6 therefore set the scene for a better understanding of the informants' use of verb clusters, the analyses carried out have to be qualified as quite rough since only sentence compounds used for the formation of the verb projection raising and scrambling index were included (cf. Sections 4.2 and 4.3). The consequence of this restriction is that many interesting tokens, for example, tokens featuring the non-V2-VPR-variant or complement sentence compounds with correlates in the matrix clause were excluded (cf. points (c) and (h) of Section 4.1). Moreover, more specific characteristics such as the verb or the mode of the matrix clause of complement sentence compounds were not taken into account (cf. point (e) of Section 4.1).

Chapter 7 will refine the analyses presented in Chapter 6. Besides including translations with minor deviations, it will also include translations with dependent clauses with one, three, and four verbal elements. The analysis will, however, only be conducted for complement and conditional sentence compounds. The reason for this confinement is that these sentence compounds share characteristics which can improve our general understanding of how word order choices depend on individual preferences and on general syntactic regularities. Obviously, it would also be interesting to analyze relative sentence compounds since they share many characteristics with complement clauses (cf. Excursus 7.2.2.1), but we will have to postpone this investigation to further publications. The reason for this is that the analysis of relative sentence compounds requires a thorough understanding of the effects of a whole array of introducing elements. Section 8.2.2 will only offer initial analyses for this phenomenon. The fourth clause type, causal clauses, will briefly be touched upon in Excursus 7.1.4.3.

Chapter 7 is structured as follows: Section 7.1 will investigate the conditions under which the MLG complementizer *daut* ('that') can be deleted creating structural V2-clauses. The reader might wonder what complementizer deletion has to do with the central question of verb clusters in introduced dependent clauses, but the relevance of this will become clear in In-Depth Analysis 7.1.4.3. In this analysis, we will see that structural (i.e. *daut*-deletion) and superficial V2-clauses (i.e. the V2-VPR-variant) occur in comparable linguistic contexts, namely contexts which exhibit a low degree of syntactic integration. Section 7.2 will determine the factors which influence or are influenced by the (non-)appearance of *daut* as a correlate in the matrix clause of complement sentence compounds. Central aspects in this section are the relationship between correlates and complementizers and the co-variance of correlates and certain cluster variants. As correlates co-occur frequently with non-V2-cluster variants, they are assumed to represent or even cause a high degree of syntactic integration. Section 7.2.5 will summarize the findings with regard to complementizers and correlates and lead to the analysis of conditional sentence compounds, the focus of Section 7.3. This section deals with two phenomena whose syntactic effects can be compared to complementizer deletion and to the correlate *daut* in complement sentence compounds. On the one hand, disintegrated conditional clauses will be analyzed; on the other hand, resumptive elements in the matrix clause will be investigated (mostly *dann*; ‘then’). The link to Sections 7.1 and 7.2 is the overarching question discussed in Chapter 7, namely different types of clause linkage, i.e. different degrees of syntactic integration. The closing Section, Section 7.4, pursues two goals: First, it will briefly summarize the results of Sections 7.1 through 7.3. Second, it will focus on the informants and try to answer the question of whether the informants who use resumptive elements and produce disintegrated conditional clauses in conditional sentence compounds are identical to the informants who use correlates and produce complementizer deletion in complement sentence compounds.

7.1 Complement clauses without a complementizer

7.1.1 Presentation of the phenomenon

If one is interested in analyzing the structure, derivation and function of verb clusters in complement sentences, one will soon find that complementizer deletion, a rather frequent phenomenon in Germanic varieties, is a cumbersome topic. This is so, because the deletion of the complementizer causes the finite verb to appear in second position thus diminishing the number of verbal elements at the end of the clause. In order to avoid complementizer deletion as much as possible, we included elements and/or structures in the stimulus sentences known to prevent it. Examples for this are the negation of the matrix clause, interrogative matrix clauses, and certain matrix verbs (e.g., *insist* in sentence <9>). Realizing that all these efforts were of little avail was a somewhat frustrating experience at first. On closer inspection, however, *daut*-deletion turned out to offer a deeper understanding of the syntax of MLG. The translations in (7-1b), (7-2b), and (7-3b) show examples for unintroduced and unexpected complement clauses (the (a)-examples represent the expected variants):

stimulus <3> Spanish: **¿No ves que estoy prendiendo la luz?**
English: Don’t you see that I am turning on the light?

(7-1) a. *siehts dü nich daut ik daut Licht anmeak* (Mex-17; f/42/MLG)
see you not that I the light on-switch

b. *[äh] siehts nich ik switch daut Lich üt* (Mex-42; f/28/MLG)
[eh] see Ø not Ø I switch the light <u>off</u>

stimulus <8> Spanish: **¿Estás seguro que él arregló la silla?**
English: Are you sure that he has repaired the chair?

(7-2) a. *bis dü sicher daut hei haf den Stuhl fertiggemeak* (Mex-24; f/14/MLG)
are you sure that he has the chair ready-made

b. *bis dü sicher her haf den Stuhl fertiggemeakt* (Mex-27; f/18/MLG)
are you sure ∅ he has the chair ready-made

stimulus <10> English: **He didn't know that he should have fed the dogs this morning**

(7-3) a. *her wißt daut nich daut hei de Hung hat sollt foderen vondaag zu Morjens* (USA-63; f/35/MLG)
he knew ~~that~~ not that he the dogs had should feed today at morning

b. *der wisst nich der hat sollt [0.6] die Hung foderen [0.3] zu morjens* (USA-4; m/14/E>MLG-∅)
he knew not ∅ he had should […] the dogs feed […] at morning

In SG, one rarely encounters V2-complement clauses after negated declarative matrix clauses and somewhat less rarely does one find V2-complement clauses after interrogative matrix clauses.[184] Especially (7-3b), a case of *daut*-deletion after a negated declarative clause, sounds markedly ungrammatical in SG. What one frequently finds in SG though is complementizer deletion after a non-negated declarative matrix clause. This also constitutes the unmarked case in MLG (cf. Table 7-3). Dropping *daut* in this context is also a correction found in the judgment test. Examples for this are given in Figures 7-1 and 7-2 (cf. also Figure 4-3 for another example):

Figure 7-1: Judgment test: Mex-'22' (m/16/MLG) dropping the complementizer *daut* in sentence {15}

15. Henrik weit, daut hei daut Launt kaun feloten (*Enrique sabe que puede salir del país*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☒ nicht ganz richtig / *más o menos* ☐ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* hei dout Lount kaun

☐ Ich sage das so / *Uso esta forma*
☒ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*
☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Henrik weit, hei kaun daut Launt feloten

Figure 7-2: Judgment test: Men-'27' (f/17/E>MLG) dropping the complementizer *daut* in sentence {5}

5. Hendrik woit, dot hoi kon dot Lont verlote (*Enrique sabe que puede salir del país*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☒ nicht ganz richtig / *más o menos* ☐ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?*

☐ Ich sage das so / *Uso esta forma*
☒ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No lo uso pero otros Menonitas usan esta forma*
☐ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Hendrik woit, hoi kon dot Lont verlote.

Both informants judge the given sentence as not entirely correct, adding that they would not use this sentence although other people in their colony might do so. The two informants

[184] However, with regard to interrogative matrix clauses, judgments differ: FREY (2011: 73 – example (52c)), for example, considers the sentence *Hofft Otto, sie wird kommen* (gloss by G.K.: hopes Otto she will come; original translation: 'Does Otto hope that she will come?') grammatical, while we find this complementizer-less sentence at least questionable.

"save" the stimuli through one change; they drop *daut* turning the complement clause into a structural V2-clause. Figure 7-2 is especially interesting, because the superficial sequence *SubjNP-*V_{finite}*-ObjNP-*$V_{non\text{-}finite}$ of the complement clause (*hoi kon dot Lont verlote*) remains identical regardless of the presence or absence of the complementizer *dot* ('that'). In contrast to this, the sequence in Figure 7-1 changes, the finite verb in the stimulus (VR-variant) surfaces later than in the informant's correction. We will come back to the question of superficial similarity in In-Depth Analysis 7.1.4.3. In any case, the two figures show that complementizer deletion has to be regarded an integral part of MLG syntax.

Section 7.1 is structured as follows: After a general overview in Section 7.1.2 (cf. Sections 7.2.1 and 7.2.2.1 for a discussion of the historic evolution of German complementizers), Section 7.1.3 will examine selected complement sentence compounds by means of monofactorial analyses of several independent variables, among them the informant's general linguistic and sociolinguistic characteristics and different constellations of verbs and modes of the matrix clause (i.e. ±negated, ±question).[185] The reason for applying monofactorial analyses first is twofold: On the one hand, despite their possibly skewed results, monofactorial analyses grant the reader more comprehensible access to the data. On the other hand, these analyses enable us to highlight analytical details which do not appear in the multifactorial analyses of Section 7.1.4. In that section, we will apply binary logistic regression analyses in order to verify which factors presented in Section 7.1.3 are important predictors for the encountered variation. Two of these predictors will be the raising and the scrambling index. It is this selection, which connects Section 7.1 to verb clusters, the central topic of the present study. Section 7.1.4 contains two especially important parts. As already mentioned, In-Depth Analysis 7.1.4.3 will deal with a comparison of structural and superficial V2 in complement clauses, while Excursus 7.1.4.3 will expand the topic of the deletion of introductory elements to causal sentence compounds.

7.1.2 General remarks about V2-complement clauses

That-deletion in English produces rather modest changes in the visible part of syntax. This constitutes a huge difference to the phenomenon in German varieties, which implies several changes. Aside from the suppression of the complementizer itself (also present in English), the position of the finite verb is the most far-reaching alternation. The verb leaves its clause-final position and moves into the head position of CP, the second position of the clause. A pragmatically important consequence of this is the existence of a prefield normally not available in introduced dependent clauses. Just like in independent main clauses, this prefield allows the speaker to topicalize (sometimes focalize) different parts of the clause (cf., e.g., example (7-13d) below and GÜNTHNER 2005: 50).

[185] It should be said once again that the mode of the matrix clause is not used like the traditional term *Satzmodus* (sentence mode). It is rather used as a cover term for four configurations of matrix clauses. These configurations can be distinguished by the presence or absence of the negation particle *nich* ('not') and by the position of the finite verb (superficially 1st or 2nd position) (cf. also Footnotes 6 in Chapter 1 and 116 in Chapter 5).

FABRICIUS-HANSEN (1992: 473–474) labels V2-complement clauses without complementizer as atypical, grouping them together with verb-initial conditional clauses, disintegrated verb-final conditional clauses (cf. Section 7.3), and introduced V2-causal clauses (cf. Section 6.3 and Excursus 7.1.4.3). Although FABRICIUS-HANSEN says that these clauses do not have the illocutionary force of an independent main clause, she makes it clear that they are not only syntactically, but also semantically less integrated than prototypical verb-final clauses. REIS (1997: 138) writes:

> Ich werde nun i.S.v. (H1) zeigen, daß aV2-Sätze [argument realizing V2-clauses; G.K.] genau die für freie *daß*-Sätze distinktiven Eigenschaften teilen, also r[elatively; G.K.]-unintegrierte Nebensätze sind […].[186]

Although the clause types REIS (1997) refers to are different from those FABRICIUS-HANSEN (1992) refers to, both approaches see V2-complement clauses as less integrated than introduced complement clauses. For REIS (1997: 138 – Figure (65)), introduced complement clauses are sisters of the matrix verb, regardless of the nature of this verb. Unintroduced complement clauses – she calls them relatively unintegrated clauses – are adjoined to VP, i.e. they are in a higher position in the structural tree. This is exactly the position we would expect if they were indeed less integrated (cf. Section 6.1.1). BARBIERS (2000) introduces a different structure. Talking about *dat*/*that*-clauses in Dutch and English, he (2000: 193) says that "[…] factive CPs [co-occurring with matrix verbs like *admit*; G.K.] are adjuncts, whereas propositional CPs [co-occurring with matrix verbs like *tell* or *find*; G.K.] are complements." BARBIERS (2000: 203 and 212) continues that "in factive constructions, CP is generated as a left-hand adjunct to ZP, an extended VP […]", while propositional clauses are "a sister of the matrix V." Structurally, one could then compare REIS' introduced complement clauses with BARBIERS' propositional clauses – both are sisters of matrix V – and REIS' unintroduced complement clauses with BARBIERS' factive clauses – both are adjoined to VP. BARBIERS' (2000) structure, however, is neither consistent with our results nor with the facts of complementizer deletion in SG. FREY (2011: 59), for example, states:

> The classical examples of root-like dependent clauses are the object clauses of verbs of saying, of verbs expressing a doxastic attitude (*believe*, *hope*), and of verbs of perception (*find out*, *feel*). Standard examples of non-root-like dependent clauses are the object clauses of so-called factive predicates (like *regret*, *be surprised*) and of predicates which are inherently negative (*avoid*, *be impossible*).

If – according to BARBIERS (2000) – propositional CPs of verbs such as SG *glauben* or MLG *gleuwen* ('believe') are more deeply embedded than (semi)factive CPs of verbs such as SG *bedauern* ('regret') and MLG *weiten* ('know'), it is surprising that the former allow more complementizer deletion than the latter (cf. especially Table 7-11). Why should a more deeply embedded type of dependent clause surface more frequently in its unintegrated guise than a

[186] Translation by G.K.: I will now show in the sense of (H1) that aV2-clauses [argument realizing V2-clauses; G.K.] share precisely those features that are distinctive for free *daß*-clauses. This means that they are r[elatively; G.K.]-unintegrated subordinate clauses […].

less embedded one? Granted, BARBIERS (2000) does not say anything about the structural position of unintroduced complement clauses, but due to the incongruency just mentioned, we will stick to REIS' (1997) analysis.

AUER (1998: 301) approaches the topic from a more pragmatic point of view. He analyzes a spoken and a written (newspaper) corpus supporting the hypothesis of a higher degree of independence of V2-clauses by saying that the content of complement clauses is often pragmatically more important than that of matrix clauses.[187] He adds that the mismatch between the syntactic and the pragmatic status of complement clauses constitutes the main impulse for speakers/writers to use dependent V2-clauses.[188] As pragmatic considerations are important with regard to complementizer deletion, one challenge will be to interpret the MLG data set, which was elicited by means of a context-free translation task. We will discuss this question at several points.

7.1.3 Monofactorial analyses of complementizer deletion in MLG

7.1.3.1 General screening of the tokens

We will start by looking at the informants' place of residence and at their general syntactic behavior and their language repertoire. Table 7-1 contains complement clauses with one to four verbal element(s) and presents a highly significant distribution with regard to the six colonies investigated.[189]

Table 7-1: Two types of complement clauses separated by origin

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (tokens)	633	880	71	534	364	348	2830
+daut	534	706	68	483	347	341	2479
	84.4%	80.2%	95.8%	90.4%	95.3%	98%	87.6%
χ^2 (5, n=2830) = 113.1; p=0*** / Cramer's V: 0.2 / 0 cells with less than 5 expected tokens							
-daut	99	174	3	51	17	7	351
	15.6%	19.8%	4.2%	9.6%	4.7%	2%	12.4%

The two North American colonies show an above-average occurrence of *daut*-deletion. In the United States, we find 99 instead of 78.5 expected tokens; in Mexico, the difference is even more marked. There are 174 instead of 109.1 expected tokens. The other extreme is the Paraguayan colony Fernheim, where there are only seven instead of 43.2 expected tokens. As it has already been shown that the six Mennonite colonies represent quite different types of

[187] CHESHIRE, KERSWILL, and WILLIAMS (2005: 167) also state that *that*-deletion in English "has been associated with speaker stance and speaker point of view." At least for English, one also has to reckon with the possibility of phonological conditioning. LEE and GIBBONS (2007), for example, show that the complementizer is sometimes deleted in order to prevent stress clash.

[188] Unless these clauses show other signs of subordination (e.g., subjunctive mood; cf. AUER 1998: 298), AUER (1998) calls them dependent main clauses instead of unintroduced subordinate clauses.

[189] Mostly, the analyses in Section 7.1 will only include tokens with an unintroduced complement clause or a complement clause introduced by the default complementizer *daut* (or its SG variant *daß*). Other complementizers like *wann* ('when') and *waut* (homophonous to the MLG relative particle; cf. Excursus 7.2.2.1) are not the main focus of this section.

informants (cf. Table 4-18), it is worthwhile checking the other factors that distinguish these colonies. These are, in particular, the differing language repertoires, but also the raising and the scrambling index. Since we are not interested in the verb cluster that actually appears in an introduced dependent clause when discussing the raising and scrambling values, it is no problem that a small share of the introduced conditional clauses analyzed in Table 7-2 were used for index formation. This is true for all analyses in Section 7.1 which include the raising index and the scrambling index.

Table 7-2: Characteristics of the informants producing two types of complement clauses

	competence in MLG	**competence in majority language**	**competence in SG**	**raising index**	**scrambling index**	**age**
n (tokens)	2446	2446	2446	2759	2641	2830
+daut	2146	2146	2146	2429	2313	2479
	12.6	8.7	8.4	+0.054	+0.004	33.2
	ns	F (1,2444) = 6.3, p=0.012*	F (1,2444) = 76.1, p=0***	F (1,2757) = 78, p=0***	ns	ns
-daut	300	300	300	330	328	351
	12.4	9.1	6.7	+0.224	-0.007	33.2

Judging from the results in Table 7-2, raising-friendly informants with a rather high competence in the majority language and a low competence in SG seem to be the ones who produce clauses without complementizers particularly frequently. This description is consistent with many North American informants. With regard to the competence in SG, this result does not come as a surprise since we have already seen that the North American examples (7-1b), (7-2b), and (7-3b) would have a marginal status in that variety.

In addition to these informant-related variables, the matrix clause has to be taken into account. Two of its features will be analyzed in detail, namely its mode and its main verb. The subjects of the matrix clause and of the complement clause will only be mentioned en passant in the following analyses because their effects are less clear. The correlate *daut*, which relates the dependent clause to the matrix clause (cf., e.g., example (7-3a)), will be the topic of Section 7.2. Examples (7-4a-d) show four Mexican translations of stimulus sentence <6> featuring the four modes of the matrix clause:

stimulus <6> Spanish: **¿No sabes que él debería aprender inglés?**
English: Don't you know that he should learn English?

(7-4) a. *weits dü nich daut dei soll Englisch lehren* (Mex-5; m/16/MLG)
know you not that he should English learn

b. *her weit nich daut hei soll [0.3] Englisch lehren* (Mex-7; m/15/MLG+Sp)
he knows not that he should […] English learn

c. *weits dü daut dei- daut dü Englisch lehren solls* (Mex-30; f/42/MLG)
know you Ø ~~that he-~~ that you English learn should

d. *her weiß daut hei soll [äh] daut Englisch lehren* (Mex-25; f/14/MLG)
he knows Ø that he should [eh] ~~the~~ English learn

Translation (7-4a) shows the intended matrix clause, a negated question (249 of the 282 usable tokens), (7-4b) features a negated declarative clause instead of a question (20 tokens), (7-4c) a non-negated question (10 tokens), and finally, (7-4d) with SG *weiß* ('knows') represents the most deviant and least frequent type, a non-negated declarative matrix clause (3 tokens).[190] All four examples feature the complementizer *daut*. There were, however, ten tokens without *daut* in the translations of sentence <6>. Due to the specific distribution of the four modes in that sentence, their distribution is not significant though. This changes radically when we analyze the four modes regardless of the sentence in which they occur. Table 7-3 does this:

Table 7-3: Different types of complement clauses separated by the mode of the matrix clause

		+negated -question	**-negated +question**	**+negated +question**	**-negated -question**	**Total**
n (tokens)		963	327	804	736	2830
+daut		959	294	724	502	2479
		99.6%	89.9%	90%	68.2%	87.6%
χ^2 (3, n=2830) = 388.1; p=0*** / Cramer's V: 0.37 / 0 cells with less than 5 expected tokens						
-daut		4	33	80	234	351
		0.4%	10.1%	10%	31.8%	12.4%

Auer's (1998: 293) central hypothesis with regard to *daut*-deletion is that introduced complement clauses are relatively presupposed, while dependent main clauses (structural V2-clauses) are relatively asserted (cf. Keller (1993: 227–229) for the same argument with regard to causal clauses). The connection to Table 7.3 is that Auer links relative presupposedness to negated matrix clauses regardless of whether negation is achieved by SG *nicht* ('not') or by a semantically negative verb like *bezweifeln* ('doubt').[191] With this, we are able to explain the huge difference between 0.4% of *daut*-deletion after negated declarative matrix clauses and 31.8% of *daut*-deletion after non-negated declarative matrix clauses. This state of affairs goes hand in hand with what Hooper and Thompson (1973: 472) state for English root transformations:

> We will associate the restrictions on the applicability of RTs [root transformations; G.K.] with a semantic notion of assertion. As we examine sentential complements, relative clauses, and adverbial clauses, we will show that RTs are restricted to application in asserted clauses, and we will attempt to establish independently which clauses are asserted and which are not.

---

[190] We will discuss the reasons why some of the informants deviated from stimulus sentence <6> in the analysis of sentence <8> in Section 7.1.3.5. The central point in that discussion will be the change from second person singular to first and especially third person singular in the matrix clauses of sentences <6> and <8> (cf. (7-4b+d), (7-8a-c), and (7-10a+b)) and the concomitant change from an interrogative to a declarative matrix clause.

[191] Iatridou and Kroch (1992: 6) write about such verbs in mainland Scandinavian languages: "Negative verbs like 'doubt', 'deny' and 'regret,' and negated bridge verbs are all incompatible with embedded v/2, just as in Frisian […]." This integrative effect of negation is nothing new; it can, for example, be seen in the behavior of Spanish complement clauses governed by verbs like *creer* ('believe'). When such matrix verbs are negated, the finite verb of the complement clause does not surface in the indicative mood, but in the subjunctive mood, a prototypical sign of dependency (cf. for this Lehmann 1988: 194, Harris & Campbell 1995: 306–307, and Reis 1995: 57).

FREY (2011: 59) writes that "[c]lassic examples of so-called root-phenomena are English topicalisation and Germanic V2." This makes the MLG V2-complement clauses a perfect example for asserted propositions. As one can see in Table 7-3, the role of negation in declarative and in interrogative matrix clauses is quite different.[192] We will deal with this difference in Section 7.1.3.4. A certain problem for applying these considerations to the MLG data set is that at least AUER (1998) bases his investigation on "naturally-occurring" spoken and written language data, while we work with a data set of context-free translations. In such a data set, it is difficult to decide whether the proposition of a complement clause is asserted or presupposed.[193] Obviously, it is reasonable to assume that informants will always try to contextualize context-free stimulus sentences (cf., e.g., WELKE 1993: 52 and 54). Furthermore, the fact that the results in Table 7-3 coincide with AUER's (1998) hypothesis, at least for declarative matrix clauses, could be taken as an indirect sign for such a contextualization.

An alternative explanation for this coincidence could be frequency effects. If the informants did not succeed in contextualizing the proposition(s) of the stimulus sentence (e.g., due to a lack of time), they may simply have fallen back on their unmarked way of speaking. As V2-complement clauses only rarely co-occur with negated declarative matrix clauses in natural speech, informants may not have produced them in the translation task either. Likewise, a non-negated declarative matrix clause will frequently co-occur with complementizer deletion in natural speech and such a combination, therefore, is sure to be acceptable to the Mennonite informants.

7.1.3.2 Sentence <2>: Negated and non-negated declarative matrix clauses

In order to improve the reliability of the following results, we will restrict the analyses to tokens that represent only one verb in different modes of the matrix clause or to tokens of only one mode with different verbs. While every column in Table 7-3 represents tokens with different verbs, Table 7-4 focusses exclusively on the influence of negation in sentence <2> *John doesn't think that you know your friends well*. This analysis is possible because many informants dropped *nich* ('not') in the matrix clause and inserted it in the complement clause. This is obviously a venial sin since the meaning of the two variants does not differ. Grammar theory would call stimulus sentence <2> a case of negative raising, i.e. in a movement approach, *nich* is assumed to originate in the complement clause and then to raise to the matrix clause. Some informants could, therefore, be said to have reconstructed the original situation by undoing negative raising in (7-5b+c). With regard to the shape of the complement clause, token (7-5a) shows the co-occurrence of a negated declarative matrix clause with a

[192] AXEL-TOBER (2012: 133–134) mentions BUTULUSSI, who lists three conditions, which allow for V2-complement clauses after negated matrix clauses, one of them being an interrogative matrix clause.

[193] Considering the fact that the informants' translations followed the interviewer's reading of the stimulus sentences, one may even conclude that all information contained in the translations is presupposed. After all, the information was directly accessible to the informant in the immediate context.

complement clause introduced by *daut*, while (7-5b+c) combine a non-negated declarative matrix clause with or without the complementizer *daut*:

stimulus <2> Portuguese: **O João não acha que tu conheces bem os teus amigos**
English: John doesn't think that you know your friends well

(7-5) a. *[äh] Hans gleuft nich daut- [äh] [0.3] daut du sine [äh] Frend gut kennst* (Bra-15; f/44/MLG)
[eh] Hans believes not ~~that-~~ [eh] […] that you his [eh] friends well know

b. *Hans gleuft daut dü dine Frend nich gut kennst* (Bra-14; m/55/MLG)
Hans believes Ø that you your friends ~~not~~ well know

c. *João meint*[194] *du: kennst nich gut dine Freunde die du hast* (Bra-9; f/14/MLG)
João believes Ø Ø you know ~~not~~ well your friends ~~that you have~~
'John thinks that you don't know the friends you have well'

As expected, there is not a single negated declarative matrix clause with a complement clause without *daut* in Table 7-4:

Table 7-4: Different types of complement clauses governed by *gleuwen* or *meinen* in the matrix clause of sentence <2> separated by the mode of the matrix clause

mode of matrix clause	**-negated** -question	**+negated** -question
n (tokens)	75	202
+daut	22	202
	29.3%	100%
χ^2 (1, n=277) = 176.5; p=0*** / Phi: +0.8 / 0 cells with less than 5 expected tokens		
-daut	53	0
	70.7%	0%

The association strength of +0.8 is truly impressive. It is safe to assume that this huge difference is caused by the presence or absence of the negation particle *nich* ('not') in the matrix clause. Starting a sentence with *John does not think […]* makes it very probable that the proposition of the complement clause is presupposed. After all, why should someone feel the need to mention that someone does not think something to be the case if this something has not been the topic of conversation? This is different with *John thinks […]*, where the proposition of the complement clause may, but does not need to be presupposed. The position of *nich* may thus not have a semantic effect in a sentence compound with matrix verbs such as *gleuwen* or *meinen*, but it sure has a pragmatic one.

In spite of this, some readers may wonder whether it might not be the frequent presence of *nich* in the complement clause, which explains this difference. Aside from a general objection to this – complementizer deletion is normally connected to linguistic facts of the matrix clause – there is also a distributional objection connected to eleven tokens in Table 7-4. These tokens

---

[194] *Meinen* occurs exclusively in Brazil (probably a consequence of Portuguese *achar* having a broader field of use than *believe* in English or *creer* in Spanish). In AUER (1998: 288 – Table 2 and Footnote 11), *meinen* occurs in its other reading as a synonym for *sagen* ('say'); in REIS (1995: 49), it is taken to be a synonym of *denken* ('think'). In sentence <2>, *meinen* is definitely closer to *gleuwen* ('believe'). As there is no distributional difference between these verbs, they will be grouped together.

deviate in yet another way from the stimulus sentence. Three of them feature the particle *nich* ('not') in both the matrix and the complement clause, while eight do not feature any negation particle (cf. the relevant discussion in In-Depth Analysis 7.1.3.3). Importantly, while the first three tokens cannot possibly differ from the other 199 tokens with a negated matrix clause (no variation!), the eight completely non-negated tokens do not differ from the other 67 tokens with a non-negated matrix clause. Three of them combine with *daut* (37.5%) while five of them do not feature a complementizer. For tokens with *nich* appearing in the complement clause instead of the matrix clause, this share is 28.4% (19 out of 67 tokens). This is a non-significant difference.

7.1.3.3 Sentences <2> and <5>: Matrix verbs *gleuwen* and *weiten*

Table 7-4 does not contain any new information; it just confirms what we already discovered in Table 7-3. Contrary to this, Table 7-5 and In-Depth Analysis 7.1.3.3 offer new information comparing stimulus sentences <2> *John doesn't think that you know your friends well* (cf. tokens (7-5a-c)) and <5> *Henry doesn't know that he can leave the country* (cf. tokens (7-7a-d) below). These sentences share many structural characteristics. Both feature a negated declarative matrix clause with a proper name as the subject and both feature a complement clause of comparable complexity containing six lexical entities (in Spanish 5–6 entities; in Portuguese 6–7 entities). Obviously, there are also differences. Sentence <2> has only one verbal element in the complement clause (two such elements are present in sentence <5>), its complement clause features a second-person-singular subject (third-person-singular subject in sentence <5>) and contains the adverb *well* (no adverb in sentence <5>). The decisive difference, however, is the verb of the matrix clause. In sentence <2>, this is *think*; in sentence <5>, it is *know*. Table 7-5 presents the distributional facts of the two sentences with regard to *daut*-deletion. As in Table 7-4, two modes of the matrix clause can be distinguished:

Table 7-5: Different types of complement clauses in sentences <2> and <5> separated by two modes and two verbs of the matrix clause

mode of matrix clause	**-negated** -question		**+negated** -question	
verb of matrix clause	***sentence <2>*** *gleuwen* ('believe')	***sentence <5>*** *weiten* ('know')	***sentence <2>*** *gleuwen* ('believe')	***sentence <5>*** *weiten* ('know')
n (tokens)	75	28	202	250
+daut	22	26	202	249
	29.3%	92.9%	100%	99.6%
	χ^2 (1, n=103) = 33.1; p=0*** / Phi: +0.57 / 0 cells with less than 5 expected tokens		ns	
-daut	53	2	0	1
	70.7%	7.1%	0%	0.4%

Unsurprisingly, the right-hand side of Table 7-5, the side with the tokens with negated declarative matrix clauses, does not show a significant difference. There is virtually no variation. The difference between the tokens with deviating non-negated declarative matrix clauses (left-hand side of the table), however, is highly significant showing a strong association of +0.57. This difference is the consequence of the verbal elements of the matrix clauses. Referring back to the things said about the independence of V2-complement clauses in Sections 7.1.1 and 7.1.2, *weiten* ('think') could be said to govern its complement clause more "efficiently" than *gleuwen* ('believe'), since the share of disintegrated V2-clauses after *weiten* is ten times smaller than the one after *gleuwen*. This difference is also documented in AUER (1998: 288 – Table 2). In his oral corpus, *glauben* co-occurs in 60% of the cases with a V2-complement clause (written corpus: 29%), while *wissen* co-occurs only in 20% with such a clause (written corpus: 13%).[195]

If we interpret this difference alongside AUER's (1998) reasoning with regard to negation, we have to assume that complement clauses governed by *think* are not only syntactically more integrated, but also more presupposed than complement clauses governed by *believe*. AUER (1998: 294) himself writes that SG *wissen* seems to be rather presupposing when no specific context is given; exactly the situation the Mennonite informants encountered. Still, the question remains of how these verbs are connected to the information status of the complement clause. A possible answer may be that complement clauses after *weiten* ('know') – unlike those after *gleuwen* ('believe') – are factually established and if combined with the complementizer *daut* ('that') and not with *ob* ('whether') fixed with regard to their truth value (cf. ZIFONUN et al. 1997: 2257–2260).[196] ZIFONUN et al. (1997: 2259) describe a sentence such as *John knows that p* in this way: "Speaker says that A [subject of the matrix clause; G.K.] knows the truth value of p and speaker pronounces the truth value of p."[197] This means that the speaker and the subject of the matrix clause share the evaluation of the truth value of the proposition of the complement clause. At least for these two actors (not necessarily for the listener), this proposition can thus be considered presupposed. The connection between this shared knowledge and negated matrix clauses would then be that, in both cases, presupposedness leads to fewer V2-complement clauses. This is consistent with HOOPER and THOMPSON's (1973: 495) assumption about root transformations:

> RTs [root transformations; G.K.] are not applicable in presupposed sentences because it is not appropriate to emphasize elements of a sentence whose proposition is already known, whose truth is presupposed, and whose content is relegated to the background.

In the case of *John believes that p*, things are quite different. John, the subject of this matrix clause, does not know the truth value of p; he just believes it. Aside from this, the speaker does not pronounce the truth value of p. The (truth value of the) proposition of the

---

[195] Quite erroneously, DUDEN (2006: 1055) claims that only verbs that express assumptions like *glauben* ('believe') or *denken* ('think') allow V2-complement clauses. In addition to the counterevidence in the MLG data set and in AUER (1998), both EISENBERG (2013b: 314 – example (3c)) and VON POLENZ (1991: 196–197) use precisely matrix clauses with *wissen* ('know') to illustrate V2-complement clauses.

[196] It is, however, important to realize that being fixed with regard to the truth value does not imply the truth of the proposition of the complement clause. This is different in prototypical factive verbs such as *regret*.

[197] Translation by G.K.; the original reads: *Sprecher sagt, daß A* [subject of the matrix clause; G.K.] *den Wahrheitswert von p kennt, und Sprecher gibt den Wahrheitswert von p zu erkennen [...]*.

complement clause does thus not constitute common knowledge. HOOPER and THOMPSON (1973: 477) write that "[t]he verbs of class B (*think*, *suppose*, *seem*, etc.) […] have assertions as their complements." REIS (1995: 72) calls SG *glauben* ('believe') an attitudinal verb. This again means that neither the proposition nor the assessment of its truth value are presupposed.[198] REIS (1997: 122) also stresses the fact that the dependent proposition of these verbs is "only" claimed to be true:

> V2-Prädikate fixieren eine zur aktualen Welt alternative (Glaubens-, Sagens-, Präferenz-)Welt des zugehörigen Subjekts (soweit vorhanden), in der die abhängige Proposition als wahr beansprucht wird.[199]

This claim may lead to more V2-complement clauses because the person uttering such a claim may feel the need to foreground it by syntactically upgrading the verb-final complement clause into a structural V2-clause. The other extreme with regard to the information status of the complement clause is represented by factive verbs. The reason for this is that these verbs do not only fix the truth value of the proposition of the complement clause, but necessarily imply its truth (cf. HOOPER & THOMPSON 1973: 480). This constitutes the highest possible degree of presupposedness, i.e. of a shared evaluation of the truth value, including not only the speaker and the subject of the matrix clause, but also the listener who must consider the proposition true. It does, therefore, not come as a surprise that factive verbs hardly ever allow V2-complement clauses.[200]

Quite unsurprisingly, verbs like *believe*, *know*, and *regret* belong to three different verb groups in HOOPER and THOMPSON's (1973) taxonomy: *Believe* is a class B-verb, *know* a class E-verb, and *regret* a class D-verb. Differing frequencies of V2-complement clauses are not the only consequence of the semantic characteristics of these verbs. HOOPER and THOMPSON (1973: 480) write that "Karttunen (1991) has pointed out one difference between the factive verbs of classes D and E, noting that verbs of class E (which he calls semifactives) can lose their factivity in questions and conditionals." If the lack of factivity in questions implies a

---

[198] REIS (1997: 124) writes about doxastic verbs like *believe* and verbs of saying: "*Es handelt sich um Prädikate, bei denen der Sprecher für die Wahrheit der abhängigen Proposition nicht selbst einstehen kann, d.h. ihre Geltung ist 'subjektorientiert', nicht sprecherorientiert*." [Translation by G.K.: These predicates indicate that the speaker does not answer for the truth of the dependent proposition, i.e. their validity is subject-oriented, not speaker-oriented.]

[199] Translation by G.K.: V2-predicates fix an alternative world (of belief, of saying, of preference) to the actual world of the pertinent subject (if present); a world, in which the dependent proposition is claimed to be true. BARBIERS (2000: 206) qualifies this semantic relationship in a similar way: "Semantically, the truth of a propositional complement is relativized by the matrix verb: the embedded proposition is not simply true or false, it is true or false according to someone's hope, thought, etc."

[200] EISENBERG (2013b: 317) expresses the connection of presupposedness and truth with regard to factivity: "Faktivität bezieht sich dabei auf den **dass**-Satz. Wenn die Proposition p die Bedeutung des **dass**-Satzes ist, dann wird p präsupponiert, d.h. als wahr vorausgesetzt." [Translation by G.K.: Factivity refers to the **that**-clause. If the proposition p is the meaning of the **that**-clause, then p is presupposed, i.e. assumed to be true.]. There may be also another reason for the impossibility of deleting the complementizer after factive verbs. ROBERTS and ROUSSOU (2003: 114) write about the English complementizer *that*: "Thus the obligatory feature which characterizes C *that* is +declarative. This feature can be taken as deictically referring to the truth of the proposition expressed by the IP complement to C *that* in the same way that the demonstrative deictically refers to the individual expressed by the complement to D *that*."

higher chance for V2-complement clauses, this is important information, because stimulus sentences <3>, <4>, and <6> do not only contain the class E-verbs *see* and *know*, but also feature an interrogative matrix clause and allow V2-complement clauses to a certain degree (cf. especially the last part of In-Depth Analysis 7.1.3.3 and Section 7.1.3.4). FREY (2011: 67) also mentions a difference between SG *glauben* ('think' or 'believe') and *bedauern* ('regret'): "Interestingly, PACs [peripheral adverbial clauses; G.K.] can belong to an embedded clause. In this case, the embedded clause has to occur in a root-context, i.e. the embedded clause has to be root-like. This is shown by the contrast illustrated in (44a,b) […]." We offer FREY's examples and glosses as (7-6a+b) and add our own translations:

(7-6) a. *Paul glaubt, dass Otto kommt, da er Geld braucht*
Paul thinks that Otto comes since he money needs
'Paul thinks that Otto will come since he, Otto ($^{?}$Paul), needs money'

b. *Paul bedauert, dass Otto kommt, da er Geld braucht*
Paul regrets that Otto comes since he money needs
'Paul regrets that Otto will come since he, Paul ($^{??}$Otto), needs money'

In example (7-6a), Otto's lack of money is the most probable reason for Otto's arrival, while this reading is improbable for (7-6b), where the unmarked reading is that Paul, the subject of the highest clause, needs money. The reason for this intriguing difference is that the complement clause selected by *glauben* in (7-6a) – unlike the one selected by *bedauern* in (7-6b) – is root-like. It is because of this that the personal pronoun of a peripheral *da*-clause is more likely to be bound by Otto in (7-6a), the subject of an adjacent root-like complement clause selected by *glauben*, rather than by Otto in (7-6b), the subject of a likewise adjacent non-root-like complement clause selected by *bedauern*. BARBIERS' (2000) hypothesis sees factive clauses governed by verbs like *bedauern* as higher up in the structural tree (more root-like?) than propositional clauses governed by verbs like *glauben*. This hypothesis is thus again contrary to empirical facts, at least for SG.

With regard to syntax proper, ZIFONUN et al. (1997: 2254–2255) group *wissen* and *glauben* into separate categories due to their selectional differences. SG *glauben*, for example, can govern an infinitival clause, which is impossible for SG *wissen*.[201] After *nicht wissen* ('not know'), both *daß* ('that') and *ob* ('if') can introduce the complement clause. After *nicht glauben* ('not believe'), *ob* is impossible.[202] One may sense a certain contradiction in the fact that *glauben* – unlike *wissen* – selects strongly integrated infinitival clauses,[203] while it also

[201] In the SG sentence *Er weiß zu gefallen* ('He knows how to please (other people)'), in which *wissen* combines with an infinitival clause, *wissen* approaches the meaning of a modal verb. The sentence could be rephrased as *Er verfügt über die Fähigkeit zu gefallen* ('he has the ability to please (other people)') but not as *Er weiß, daß er gefällt* ('he knows that he pleases (other people)').
[202] This may be a syntactic reflex of the higher integration of the complement clause after *wissen*, because the insertion of a negation particle in a matrix clause with this verb can cause a change of the complementizer (*I know **that** […]*; *I do **not** know **if** […]*). This does not happen after *glauben* (**I do not believe, if […]*).
[203] One structural correlate for this high degree of integration is subject control. This means that the subject of the matrix clause with *glauben* ('believe') has scope over the infinitival clause binding its logical subject, which is phonetically empty.

combines frequently with disintegrated V2-complement clauses. It is, however, questionable whether these selectional preferences can be compared.

Aside from the varied occurrence of V2-complement clauses, Table 7-5 poses another question. Why does the negation particle *nich* disappear so frequently from the matrix clause of sentence <5> (28 out of 277 tokens; 10.1%)? For sentence <2>, which shows an even higher share of this phenomenon (75 out of 278 tokens; 27%), we have assumed a meaning-neutral reconstruction of negative raising. This explication does not hold for sentence <5> though where inserting *nich* in the complement clause is definitely not meaning-neutral, at least not in modern SG. We will try to answer this question in the following excursus.

In-Depth Analysis 7.1.3.3: Syntactic doubling crossing clause boundaries

Examples (7-7a-d) show four relevant variants for sentence <5>:

stimulus <5> Spanish: **Enrique no sabe que puede salir del país**
English: Henry doesn't know that he can leave the country

(7-7) a. *Hein weit nich daut hei: üt dem Land rütkann* (Mex-94; m/27/MLG)
Hein knows not that he out the country out-can

b. *Henrik weit nich daut hei nich üt dem Land rütfohren kann* (Mex-96; f/18/MLG)
Henrik knows not that he ~~not~~ out the country out-drive can

c. *Henrik w:eit daut hei von [1.1] Land [0.6] wech:kann* (Mex-84; f/15/MLG+E)
Henry knows Ø that he from […] Ø country […] away-can

d. *[äh] He- Enrique weit daut daut hei nich kann üt det Land rütfohren* (Mex-97; m/22/MLG)
[eh] ~~He-~~ Enrique knows ~~that~~ Ø that he ~~not~~ can out the country out-drive

Tokens (7-7a+b) show negated declarative matrix clauses, tokens (7-7c+d) non-negated ones. Example (7-7a) represents the intended translation, (7-7c) a unique translation without any negation element. The interesting variants are (7-7b), already presented as (1-13), where *nich* ('not') appears in both the matrix and the complement clause, and (7-7d), where it only appears in the complement clause. Table 7-6 furnishes the distribution of these four variants for sentences <2> and <5>:

Table 7-6: Different negation patterns in sentences <2> and <5>

	sentence <2> *gleuwen* ('believe')	**sentence <5>** *weiten* ('know')
n (tokens)	277	278
+nich in matrix clause ***-nich*** in complement	199 71.8%	184 66.2%
+nich in matrix clause ***+nich*** in complement	3 1.1%	66 23.7%
χ^2 (3, n=555) = 80.6; p=0*** / Cramer's V: 0.38 / 2 cells (25%) with less than 5 expected tokens		
-nich in matrix clause ***-nich*** in complement	8 2.9%	1 0.4%
-nich in matrix clause ***+nich*** in complement	67 24.2%	27 9.7%

The nine completely non-negated tokens will not be analyzed due to their rarity (cf. (7-7c)). Likewise, we will not be discussing the 383 translations, which do not deviate from the stimulus sentences as in (7-7a). The other two variants, however, need to be examined. The first question mentioned above refers to tokens like (7-7d), where *nich* appears exclusively in the complement clause. The answer to this question does not lie in the rather frequent tokens in sentence <2> (67 tokens), where the meaning does not depend on the position of *nich*, but in the less frequent 27 tokens of sentence <5>. This sentence contains *weiten* ('know'), a verb that – contrary to *gleuwen* ('believe') – does not allow negative raising.

Two explanations come to mind immediately, but both of them do not seem to be on target. First, one could assume that the informants were surprised by hearing a sentence like *Henry doesn't know* ***that*** *[...]* instead of *Henry doesn't know* ***if*** *[...]*. Not that the version of the stimulus sentence is unusual, let alone ungrammatical, but some informants may have preferred the co-occurrence of the complementizer *that* with a non-negated matrix clause. Still remembering the extant negation particle in the stimulus sentence, these informants may then have erroneously transferred *nich* to the complement clause.[204] This scenario, however, does not explain the even higher number of 66 tokens of sentence <5>, in which *nich* appears both in the matrix and in the complement clause.

A second explanation may be mispronunciation of the interviewer or misperception of the interviewees. Neither the interviewer nor most of the interviewees were native speakers of English. Due to this, the sequence of [n] in the coda of *can* and [l] in the onset of *leave* in *that he ca**n** **l**eave the country* may have led to the pronunciation or the perception of a non-released homorganic [t] turning *can* into *can't*.[205] Obviously, *can* and *can't* in US-American English are also distinguished by different degrees of vowel opening and obviously, the interviewer was aware of this problem and stressed this difference. Nevertheless, a perceived *can't* could explain the appearance of *nich* in the complement clause. However, this explanation could only account for translations from English and the vast majority of 73 of the 93 tokens in question come from Spanish and Portuguese translations.[206]

In any case, a joined analysis of variants (7-7b+d) seems to be in order. Variant (7-7b) occurs just three times in sentence <2>, a number within the normal range of translation errors. In sentence <5>, however, the variant is responsible for 66 tokens, i.e. 23.7% of all

[204] This explanation is supported by the fact that some informants maintained the negation particle in the matrix clause, but changed the complementizer. Ten used *of* or *as* (both 'if') instead of *daut* ('that'); four used semantically fitting interrogative adverbs like MLG *woo* ('where' or 'how') or SG-influenced *wie* ('how'). An example for the latter group follows: *Heinrich weit nich* ***woo*** *her soll üt- [0.4] üt de Land rütkommen* (Mex-24; f/14/MLG) (gloss: Henry knows not where/how he should ~~out~~ […] out the country out-come; 'Henry doesn't know where/how he should leave the country').

[205] In language change, this is quite a frequent process. One can see this, for example, in the development of Middle High German *eige**nl**ich* to Modern German *eige**ntl**ich* (both 'actually').

[206] A third explanation was offered by MARTIN PFEIFFER (p.c.), who suggested that a sentence stating that *someone does not know that he can leave the country* could involve some additional cognitive effort for people who live in countries where leaving the country is not problematic. Due to this, it may have been difficult for the informants to construct a context in which someone does not know this obvious fact. The informants may thus have "improved" the meaning of the sentence compound by attuning it to their world knowledge, i.e. for them, it would be less marked to not know that someone cannot leave the country.

cases. Adding these tokens to the 27 translations of (7-7d), in which *nich* appears exclusively in the complement clause, we are faced with the somewhat worrying fact that the Mennonite informants in North (52 tokens) and South America (41 tokens) have apparently turned around the meaning of the original sentence compound in 33.5% of the 278 relevant translations. This is definitely a number outside of any normal range for translation errors, especially because sentence <5> does not seem to be an exceptionally complex sentence compound (cf. Footnote 206 in this chapter for a different opinion). Due to this and due to the generally high quality of the translations, a possible translation problem can only explain a fraction of these tokens.

In Table 7-5, we have seen that sentence <2> with *gleuwen* has a share of 70.7% of *daut*-deletion after non-negated declarative matrix clauses, while sentence <5> with *weiten* only has a share of 7.1% of V2-complement clauses. This difference was explained by the fact that complement clauses after *weiten* are more integrated into the matrix clause than complement clauses after *gleuwen*. If we continue in this vein, the high share of tokens with double negation in sentence <5> may also be the consequence of this strong integration.[207] Non-technically, we may say that strong integration makes the linkage between matrix and complement clause more transparent. This high transparency coincides perfectly with our assumption that some Mennonites may perceive this sentence compound as one unit rather than as two clausal entities (cf. the discussion at the end of Section 5.1.3.3). Therefore, a high degree of transparency and thus a high degree of syntactic integration may have furthered infiltration of the negation particle into the complement clause.[208]

Variant (7-7b) might, therefore, be considered an interesting case of multiple negation, perhaps comparable to familiar cases from colloquial varieties of German (cf. Zifonun et al. 1997: 857–858) and English. Multiple negation in these varieties does not change semantics, i.e. *I can't see nothing* in colloquial English means *I can't see anything* and not *I can see something*. A token like (7-7b) with a verb like *weiten* ('know') and two negation particles, however, seems to re-translate into *Henry doesn't know that he cannot drive out of the country*. If this really were a case of double negation in the above-mentioned sense, we would have to assume that (7-7b) actually means that *Henry is ignorant about a possibility for him or another masculine person to leave the country*. Granted, this type of semantically neutral

---

[207] The fact that double negation in sentence <5> also seems to be sensitive to the presence of the correlate *daut* ('that') in the matrix clause supports this idea. These correlates occur frequently in negated declarative clauses and they will be shown to represent/induce a higher degree of integration of the complement clause (cf. Section 7.2). In sentence <5>, double negation occurs in 23.3% of 180 sentence compounds with a negated matrix clause, but without a correlate. In contrast, it occurs in 34.3% of seventy sentence compounds with a correlate (χ^2 (1, n=250) = 3.1; $p=0.078^{(*)}$ / Phi: 0.11 / 0 cells with less than 5 expected tokens). Granted, the distribution only reaches a statistical tendency and the association is weak, but the gist of the story matches our assumption.

[208] One may consider this transparency assumption problematic since *weiten* ('know') is not a prototypical bridge verb. D'Avis (1995: 99), however, writes that "*[w]issen* ('to know') is not a bridge verb *per se*: it doesn't allow extraction from *daß*-complements […]." However, D'Avis (1995: 99) qualifies this statement by adding that *wissen* has some bridge properties after all, at least in contexts only marginally present in our translations (cf. Footnote 204 in this chapter): "[…] it could be concluded that the bridge properties of *wissen* only come to fruition with *wh*-complements and not with *daß*-complements. This could be encoded in a way such that, whenever the matrix verb is not a bridge, an additional barrier is involved […]."

double negation would be highly marked, first because it goes against our intuition and second because it would cross a clause boundary. In spite of this, assuming double negation seems to be the only viable explanation because it is hard to imagine that so many informants misunderstood such a simple sentence.

Quite unexpectedly, our assumption receives support from GOETHE himself. This eminent figure of German poetry produced the following two tokens with the semantically negative verb *verbieten* ('prohibit'). The first example comes from *Wilhelm Meisters Wanderjahre* (GOETHE 1964 (volume 8): 345), the second one from the *Italienische Reise* (GOETHE 1964 (volume 11): 93):

> Des andern Morgens jedoch war das erste, daß die Familie zusammenlief und den Kindern streng **verboten** ward, **nicht** aus der Türe zu gehen, indem ein greulicher Bär oder sonst ein Ungetüm in der Nähe sich aufhalten müsse […] [bold print; G.K.].[209]

> Nun ist zwar bei großer Strafe **verboten**, **nichts** in die Kanäle zu schütten, **noch** Kehrig hineinzuwerfen; einem schnell einfallenden Regenguß aber ist's nicht untersagt, allen den in die Ecken geschobnen Kehrig aufzurühren, in die Kanäle zu schleppen […] [bold print; G.K.].[210]

From the context of the two quotations, it is obvious that they do not mean that it was forbidden for the children to *not* go out of the door and for all inhabitants and visitors of Venice to throw *nothing* into the canals *nor* to put rubbish there. They rather mean that it was forbidden for the children to go out of the door and for all inhabitants and visitors of Venice to throw *anything* into the canals. For modern speakers of German, GOETHE's sentences are senseless.[211] In accordance with this, the English translations do not feature these negated dependent non-finite clauses. In any case, the structure of GOETHE's examples is strikingly similar to the MLG translations of sentence <5>. Both the Mennonites and GOETHE negate the matrix clause as well as the dependent clause although, semantically, the negation is restricted to the matrix clause. The only differences are that GOETHE uses a semantically negated verb in the matrix clause instead of clausal negation and that his complement clauses are even more strongly integrated since they are non-finite. This non-finiteness ties in with other exceptional cases of non-clause-bound negative concord. DE SWART (2010: 216–217) states the general impossibility of such a type of negative concord, but mentions some exceptions:

---

209 Translation from GOETHE (1989 (volume 10): 337): "Yet first thing the following morning the entire family rushed together, and the children were strictly forbidden to step out the door, because a dreadful bear or some other monster must be lurking in the neighborhood."

210 Translation from GOETHE (1989 (volume 6): 77): "Now it is true there is a heavy penalty for pouring anything into the canals or throwing rubbish into them. However, nothing prevents a hard rain from stirring up all the rubbish shoved into corners and dragging it into the canals […]."

211 This does not mean, however, that such "incorrect" double negations do not occur in spoken Modern German. In a TV-discussion following the Paris attacks of November 13, 2015, a German politician, JULIA KLÖCKNER, said (ARD – HART-ABER-FAIR from 14.11.2015; 25.19 minutes): "*Natürlich gerät nicht alles an die Öffentlichkeit, aber es ist nicht so, daß der Staat nicht wehrlos ist*" (gloss: naturally gets not everything to the public but it is not-NEGATION so that the state not-NEGATION defenseless is; translation of intended meaning: 'Naturally, not everything is told to the public, but it is not so that the state is defenseless'). The second *nicht* reverses the intended meaning, but it was not repaired by the speaker nor was it commented on by the listeners.

> Given that clause-boundedness is conceived as a standard restriction on resumptive quantification (Corblin et al. 2004, and references therein), languages generally do not show negative concord across clause boundaries. Exceptions are cases like (16)-(19) [examples from French, Polish, Italian, and Greek; G.K.], in which neg-raising indicates that the clause boundary is permeable (Kayne 1984, Godard 2004). Permeability is frequently favored by non-finiteness (16) and (17) […], and subjunctive mood (18).

Although both Mennonites and GOETHE practice neg-lowering rather than neg-raising, their examples are comparable to those given by DE SWART since GOETHE's examples are non-finite clauses and one may attribute a certain degree of subjunctive mood to the MLG tokens represented by (7-7b). Complement clauses after negated matrix clauses are the very context for which languages like Spanish or Portuguese require the subjunctive mood. Additionally, we have seen in the translations of sentence <2> *John doesn't think that you know your friends well* that such complement clauses frequently appear with the MLG marker of conditionality *dune* ('do'; cf. the discussion at the end of Section 5.1.3.3), a feature not possible in sentence <5> due to the presence of the modal verb.

Due to the speculative nature of our explanation, we will include sentence <6> *Don't you know that he should learn English?* and sentence <10> *He didn't know that he should have fed the dogs this morning* in the analysis. Between sentences <5> and <10>, there are some similarities, such as the mode and the verb of the matrix clause, but there are also decisive differences. Sentence <10> is more complex, i.e. it contains non-deictic contexts (past tense in the matrix clause, counterfactuality in the complement clause[212]), and probably most importantly, it does not feature a proper name. This last point in particular is likely to explain the fact that the infiltration of *nich* into the complement clause of sentence <10> is much less frequent (17 of 279 tokens (6.1%), among them 14 tokens with double negation (5%)) than in sentence <5> (33.5% and 23.7%, respectively). The reason for this is probably that the informants may have frequently preferred a split reference reading for the two context-free occurrences of *he* in sentence <10>, while the proper name in the matrix clause of sentence <5> *Henry doesn't know that he can leave the country* is an ideal binder for the personal pronoun of the following complement clause. Such a shared subject reference increases clausal integration (cf. PITTNER 1999: 205) thus making the clause boundary even more transparent. In any case, the decisive tokens with double negation in sentence <10> are still more frequent than in sentence <2>, the sentence featuring non-integrating *gleuwen*, which only exhibit a share of 1.1%.

The results of sentence <6> are quite enlightening too. In contrast to sentences <5> and <10>, the reference of the subjects of the two clauses is definitely different (*you* and *he*). Furthermore, sentence <6> features a negated interrogative matrix clause and not a negated declarative clause. We already know that negated interrogative clauses allow for more *daut*-deletion than negated declarative clauses, i.e. syntactically their integrating force is less

[212] HARRIS and CAMPBELL (1995: 306) consider counterfactuals as non-asserted. It is hard to say whether this changes anything for sentence <10> though, since its complement clause is already clearly non-asserted due to the negation of the matrix clause. Confer also AUER (1998: 296) for a possible influence of deictic contexts on complementizer deletion.

pronounced (cf. Table 7-3). We also know from token (7-4b) that some informants translated sentence <6> with a negated declarative matrix clause. If we do not restrict our analysis to complement clauses with *daut* (and its SG alternative *daß*) and V2-clauses without a complementizer, we obtain quite an interesting result. A total of 254 translations of sentence <6> with a negated interrogative matrix clause do not show a single case of double negation. Among the 25 tokens with a negated declarative matrix clause, however, three tokens show double negation (χ^2 (1, n=279) = 30.8; p=0*** / Phi: -0.33 / 2 cells (50%) with less than 5 expected tokens / Fisher's Exact: p=0.001**). These three tokens could be considered to be within the normal error margin, but their concentration after negated declarative matrix clauses coincides with our hypothesis that negation can only infiltrate complement clauses if these clauses are firmly integrated, for example by a negated declarative matrix clause as in (7-8a-c).

stimulus <6> Spanish: **¿No sabes que él debería aprender inglés?**
English: Don't you know that he should learn English?

(7-8) a. *hei weit nich waut hei nich soll Englisch lehren* (Mex-4; m/16/S>MLG-71%)
he knows not that he ~~not~~ shall English learn

b. *[oh] ik weit nich daß hei nich würd sollen Englisch lehren* (Mex-37; f/18/MLG)
[oh] I know not that he ~~not~~ will shall English learn
'I don't know that he will not have to learn English'

c. *[ähm] ik weit nich [1.3] warum ik nich: Englisch rede kann* (Fern-12; m/42/MLG)
[ehm] I know not […] why I ~~not~~ English talk can
'I don't know why I cannot converse in English'

Although these translations show further deviations from the stimulus sentence,[213] it is precisely some of these deviations that support our hypothesis. In (7-8a+c), for example, the same pronoun is used in matrix and complement clause, possibly increasing syntactic integration. In (7-8c), the reference is necessarily identical; in (7-8a), a shared reference is possible.

7.1.3.4 Sentences <3> and <4>: Negated and non-negated interrogative matrix clauses

Table 7-3 showed a massive difference in *daut*-deletion after negated and non-negated declarative matrix clauses. It did not discriminate between negated and non-negated interrogative matrix clauses though. Both exhibited a share of roughly 10%. This picture changes with the data presented in Table 7-7, which focuses on sentences <3> *Don't you see that I am turning on the light?* and <4> *Can't you see that I am wearing a new dress?* These two sentences are grouped together because they are structurally similar, they fulfill a comparable illocutionary function (a kind of reproach), and their translations do not show a distributional difference with regard to complementizer deletion (this was different in Table

[213] None of the introducing elements is *daut* (cf. for *waut* in (7-8a) Excursus 7.2.2.1, for *daß* in (7-8b) point (f) in Section 4.1, and for *warum* ('why') in (7-8c) Footnote 204 in this chapter), the verbal complex deviates twice (7-8b+c), and all subject pronouns of the matrix clause have changed from second to first or third person singular (cf. Footnote 190 in this chapter and especially the discussion in Section 7.1.3.5).

5-37 where the position of the ObjNP was analyzed). As we have already provided examples for sentence <3> (cf. 7-1a+b), we now present tokens of sentence <4>:

stimulus <4> Spanish: **¿No ves que estoy usando un vestido nuevo?**
English: Can’t you see that I am wearing a new dress?

(7-9) a. *siehts dü nich daut ik en nüet Kleid bruuk* (Mex-15; m/40/MLG)
see you not that I a new dress use

b. *siehts dü daut daut ik en nüet Kleid anha* (Mex-2; f/52/MLG)
see you ~~that~~ Ø that I a new dress on-have

c. *kos nich sehen ik ha en nüet Kleid* (Mex-20; f/34/MLG)
~~can~~ Ø not see Ø I have a new dress

d. *kos sehen ik ha: en nüet Kleid* (Mex-49; f/39/MLG)
~~can~~ Ø Ø see Ø I have a new dress

Translations (7-9a+b) feature the complementizer *daut*, while tokens (7-9c+d) present V2-complement clauses and an additional modal verb in the matrix clause (cf. Table 7-8). Besides this, (7-9b+d) deviate from the stimulus sentence because the negation particle does not appear. Table 7-7 presents the distribution for this factor:

Table 7-7: Different types of complement clauses governed by *sehen* in the matrix clause of sentences <3> and <4> separated by the mode of the matrix clause

mode of matrix clause	**-negated** +question	**+negated** +question
n (tokens)	53	543
+daut	33	472
	62.3%	86.9%
χ^2 (1, n=596) = 22.7; p=0*** / Phi: +0.2 / 0 cells with less than 5 expected tokens		
-daut	20	71
	37.7%	13.1%

The distribution is highly significant, showing that there are many more V2-complement clauses after non-negated than after negated interrogative matrix clauses. Negation, therefore, seems to have a comparable syntactic effect in declarative and in interrogative matrix clauses; it strengthens the syntactic integration of the complement clause. The question of why the negation of the matrix clause disappears in 8.9% of the 596 tokens is an interesting one. With regard to sentence <2>, the informants’ tendency to transfer *nich* (‘not’) into the dependent clause could be explained by the fact that the overall meaning of a sentence compound containing a verb like *believe* does not change regardless of whether *nich* appears in the matrix or in the complement clause. A somewhat similar explanation can be found for the suppression of *nich* in the matrix clauses of sentences <3> and <4>.[214] Inserting or not inserting *nich* into the interrogative matrix clause does not change the proposition of this clause; it just changes its polarity (cf. BLÜHDORN 2012: 376–385 and for another example of a

[214] Among all tokens of <3> and <4>, there are only five in which *nich* does not appear in the matrix clause, but in the complement clause. One unique token shows negation in both the matrix and the complement clause.

meaning-neutral negation AUER 1998: 291 – Footnote 15). In the two sentences analyzed, a non-negated matrix clause could be said to be a rather neutral type of question, asking the listener whether he sees the speaker's new outfit or her switching on the light, respectively. In this case, the proposition of the complement clause would not constitute shared knowledge of speaker and listener. A negated matrix clause fits a different kind of situation. The speaker of these sentences could be characterized as impatient, wondering why the listener did not notice or pretends not to have noticed the obvious, i.e. the new outfit or the ongoing action. If the informants imagined this kind of situation, it does indeed make sense to classify the proposition of the complement clause after a negated interrogative matrix clause as presupposed. We would, therefore, expect less V2-complement clauses after the negated matrix clause and this is indeed the case.

Another hint for the assumption that the informants really construct contexts for their translations comes from (7-9c+d), which contain the MLG equivalent of the modal verb *can*. The use of this modal verb weakens the implicit reproach in sentences <3> and <4>, because the question does not refer directly to the listener's willingness to realize something, but only to his general ability to do so. Importantly, only the English version of sentence <4> actually features the modal verb in the stimulus sentence. This has the effect that in 98.8% of these cases, the informants use the modal verb. Interestingly, the informants that translated from Spanish or Portuguese also use the modal verb in 49.1% of the tokens in sentence <4>. In sentence <3>, in which the modal verb does not appear in either version of the stimulus sentence, the informants nevertheless use the modal verb in 60.2% of the cases.

If the modal verb were indeed a way of politely drawing the listener's attention to the proposition of the complement clause, we would presume that the speaker does not necessarily assume that the information of the complement clause is presupposed. Therefore, we would expect that not only the question whether the matrix clause is negated or not, but also the question whether the matrix clause is attenuated by a modal verb or not plays a role with regard to V2-complement clauses. Table 7-8 separates the data of Table 7-7 in this respect:

Table 7-8: Different types of complement clauses governed by *sehen* in the matrix clause of sentences <3> and <4> separated by the mode of the matrix clause and by the presence of the modal verb *können*

mode and finite verb of matrix clause	**-modal**		**+modal**	
	+negated +question	**-negated** +question	**+negated** +question	**-negated** +question
n (tokens)	223	7	320	46
+daut	215	7	257	26
	96.4%	100%	80.3%	56.5%
χ^2 (3, n=596) = 57.9; p=0*** / Cramer's V: 0.31 / 1 cell (12.5%) with less than 5 expected tokens				
-daut	8	0	63	20
	3.6%	0%	19.7%	43.5%

Unfortunately, there are only seven tokens without the negation particle and without a modal verb. Due to this, we will not be able to say anything reliable about this constellation. The other three constellations, however, fit our expectation perfectly. Combining two features which indicate the complement clause as presupposed (negation particle, no modal verb) leads to only 3.6% of V2-complement clauses; swapping these two parameters leads to an impressive 43.5% of such clauses, a clear sign for a rather asserted status of the proposition of the complement clause. The intermediate constellation with a presupposing *nich* ('not') and an asserting/attenuating modal verb shows – as expected – an intermediate share of 19.7%. Because of this clear-cut result, we will separate the matrix verb *sehen* ('see') in two subtypes for the regression analyses in Section 7.1.4: $Sehen_{Modal}$ with a modal verb and *sehen* without such a verb.

7.1.3.5 Sentence <8>: Non-negated declarative and interrogative matrix clauses

With sentence <8> *Are you sure that he has repaired the chair?*, we will be able to compare another pair of matrix clauses, namely non-negated interrogative and non-negated declarative clauses (some of them confirming, echo, or checking questions; some not). Aside from this, another type of variation comes to the fore. Some informants change the subject pronoun of the matrix clause from second to first or third person singular. We have already encountered this variation in (7-4b+d) and in (7-8a-c). As the deviating subject pronouns mostly co-occur with a change from interrogative to declarative mode, we will be able to directly compare the influence of the syntax of the matrix clause and its illocutionary force. Sentence <8> predominantly features the epistemic predicative construction *sicher sene* ('be sure'); *weiten* ('know') constitutes an alternative for some informants. We will only analyze tokens with *sicher sene* though. Furthermore, all tokens with Portuguese and English stimulus sentences will be excluded since they did not produce a single token with a declarative matrix clause.

The fact that only Spanish stimulus sentences produced this kind of deviation provides us with further interesting insights into the ingenious ways in which the informants handled the translation task. Producing declarative matrix clauses is probably not the result of the lack of "inversion" in Spanish question formation, because if priming by the Spanish stimulus sentence *¿**Estás seguro** que él arregló la silla?* were the reason, we would expect deviating tokens in Brazil, too, since the Portuguese stimulus sentence looks very much like the Spanish one: *(Tú) **tem certeza** que ele consertou a cadeira?* Actually, we would even expect more deviations, since (i) in order to disambiguate the reference of the finite verb *tem* ('have' or 'has') and (ii) in order to make the stimulus sentence sound more natural, the subject pronoun was usually added in Brazil, clearly showing that there was no "inversion".[215] Therefore, the lack of "inversion" cannot explain the exclusive appearance of declarative clauses in Spanish-based translations. What may explain this appearance is precisely the fact that the Portuguese

[215] *Tú* (2nd person singular) is necessary since *tem* ('have' or 'has') in the Portuguese variety of Rio Grande do Sul can be second or third person singular. *Tú* is also necessary because Brazilian Portuguese is not a strict pro drop-language anymore contrary to Spanish and European Portuguese.

and English stimulus sentences – but not the Spanish one – feature subject pronouns. In the translations from Spanish, 23 informants translated the matrix clause with *hei* ('he') instead of *dü* ('you' singular), nine with *daut* ('this'), three with *ik* ('I'),[216] and two with *sie* ('they'). We will give examples with *hei*, one with complementizer (cf. (7-10a)) and one without (cf. (7-10b)):

stimulus <8> Spanish: **¿Estás seguro que él arregló la silla?**
English: Are you sure that he has repaired the chair?

(7-10) a. *[äh] hei is sich sicher daut hei den Stuhl repariert haft* (Fern-11; m/44/SG>MLG-79%)
[eh] he is ~~himself~~ sure that he the chair repaired has

b. *[äh] hei is sicher hei haf die: Stuhl fertiggemeakt* (Mex-77; f/46/MLG)
[eh] he is sure Ø he has the.FEM chair ready-made

The important question now is what causes the co-occurrence of changed subject pronoun and changed mode. Before we come to this, it is, however, important to rule out one more possible reason for the variation found. The translations represented by (7-10b) do not constitute cases of what REIS (1997: 123) calls colon constructions ('*Doppelpunkt-Konstruktion*') and TRUCKENBRODT (2006: 297) calls half-statement reading. This type of construction is rather typical for certainty predicates like *be sure* or *be obvious* in declarative clauses (not in interrogative ones) and is characterized by two separated focus-background-structures, clear evidence for the almost complete syntactic and intonational disintegration of the V2-complement clause. REIS (1997: 123) writes:

> Was die Untergruppen von V2-Prädikaten angeht, lassen Gewißheitsprädikate zwar frei die V2-'Doppelpunkt-Konstruktion' zu, bei der der (progredient intonierte) Bezugssatz und der V2-Satz je eine Domäne für die Fokus-Hintergrund-Gliederung (FHG) bilden […], aber eher marginal die für die sonstigen V2-Prädikate typische Möglichkeit, den aV2-Satz [argument realizing clauses; G.K.] in die FHG des Bezugssatzes zu integrieren […].[217]

The first part of REIS' (1997: 123) example (3a) is given here as (7-11) (gloss and translation by G.K.; both the punctuation and the indication of foci by capital letters are taken from the original):

(7-11) Es ist KLAR: er KOMMT.
it is clear: he comes
'There can be not doubt: He will come'

[216] The tokens with *daut* ('it') will not be analyzed, since – like in sentence <1> – *daut* functions as a correlate of a subject clause changing the syntactic role of the dependent clause of the stimulus sentence. The three tokens with *ik* ('I') appear exclusively in declarative matrix clauses. These tokens may be seen as a kind of answer to the interviewer's question *Are you sure [...]?*, an interesting case of informants apparently preferring a dialogue to mere translations.

[217] Translation by G.K.: With regard to the subgroups of V2-predicates, certainty predicates freely allow colon constructions, in which the reference clause (spoken with a progredient intonation) and the V2-clause form independent domains for the focus-background-structure […], but they only rarely allow the integration of the aV2-clause [argument realizing clauses; G.K.] in the focus-background-structure of the reference clause, a typical possibility of other V2-predicates.

In translations such as (7-10b), there is only one sentence focus marked by primary stress (mostly *sicher*) and no pause between the two clauses. This means that the translations of sentence <8> with V2-complement clauses do not depend on a special construction type connected to the predicative construction of the matrix clause. These cases are, therefore, comparable to the other cases with *daut*-deletion.

One reason for the co-occurrence of changed subject pronoun and changed mode may be a phonetic parsing problem. In total, 32 of the 37 deviating subject pronouns, the ones with *hei* and *daut*, may be caused by interpreting interrogative *Está**s** **s**eguro que [...]?* ('Are you sure that [...]?') as declarative *Está **s**eguro que [...]?* ('He/this is sure that [...]?'). In spite of the fact that the stimulus sentence was always spoken with a clear question intonation, the lack of recognition of the two adjacent sibilants may have led to a re-interpretation of the stimulus sentence. Such a re-interpretation would be difficult in the case of *dü* since a context-free declarative sentence *You are sure that he has repaired the chair* sounds markedly odd. Unlike this, a declarative matrix clause with *daut* or *hei* as in (7-10a+b) sounds more natural even considering the somewhat marked constellation with two formally identical pronouns with unclear, possibly split reference in the latter case. This hypothesis is supported by two facts: First, 21 of the 23 tokens with *hei* appear in declarative matrix clauses. They represent 70% of the thirty tokens with declarative matrix clauses. The remaining two tokens in interrogative matrix clauses represent only 1.3% of these 116 tokens.[218] Second, there are only four declarative matrix clauses with a rising question intonation. All of them are tokens with *dü*.[219] TRUCKENBRODT (2006: 259) calls such clauses declarative questions and says that they "require[] that (there is an interference in the common ground that) *the addressee A believes p*," i.e. that the addressee believes the proposition of the dependent clause to be true. In our case, this means that the listener is sure that a masculine person has repaired the chair. This seems a possible interpretation of the stimulus sentence. Table 7-9 looks at the general distribution of the two modes, but also at the distribution with regard to different subject pronouns.

---

[218] This analysis is supported by data from sentence <6> *Don't you know that he should learn English?* (cf. tokens (7-4a-d) and (7-8a-c)). This sentence also starts with a negated interrogative matrix clause. There are thirteen translations with a changed subject pronoun (8 tokens with *hei* ('he'); 5 tokens with *ik* ('I')). Once again, twelve of the thirteen cases come from Spanish-based interviews (1 from Brazil) and nine of the twelve Spanish-based tokens appear in negated declarative matrix clauses, two in non-negated declarative matrix clauses. Just one token with *hei* appears in the expected negative interrogative matrix clause. One caveat to our hypothesis is that the Spanish stimulus version of sentence<6> *¿No sabes que él debería aprender inglés?* does not contain two adjacent sibilants as in sentence <8>. The consequence of this difference is measurable though; only 2.8% of the tokens of sentence <6> feature *hei*; in sentence <8>, this share is 7.4%.

[219] This concentration of rising intonation in case of *dü* as subject pronoun (4 out of 6 tokens) is conspicuous and contrasts COUPER-KUHLEN's (2012) findings for English. She (2012: 131) writes: "The numbers for declarative questions, which are traditionally thought to require rising intonation in order to be recognised as such, are equally revealing. As Table 7.2 shows, there are 14 declarative questions without tags across activities, but only *one* of these has rising intonation." This means that MLG either differs from English in this respect or that some of the declarative matrix clauses with *hei* or *ik* and without a rising intonation may be questions after all.

Table 7-9: Different types of complement clauses governed by *sicher sene* in the matrix clause of sentence <8> separated by the mode and the subject pronoun of the matrix clause (only Spanish-based tokens)

verb of matrix clause	**complement clause <8>** *sicher sene* ('be sure')					
mode of matrix clause	-negated **-question**			-negated **+question**		
n (tokens)	30			116		
+daut	22			113		
	73.3%			97.4%		
	ik	*dü*	*hei*	*dü*	*hei*	*sie*
	2	6	14	109	2	2
χ^2 (1, n=146) = 19.8; p=0*** / Phi: +0.37 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0***						
-daut	8			3		
	26.7%			2.6%		
	ik	*dü*	*hei*	*dü*	*hei*	*sie*
	1	0	7	3	0	0

The distribution demonstrates that not only the difference in negation, but also the difference between a non-negated declarative and a non-negated interrogative matrix clause influence the shape of complement clauses. In case of a non-negated declarative clause, the chance of *daut*-deletion is ten times higher. Aside from this, the tokens with a deviating subject pronoun offer a possible answer to another question, namely whether it is syntax proper or illocutionary force that causes the distributional difference. We have claimed that the six declarative clauses with *dü* ('you' singular) – four of them with question intonation – should be analyzed as questions in spite of their syntactic structure, while the 24 declarative matrix clauses with *ik* ('I') and *hei* ('he') – none with question intonation – seem to be declarative clauses both with regard to their syntax and with regard to their illocutionary force. Interestingly, among the thirty syntactically declarative matrix clauses, the tokens with *ik* and *hei* are the ones that exhibit *daut*-deletion, i.e. they are responsible for the difference between declarative matrix clauses and interrogative ones. The six tokens with *dü*, which seem to be declarative matrix clauses with regard to word order, behave exactly like the tokens with *dü* in interrogative matrix clauses; there is no case of *daut*-deletion (only 3 cases after 112 interrogative matrix clauses). Therefore in sentence <8>, illocutionary force, i.e. stating a state of knowledge or asking for it, seems to be more important than the sequence of subject pronoun and finite verb in the matrix clause.[220]

The results found in Table 7-9 are consistent with HARRIS and CAMPBELL (1995: 298 and 306; cf. also HOOPER & THOMPSON 1973: 472–473), for whom questions are pragmatically non-assertive just like dependent clauses. If we equate *non-assertive* with *presupposed* and both with stronger syntactic integration, i.e. with fewer cases of complementizer deletion, the

[220] Sometimes, however, the syntactic structure is more important than illocutionary force. ZIFONUN et al. (1997: 643) mention SG confirming questions with clause-final rising intonation like *Sie heißen (doch) mit Vornamen Alfred?* (gloss and translation by G.K.: you.FORMAL name (PARTICLE) with first name Alfred; 'Your first name is Alfred, isn't it?'). These clauses, which appear with the syntax of a declarative clause, are questions, but may nevertheless contain a modal particle like *doch*. Such an element cannot appear in questions with question syntax (*Heißen Sie (*doch) mit Vornamen Alfred?*).

fact that interrogative matrix clauses lead to fewer V2-complement clauses than declarative matrix clauses is expected, provided we allow for a spread of non-assertiveness from the matrix clause to the dependent clause. Applying this reasoning to Table 7-9, one can say the following: Asking an interlocutor whether he is sure about something puts the focus on the interlocutor's conviction with regard to an already mentioned proposition and not on the proposition itself. This proposition is thus backgrounded and does, therefore, not allow disintegrated V2-clauses. After a declarative clause, however, the speaker can chose either to leave the proposition of the complement clause in the background or to foreground it by producing a V2-complement clause. In the case of backgrounding, the focus will be on the subject's state of knowledge. In the case of foregrounding by means of *daut*-deletion, the declarative matrix clause is merely an introductory element demanding the listener's full attention for what is about to be uttered. Thus, the decision on whether to realize a complementizer or not serves various purposes. It may indicate the information status of the proposition of a complement clause, but it may also be a means by which the speaker can foreground this proposition regardless of its information status.

7.1.3.6 Sentence <9>: Five different matrix verbs

In the tables following Table 7-3, the analyses dealt with single clauses that compare either two different modes of matrix clauses with the same verb (Tables 7-4, 7-5, 7-7, 7-9) or two verbs in the same mode (cf. Tables 7-5, 7-6, 7-8). Summarizing the results so far, we can say that negation plays a significant role both in declarative clauses (cf. Tables 7-4 and 7-5) and in interrogative clauses (cf. Tables 7-7 and 7-8). Aside from this, the status of either a declarative or an interrogative clause proved significant in non-negated matrix clauses (cf. Table 7-9). Unfortunately, we will not be able to directly compare declarative and interrogative clauses in negated contexts, but as there is hardly any *daut*-deletion after negated declarative clauses (cf. Table 7-3), a significant difference is very probable. At this point, we will not yet offer final theoretical considerations with regard to the mode of the matrix clause; we will postpone this to the discussion of the binary logistic regression analyses in Section 7.1.4.2. Before initiating these multifactorial analyses however, it is worthwhile applying another monofactorial analysis focusing once more on the role of matrix verbs

Table 7-10 takes advantage of the verbal variation in the non-negated declarative matrix clause of sentence <9> *Elisabeth insists that you must have seen the truck*. Much of this variation is due to the lack of familiarity of many informants with the stimulus verb *insist* (Spanish and Portuguese *insistir*).[221] In spite of the fact that *insist* appeared in the stimulus sentence, informants frequently used comparable, but semantically less complex verbs like *know* or *be sure*. The comparability makes it clear that they had understood the general

[221] Frequency of occurrence is definitely a factor for this lack of familiarity. For spoken language in German, for example, we find the following numbers in RUOFF (1990): Intransitive *bestehen* ('insist', i.e. not transitive *bestehen* 'pass (an exam)') occurs sixteen times. All other verbs in the MLG data set are more frequent: *Denken* ('think') 220 times (43rd rank), *glauben* ('believe') 363 times (27th rank), *sehen* ('see') 463 times (23rd rank), *wissen* ('know') 1,285 times (12th rank), and *sagen* ('say') 2,370 times (6th rank).

meaning of *insist*, but did not manage to come up with an adequate MLG equivalent, for example, *daop stone bliewe*.[222] Sometimes, however, the stimulus sentence was also reformulated by the interviewer using *know*, *be sure*, or even *say* in order to guarantee a higher number of translations. This is obviously a problematic procedure, but without the informants' flexibility in their translations and without the change in some of the stimuli, the following analysis would not have been possible. We will give one example for each of the five matrix verbs, which appear frequently in the translations. One additional token, (7-12f), is given due to an interesting alternative using a volitional verbal complex:

stimulus <9> English: **Elisabeth** [*sometimes* Tina] **insists that you must have seen the truck**

(7-12) a. *Tina weit daut nev daut dü mutst den Truck gesehen han* (USA-29; f/19/MLG)
Tina knows ~~that~~ sure that you must the truck seen has

b. *Elisabeth [1.4] gleuf: daut dü: [1.0] mutst de:n [0.4] Truck gesehen han* (USA-3; f/14/MLG+E)
Elisabeth […] believes that you […] must the […] truck seen has

c. *Tina se- seit [0.3] dü wirsch han den Truck gesehen* (USA-5; m/16/MLG+E)
Tina ~~sa~~- says […] Ø you will have the truck seen
'Tina says that you will probably have seen the truck'

d. *[äh] Lisbeth die: [0.8] sch- [ähm] blieft daop ston daut dü muts han den Truck gesehen* (USA-85; f/33/E>MLG-79%)
[eh] Lisbeth ~~she~~ […] ~~sh~~- [ehm] insists that you must have the truck seen

e. *Tina is sick sicher daut dü hast den Truck gesehen* (USA-34; m/33/S>MLG-Ø)
Tina is herself sure that you have the truck seen
'Tina is sure that you have seen the truck'

f. *Tina will- [1.3] will han: daut dü den Truck hats sollt sehen* (USA-47: m/19/MLG+E)
Tina ~~wants~~- […] wants have that you the truck have should seen
'Tina would like you to have been obliged to see the truck'

With the exception of (7-12c), all tokens feature the complementizer *daut*. This does not represent the overall share of *daut*-deletion though, which is 35.6% (104 out of 292 usable tokens; cf. Table 7-10 below). The examples given are also not representative in another aspect. Three of the six tokens show the expected translation with a finite epistemic modal verb and an infinitive perfect as in (7-12a+b+d) although the overall share of this construction is only 25.3% (74 tokens). 14 tokens (4.8%) are represented by (7-12c), a translation in which the modal verb is exchanged for epistemic *woare* ('will'). 91 tokens (31.2%) are represented by (7-12e), a translation with a verbal complex appearing in the perfect tense and without a modal verb. Frequently, the informants also used a finite deontic modal verb in the perfect tense as in (7-12f) (68 tokens, i.e. 23.3%; cf. the inclusion of these translations in Section 5.3) or a finite deontic or epistemic modal verb in the present tense (18 tokens, i.e. 6.2%). Fortunately, we do not have to heed the different verbal complexes in the complement clause

[222] A few informants used *insist*/*insistir* in their translations. This may either be a case of borrowing or it may be an evasion tactic. The frequent problems with this verb suggest that at least some of these informants did not understand the concept of *insist* and "saved" their positive face by repeating the verb of the stimulus sentence. Due to this, MLG tokens with *insist* were not analyzed.

since the share of *daut*-deletion does not depend on the number of verbal elements in this clause or on the question of whether there is an epistemic element in the verbal complex or not. Table 7-10 shows the distribution of *daut*-deletion separated by the five most frequent verbs in the matrix clause:

Table 7-10: Different types of complement clauses in sentence <9> separated by the verb in the matrix clause

	sagen ('say')	***gleuwen*** ('believe')	***weiten*** ('know')	***sicher sene*** ('be sure')	***daop stone bliewe*** ('insist')
n (tokens)	117	30	9	62	51
+daut	42	16	7	57	47
	35.9%	53.3%	77.8%	91.9%	92.2%
χ^2 (4, n=269) = 79.6; p=0*** / Cramer's V: 0.54 / 1 cell (10%) with less than 5 expected tokens					
-daut	75	14	2	5	4
	64.1%	46.7%	22.2%	8.1%	7.8%

Because of the noteworthy association in Table 7-10, we are able to distinguish three groups of verbs: *Sagen* ('say') with the highest share of complementizer deletion, *gleuwen* ('believe') showing an intermediate share, and the three *daut*-furthering verbs *weiten* ('know'), *sicher sene* ('be sure'), and *daop stone bliewe* ('insist'). Importantly, the hierarchy of *weiten* and *gleuwen* is the same as in Table 7-5, even though the difference is somewhat smaller. This may be the consequence of the low number of tokens, especially with regard to *weiten*. In the discussion of Table 7-5, the difference between *weiten* and *gleuwen* was explained by means of the relationship between these verbs and the truth value of the proposition of the complement clause. The evaluation of the truth value was said to be shared by speaker and subject in the case of *weiten*, while it is not shared in the case of *gleuwen*.

The other verbs confirm the close connection between the information status of the proposition of the complement clause and *daut*-deletion. *Sagen*, which allows even more V2-complement clauses than *gleuwen*, fits in well, since there is no pledge whatsoever of either the speaker or the subject with regard to the truth value of the proposition of the complement clause. This proposition is just expressed; it is not evaluated.[223] Furthermore, HARRAS et al. (2004: 27) state that "[w]ith *sagen* ('say'), one can refer to innumerable speech acts. The question of which of these speech acts is meant in a specific situation results from the proposition of the complement clause."[224] Thus, the meaning of SG *sagen* in isolation is

[223] The high shares of V2-complement clauses after *gleuwen* ('believe') and *sagen* ('say') could be seen as an indication for a general semantic connection between these verbs. Both verbs are reporting verbs and both allow the subjunctive mood in their complement clause (cf. DUDEN 2006: 529–530 and EISENBERG 2013b: 110). Due to this fact, it is worthwhile extending our reasoning to indirect speech. ZIFONUN et al. (1997: 1753) consider indirect speech an indirect context in which the speaker marks propositional knowledge as not directly accessible for him at the moment of utterance. The lack of direct access disallows the assumption that the proposition of the complement clause is presupposed. The syntactic correlate of this may be that HALLIDAY considers reported speech as an instance of clause combining, not of embedding (cf. MATTHIESSEN & THOMSON 1988: 282–283). This may cause the high number of V2-complement clauses. TRUCKENBRODT (2006: 289) too links *saying* and *believing* and writes that "[s]aying in turn entails a context in terms of believing […]."

[224] Translation by G.K.; the original reads: *Mit* sagen *kann auf alle möglichen Sprechakte Bezug genommen werden; welcher jeweils gemeint ist, ergibt sich aus dem Gehalt des Komplementsatzes*.

underspecified. The precise speech act is fixed by the proposition of the complement clause, i.e. with *sagen*, the dependent clause defines the meaning of the verb of the matrix clause inverting their usual domination hierarchy. This may cause the high amount of V2-dependent clauses. In stark contrast to *sagen*, *daop stone bliewe* ('insist'; SG *bestehen auf*) is the most integrating matrix verb; it only allows 7.8% of disintegrated V2-complement clauses. This stark difference does not come as a surprise (and does increase the validity of the MLG data set once more), since HARRAS et al. (2007: 161; cf. also HARRAS et al. 2004: 151) describe SG *bestehen auf* and related verbs in this way:

> Mit den Verben dieses Paradigmas wird auf Situationen Bezug genommen, in denen der Sprecher eine bereits früher geäußerte (Auf)Forderung wiederholt und auf deren Erfüllung dringt, und zwar als Reaktion auf eine Zurückweisung oder Nichterfüllung seiner ursprünglich gestellten Forderung durch den Hörer.[225]

In the case of *bestehen auf*, the proposition of the complement clause constitutes old information which is being repeated. The decisive information of the sentence compound is that the subject of the matrix verb will not change his evaluation of the truth of the complement proposition, a truth which the listener (or somebody else) has questioned.

7.1.4 Binary logistic regression analyses of complementizer deletion in MLG

7.1.4.1 Analysis of all tokens

As in Section 5.5.5, a binary logistic regression analysis is important because it allows us to calculate the influence of different variables at the same time. With regard to complementizer deletion in MLG, the analysis is possible, because the dependent variable has only two levels, namely the presence or absence of the complementizer. Aside from this, the fact that many informants translated some stimulus sentences with a different mode or a different verb in the matrix clause adds intra-sentential to inter-sentential variation. Some of the tokens analyzed in Tables 7-1 and 7-2 must now be excluded for theoretical and/or methodological reasons. Sentence <1> *It is not good that he is buying the car* is responsible for most excluded translations. This sentence shows virtually no variation with regard to the variables under consideration (mode and verb of the matrix clause; *daut*-deletion in the complement clause). Moreover, it is the only sentence in which the complement clause is a subject clause and not an object clause. Aside from this, we7. c have not obtained precise information for the language competence and/or the raising and scrambling index for all informants (cf. Tables 2-2, Tables 4-5, and 4-15). As these factors turned out to be of some importance (cf. Table 7-2), all tokens of informants, for whom we do not have this information, had to be excluded as well. The following analysis is, therefore, based on 2,056 instead of 2,830 tokens. These tokens were produced by 245 of the 313 Mennonite informants (78.3%). The following variables served as categorical or metrical (interval) covariates:

[225] Translation by G.K.: With the verbs of these paradigms, one refers to situations in which the speaker repeats a request that he has already made and that he wants to be complied with. He does this as a reaction to the listener's rejection of or his non-compliance with the originally uttered request.

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Mode of the matrix clause (4 variants; contrasting variant *negated question*): negated question; non-negated question; negated declarative; non-negated declarative

Verb of the matrix clause (7 variants; contrasting variant *weiten*): *weiten* (‘know’); *gleuwen* (‘believe’; in sentence <2> also *meinen*); *sehen* (‘see’); *sehen*$_{Modal}$ (‘can see’); *sagen* (‘say’); *sicher sene* (‘be sure’); *daop stone bliewe* (‘insist’)

Metrical variables

Age

Competence in MLG

Competence in the majority language (English, Spanish, or Portuguese)

Competence in SG

Raising index

Scrambling index

The reason for including the raising index and the scrambling index is that they have, on several occasions, been found to exert an influence on the informants’ general syntactic behavior (cf., e.g., Chapter 5). The subject of both the matrix and the complement clause and the presence of a correlate in the matrix clause do not enter into the analysis. Two motives are responsible for this exclusion. With regard to correlates, the problem is that its occurrence is largely predictable from the verb of the matrix clause. Correlates are obligatory with ***daop** stone bliewe* (‘insist’; 100%), more or less frequent with ***(daut)** weiten* (‘know’; 33.4%) and ***(daut)** sehen können* (‘can see’; 24.8%), rare with *gleuwen* (‘believe’; 9.3%), and virtually inexistent with ***(daut)** sagen* and ***(daut)** sicher sene* (‘say’ and ‘be sure’; both 0.8%). This is the same situation as in SG (cf. DUDEN 2006: 1064–1065). Aside from this interdependency of two covariates, which constitute a problem in regression tests, separate analyses with each of these verbs show that the presence of a correlate does not seem to influence the presence or absence of the complementizer (but cf. Section 7.2 for more detailed analyses).[226] The same is true for analyses with regard to the subjects of the two clauses. Binary logistic regression analyses including these factors were carried out. Neither of the two variables was selected.

The informants’ place of residence was also excluded, since it correlates strongly with most of the metrical variables in the analysis (not with age and scrambling). Between the six metrical variables, there is only one correlation, which surpasses an r-value of 0.4. The raising index correlates negatively with the competence in SG with -0.525***, i.e. informants with a high competence in SG raise less frequently than informants with a low competence in SG. This is not ideal, but we do not consider the co-variance of 27.6% excessive. Tests for multicollinearity were also carried out. As in all other regression analyses in this study, the Variance Inflation Factors (VIF) never reach the critical value of 3 (cf. the discussion of Table

[226] Granted, the rare combination of a correlate and no complementizer as in (7-14d) seems to contradict this state of affairs. ZIFONUN et al. (1997: 1476) consider the co-occurrence of the SG correlate *es* (‘it’) with complementizer deletion as marginal (cf. also BREINDL 1989: 237–238).

5-38 and Footnotes 148 and 149 for further explanations with regard to binary logistic regression analysis). The results of the regression analysis are presented in Table 7-11:

Table 7-11: Binary logistic regression analysis (method: stepwise forward conditioned) with complementizer deletion as dependent variable

verb of matrix clause	**mode of matrix clause**	**raising index**	**competence in SG**
Wald: 170.2***	Wald: 54***	Wald: 28.7***	Wald: 7.3*
sagen (12.4***) sehen$_{modal}$ (12.1***) gleuwen (11.2***)	-negated -question (7***)		
	-negated +question (2.2*)	**raising** (5.2***)	
sehen (2.7$^{(*)}$)			
weiten daop stone bliewe sicher sene	**+negated** **+question**		
			SG (0.92*)
	+negated -question (0.02***)		

Four of the nine variables are selected. Their total "explained variance" is 47.6% (Nagelkerkes R-square: 0.476; Cox & Snell R-square: 0.252). The empirical effects of the verb and the mode of the matrix clause will be discussed at the end of the current section; some of the related theoretical implications in Section 7.1.4.2. Aside from this, the regression analysis selected two metrical factors, the informants' competence in SG and the raising index. Let us first analyze the competence in SG (the competence in the majority language was not chosen although Table 7-2 showed a significant difference). An informant with a competence level of six points in SG (out of 14 possible points; cf. Table 2-2) uses roughly 1.18 times more complement clauses without *daut* than an informant with eight points ($(1:0.92)^2$) and 1.4 times more often ($(1:0.92)^4$) than an informant with ten points. This does not constitute a dramatic rise, but it means that speakers with a good knowledge of SG show a certain measure of convergence towards SG, a more restrictive variety with regard to *daut*-deletion. This coincides with the results in KAUFMANN (2011), where convergence towards SG in several parts of MLG grammar is documented for the South American colonies.[227]

The second metrical variable selected, the raising index, is more important. Raising was chosen in the third step of the analysis and constitutes the decisive finding of the present section because it is the only variable where the reason for its selection is not clear at first glance. *Daut*-deletion is 5.2 times more probable for an informant with a raising value of +0.65 than for an informant with a raising value of -0.35. This is indeed a noteworthy result.

[227] One could also argue that informants with little knowledge of SG innovate by creating new areas of use for *daut*-deletion thus enlarging the gap between SG and MLG. This seems to be an adequate scenario for North America. In South America, however, convergence to SG is probably the correct analysis.

Obviously, the influence of the informants' raising index on *daut*-deletion could also be mediated by a third factor, i.e. a factor that independently influences both raising and *daut*-deletion. Such a factor may be a general tendency towards grammatical simplification in some varieties of MLG, especially in the North American varieties, where there is a strong concentration of both raising and *daut*-deletion (cf. Tables 4-18 and 7-1). There is, however, one direct connection between raised cluster variants and *daut*-deletion. With regard to raising, it has been claimed that it is the consequence of the preference of right-branching instead of parsing-difficult left-branching structures. *Daut*-deletion is also consistent with such a parsing-related scenario. AUER (1998: 289), for example, explains the frequency of dependent main clauses in spoken language with their greater ease of processing; KELLER (1993: 225 und 242–245) mentions economy as a possible reason for V2-causal clauses, and DI MEOLA (2000: 42) gives a kind of diachronic explanation claiming that parataxis is more basic than hypotaxis. Finally, we would like to repeat the quote by GONZO and SALTARELLI (1983: 192), which was already presented at the end of Section 6.3.3:

> There are, indeed, similarities between pidgin languages, interlanguage systems and emigrant languages. All exhibit a large borrowed lexicon, a reduction of redundant code distinctions such as gender and number, and a reduction in sentence embedding.

Daut-deletion is one way to achieve "a reduction in sentence embedding." In spite of this, we must not compare MLG in North America with rudimentary languages (pidgin languages, interlanguage systems) or languages with dramatically reduced domains of use (emigrant languages in their final stages). Economy of unembedded clauses *per se* may, therefore, not be the decisive point with regard to MLG in North America. What may matter is the (superficial) convergence of different clause types. Dependent clauses with right-branching verb phrases more ((V2-)VPR-variant) or less (VR-variant) resemble root clauses, and complement clauses without *daut* are structurally almost identical with such clauses.

Whether this (superficial) similarity of dependent and independent clauses is a case of language change proper happening in the MLG of some Mennonites or whether it is just a side effect of their general preference for right-branching verbal sequences, i.e. *V1-(…-)V2*, is hard to say. The important point is that MLG speakers have different options to achieve such a sequence in a language with head-final verb and inflectional phrases. They can either apply verb projection raising, a mechanism which causes the finite verb *V1* to remain in head-final IP and *VP2* (perhaps containing further verb phrases and non-verbal material) to move to the right and adjoin to IP, or they can suppress the clause-introducing complementizer. This suppression causes the finite verb to move from head-final IP to head-initial CP, while the other verbal phrases may or may not be raised (cf. Section 5-2 for raised verb clusters without a finite verb).

In spite of the coincidence of the verbal sequence in these scenarios, there is an important distinctive factor, the position of the ObjNP. If we take the similarity between superficial linearization patterns seriously, the fact that scrambling was not selected as a hampering variable in Table 7-11 needs to be explained. After all, it is the (V2-)VPR-variant (+raising, -scrambling) and not the VR-variant (+raising, +scrambling), which shares the superficial sequence *V1-ObjNP-V2* with (in)dependent main clauses. The non-selection of the scrambling index is, however, only valid for the analysis of all tokens. In Section 7.1.4.3, we will see that scrambling is selected for the North American data, i.e. for the data, which are hardly influenced by SG. The North American informants seem to behave similarly with regard to their verb cluster preferences and their deletion of *daut* (cf. In-Depth Analysis 7.1.4.3).

The four variables selected in Table 7-11 fall into two classes. In the present section, we have analyzed the two selected metrical covariates, the informants' competence in SG and their raising index. These variables are intimately connected to the MLG speech communities. The two categorical covariates selected, verb and mode of the matrix clause, are related to syntactic, semantic, and pragmatic issues. Their general importance for complementizer deletion, however, is not specific to MLG. After the monofactorial analyses in Section 7.1.3, it does not come as a surprise that the mode and the verb of the matrix clause enter into the regression analysis during the first two steps, i.e. they "explain" most of the variation. The chance of *daut*-deletion is 12.4 times higher when *sagen* ('say') instead of *weiten* ('know') appears in the matrix clause. *Sehen$_{Modal}$* ('can see') and *gleuwen* ('believe') raise the chances for *daut*-deletion by comparable factors of 12.1 and 11.2, respectively. *Sehen* on its own only increases the probability by 2.7. This verb appears in an isolated line because the exponential-function of the regression coefficient B only reaches a statistical tendency. That bare *sehen* almost groups together with *weiten*, which itself does not show any different behavior from *sicher sene* ('be sure') and *daop stone bliewe* ('insist'), can be easily explained. The subject's and the speaker's shared evaluation of the truth value of the complement clause seems to be comparable in *know* and *see*.[228]

Like in the case of the mode of the matrix clause, these results show striking similarities to AUER's (1998: 287–290) figures. The sequence and in part even the absolute shares for *daut*-deletion are comparable. *Sagen* (AUER's oral corpus: 77%/his written corpus: 49% – our raw frequency of the tokens of Table 7-1: 64.7%); *glauben*/*gleuwen* (60%/29% – 27.7%); *wissen*/*weiten* (20%/13% – 2.5%); *sehen$_{(Modal)}$* (15%/15% – with a modal verb 22.6%, without a modal verb 3.4%); and *sicher sein*/*sicher sene* (oral corpus: 11%/no share given for the written corpus – 8%). We cannot compare ***darauf*** *bestehen* with *daop stone believe* ('insist'; 7.8% in the MLG data set) since AUER (1998: 286 – Footnote 4) does not analyze sentences with correlates. The fact that both SG *wissen* and SG *sehen* show higher shares for *daut*-deletion than the MLG data can be explained by the fact that in the MLG data set *weiten* and *sehen* appear predominantly in negated matrix clauses (88.1% and 96.6%, respectively). This is probably not the case in the corpora used by AUER (1998). That the regression analyses

[228] Etymologically MLG *ik weit* ('I know'), originally a past tense form, is related to Latin *video* ('I see'); i.e. *what I saw is what I know* (cf. also KELLER 1993: 220). Quite fittingly, eight informants used *weiten* ('know') instead of expected *sehen* ('see') in sentences <3> and <4>, while two informants used *sehen* instead of expected *weiten* in sentence <10>.

does nevertheless not show a difference between *weiten* on the one hand and *sicher sene* ('be sure') and *daop stone bliewe* ('insist') on the other hand demonstrates the importance of multifactorial analyses. These last two verbs show much higher absolute shares (8% and 9.3%, respectively), but do not occur once in negated matrix clauses.

In spite of the different shares of complementizer deletion in his data set, AUER (1998: 289–290) does not believe in too strong an influence of the semantic content of these verbs (AUER analyzes them under the heading *lexical conditions*). He correctly claims that groups like *verba sentiendi* or *verba dicendi* contain verbs which occur frequently with complementizer deletion and verbs which do so only rarely. However, grouping verbs like *know* and *believe* together as verbs of mental states, as AUER (1998: 288 and 290) does, may be correct with regard to a rather rough level of semantic analysis, but it does not seem to be the appropriate approach with which to explain their different behavior with regard to complementizer deletion. We have already seen that most researchers strictly distinguish *know* and *believe* (e.g., HOOPER & THOMPSON 1973, REIS 1997, ZIFONUN et al. 1997, and FREY 2011). Moreover, Section 7.1.3.3 has shown that the differences connected to the question of whether the proposition of the complement clause of such verbs is factually founded and whether it is fixed with regard to its truth value are decisive. The more convinced the subject and the speaker are of the truth value of the proposition (*know*, *be sure*, *insist*, and also bare *see*), the less of a necessity or possibility for asserting it by means of a V2-complement clause exists. The less convinced the subject and the speaker are (*believe*, but also *say* (saying does not imply knowing)), the more assertion, i.e. *daut*-deletion, is needed or possible.

7.1.4.2 General discussion of matrix clause features

Let us recapitulate at this point some of the verb groupings briefly touched upon in Section 7.1.3.3. On a first level, HOOPER and THOMPSON (1973: 473–481) distinguish between nonfactive and factive verbs. They distinguish three subcategories for nonfactive verbs. Class A-verbs are verbs of saying (represented by *sagen* in the MLG data set). Quite surprisingly, HOOPER and THOMPSON's (1973: 473) put *be sure* in this group as well. We would rather group MLG *sicher sene* under Class C-verbs (epistemic predicates). In any case, the difference in Table 7-11 prohibits grouping *sicher sene* together with *sagen*. *Sagen* shows the highest share of V2-complement clauses and this is in line with HOOPER and THOMPSON' (1973: 474) conviction in regard to Class A-verbs: "The complement propositions are not presupposed, but rather are cited or reported assertions." Class B-verbs are verbs of mental processes (represented by *gleuwen* in the MLG data set). HOOPER and THOMPSON (1973: 478) distinguish Class B from Class A in the following way:

> A significant difference between the predicates of classes A and B is that a tag question[229] may be formed from the complement of a class B predicate, but not from the complement of a class A

[229] HOOPER and THOMPSON (1973: 477) define tag questions in sentence compounds with Class B-verbs as follows: "Given that the function of the tag question is to ask for confirmation about the truth of an assertion

> predicate, even if it is the first person of the present tense. […] The reason for the difference is that even in their parenthetical sense, the class A predicates make an assertion independent of the complement assertion. Class B predicates, however, do not make any assertion themselves.

We will come back to the "parenthetical sense" in a moment. Right now, the idea of multiple assertions of a sentence compound is important because we, too, will use a comparable concept in Table 7-12. HOOPER and THOMPSON say that Class B-verbs – unlike Class A-verbs – do not assert anything by themselves. The overall assertion of the sentence compound, i.e. of matrix clause and complement clause, is, therefore, smaller than in the case of Class A-verbs. This may be the reason, why *gleuwen* in Table 7-11 shows a somewhat lower probability for V2-complement clauses than *sagen*.[230] The third class of non-factive verbs, Class C-verbs, are epistemic predicates like *be likely* or *be possible* (in our opinion represented by *sicher sene* in the MLG data set). HOOPER and THOMPSON (1973: 478) define the complements of class C verbs in the following way: They "are neither asserted nor presupposed. While in a sentence such as (93) [*It is likely that Kissinger is negotiating for peace*; G.K.] the speaker may be predisposed to believe that the complement proposition is true, he is not asserting that proposition. Rather the main assertion in (93) is *it is likely*." This lack of assertion of the complement clause in the case of *sicher sene* goes hand in hand with its small share of V2-complement clauses in Table 7-10.

Factive verbs, finally, fall into two categories: On the one hand, there are true factive verbs like *resent* or *regret* (Class D; not represented in the MLG data set), on the other hand, semifactives (Class E; represented by *weiten* and *sehen* in the MLG data set). HOOPER and THOMPSON (1973: 481; cf. also 480 and 484) provide several characteristics separating these two groups, one of them being that "complements of semifactive verbs allow tag questions to be formed from them, but complements of true factives do not." As tag questions were seen as evidence of assertion of the complement proposition (cf. Footnote 229 in this chapter), the fact that semifactive verbs, but not true factive verbs, allow some V2-complement clauses in SG (cf. Footnote 195 in this chapter) and in the MLG data set, makes sense. Unfortunately, we do not have data for true factive verbs, but the situation in SG abides by HOOPER and THOMPSON's (1973) predictions. AUER (1998: 290 – Table 3) qualifies V2-complement clauses after factive *bereuen* ('regret') as unusual.

A somewhat different dimension is mentioned by LEHMANN (1988: 186), who writes about implicative verbs: "In particular, so-called implicative verbs such as 'force' appear to downgrade the subordinate clause more strongly than non-implicative verbs such as 'believe'." Downgrading can be understood as a pragmatic correlate to strong syntactic

---

made by the speaker, it follows that the complements […] are speaker assertions, and furthermore, the main assertions of the sentences."

[230] This difference is more marked in the North American data (cf. Table 7-13). A counterargument to this analysis in terms of an overall degree of assertiveness is the assumption that the relative degree of assertiveness of the two clauses is decisive. While in Class A-verbs the degree of assertiveness of the main clause and the complement clause is comparable, the complement clause of Class B-verbs is more asserted than the matrix clause. Therefore, one could expect more V2-clauses after Class B- than after Class A-verbs. This, however, is not what the MLG data tell us.

integration. The scopal correlate of downgrading may then be the fact that the negation of a matrix verb like *force* implies the non-reality of the proposition of the complement clause. This does not happen when a verb like *believe* is negated. The visible consequence of downgrading is that verbs like SG *zwingen* ('force') – contrary to non-factive verbs like *glauben* ('believe') – do not allow V2-complement clauses (cf. AUER (1998: 290) for (negative-)implicative verbs like *veranlassen* ('cause' or 'induce') und *verhindern* ('impede')). With regard to this, implicative verbs behave like true factive verbs.

If we recall that all complement sentence compounds in this study feature rather short matrix clauses, it is insufficient to think about possible downgrading of complement clauses after certain matrix verbs. One also has to ponder the possibility of downgraded matrix clauses. LEHMANN (1988: 202) writes of causative constructions with Latin *facere* or Italian *fare* (both 'make'):

> However, both the grammatical causatives of (19) and (20) and the lexical causatives of (38) etc. prove the point which is essential here: to the degree that the main clause predicate gets grammaticalized, the whole sentence ceases to be syntactically complex.

One could assume that if the whole sentence is no longer complex, its semantically more important component – in this case the complement of the finite causative verb – will exhibit some root phenomena. Although LEHMANN writes about verbs that govern infinitives, a clause type which can hardly express root phenomena, AUER (1998: 301–302) shows that such grammaticalization effects also exist with regard to verbs such as SG *glauben* ('believe'), *denken* ('think'), and *wissen* ('know'). Once these matrix verbs merely serve as hedges or formulas, the complement clause surfaces as a V2-clause. These downgraded matrix clauses represent what HOOPER and THOMPSON (1973: 475) call the "parenthetical sense":

> In (55) [*It's just started to rain, he said*; G.K.], to which Complement Preposing has applied, there is no doubt that the complement proposition is the main assertion, and the original main verb merely parenthetical, because the complement takes the position of the main assertion.[231]

If we take LEHMANN's (1988) and AUER's (1998) use of the concept of grammaticalization seriously, we would not only expect semantic bleaching, but also phonetic reduction. This is exactly what we find. AUER (2007: 114–115) mentions the innovative combination of a subject pronoun and *so* ('like'; *und ich so [$_{Quotation}$]* 'and I like [$_{\text{Quotation}}$]') as a quotative particle, where precisely the finite verb is missing.[232] This propensity for phonetic reduction

[231] LANGACKER (2009: 337) argues almost identically: "In (6)c [*I suspect that evolution is only conjecture*; G.K.] the balance tips in favor of the complement, and in (6)d [*Evolution is only conjecture, I think*; G.K.] *I think* is clearly an appendage to it, an epistemic afterthought. It is phonologically reduced to the point that it can hardly be taken as representing a separate window of attention."

[232] With regard to this, ETXEPARE (2008: 52) mentions intermediate stages for English. The embedding constructions in this case are *he goes like [$_{Quotation}$]* and *he is like [$_{Quotation}$]* containing largely desemanticized verbs. ETXEPARE (2008: 36–37) also gives a Spanish example: "Imagine the following situation: two teenagers are secretly smoking in a room. Suddenly, fearing that his mother could show up and find out, one tells the other (3a): "si viene mi madre, el tabaco es tuyo" [Translation by G.K.: 'If my mother comes in, the tobacco is yours']. By saying that, the speaker asks the other person to act as if the tobacco was his or hers, if mother comes. By

and downgrading in matrix clauses, in which we would expect a verb of saying, matches our finding that *sagen* ('say') shows the highest share of V2-clauses.

The mode of the matrix clause was selected as the second variable. In comparison to the contrasting variant (negated question), *daut*-deletion in the complement clause is seven times more probable after a non-negated declarative clause and 2.2 times more probable after a non-negated question (cf. Table 7-11). A negated declarative matrix clause co-occurs fifty (1:0.02) times less probably with *daut*-deletion than the contrasting variant. With these results, we can convincingly conclude that negation of the matrix clause strongly impedes *daut*-deletion, both in declarative and in interrogative matrix clauses. The role of a question as compared to a declarative clause is less clear. In non-negated matrix clauses, a question reduces *daut*-deletion in comparison to a declarative clause; in negated matrix clauses, however, a question strongly furthers *daut*-deletion.

We, therefore, have to add another factor aside from the subject's and the speaker's evaluation of the truth value of the complement proposition (expressed by the verb of the matrix clause), aside from the information status of this proposition (expressed by the mode of the matrix clause), and aside from the speaker's pragmatic intentions with regard to this information status (possible foregrounding; cf. Table 7-8). This additional factor may be the speaker's knowledge with regard to the subject's state of knowledge (or state of belief, etc.). In a matrix clause with *know*, the speaker pronounces the truth value of the complement clause regardless of negation or interrogation in the matrix clause. There is, however, a difference between declarative and interrogative matrix clauses. In an interrogative clause, the speaker does not know whether the subject knows (believes, etc.) or does not know (believe, etc.) the proposition of the complement clause. This means that the speaker's knowledge is less certain[233] in (negated) interrogative matrix clauses than in (negated) declarative ones. If speaker uncertainty with regard to the subject's knowledge (belief, etc.) leads to more *daut*-deletion – perhaps comparable to the effect of matrix verbs that do not fix the truth value of the proposition of the complement clause –, we may be able to explain, why (negated) interrogative matrix clauses cause more *daut*-deletion than negated declarative matrix clauses. Both types of interrogative clauses show a higher degree of uncertainty. Following this line of reasoning, non-negated interrogative matrix clauses should cause more *daut*-deletion than non-negated declarative matrix clauses since the speaker's state of knowledge is less certain in the interrogative mode. This is not the case though; non-negated declarative matrix clauses excel in complementizer deletion.

We will localize the seemingly special status of one of these two modes in non-negated declarative matrix clauses. This decision is justified once we reflect on the role of the subject

saying (3b) [*Si viene mi madre, **que** el tabaco es tuyo;* G.K.], the speaker asks something more than just pretense: he or she asks the other person to *say* that the tobacco is his or hers." Interestingly, the complete lack of a matrix clause in this case, not just of the reporting verb, concurs with a typical non-root phenomenon, namely the use of the complementizer *que* ('that').

[233] The concept of certainty is not new in this discussion. With regard to (anti-)veridicality, GIANNAKIDOU (2011: 74), for example, talks about "certainty about, or commitment to, the truth of a sentence."

of the matrix clause more deeply. AUER (1998) mainly analyzes the influence of negation on the information status of the complement clause. Only when talking about grammaticalization tendencies does he (1998: 301–302) say something about the status of the matrix clause. We have already touched upon the overall assertion of a sentence compound when referring to HOOPER and THOMPSON's (1973: 478) distinction between Class A and Class B verbs. On page 475, they write:

> An indirect assertion is not necessarily the sole assertion of the sentence. The main verb also makes an assertion. Thus a sentence such as (54) [*He said it's just started to rain*; G.K.] has two assertions.

One must not forget however that not only the matrix verb, but also the matrix subject may play an important role. If the speaker asks for a person's state of knowledge (belief, etc.) with regard to a proposition, or if he negates this knowledge (belief, etc.), this normally implies that this person – the subject of the matrix clause – has already been mentioned in conversation. This may, but need not be the case when someone mentions that someone knows (believes, etc.) something. Therefore, in a sentence compound with a non-negated declarative matrix clause, both the subject of the matrix clause and the proposition of the complement clause could constitute new, possibly asserted information,[234] thus increasing the overall assertion of the sentence compound. Table 7-12 illustrates different feature constellations for matrix clauses:

Table 7-12: Aspects of the overall information status in complement sentence compounds with different modes of matrix clauses

mode of matrix clause	proposition of complement clause	subject of matrix clause	speaker's state of knowledge
-negated -question	-presupposed	-presupposed	+certain
-negated +question	-presupposed	+presupposed	-certain
+negated +question	+presupposed	+presupposed	-certain
+negated -question	+presupposed	+presupposed	+certain

The pluses and minuses in Table 7-12 should be understood as gradients, not as absolutes. A plus means rather presupposed/certain and a minus rather asserted/uncertain. Importantly, this table does not say anything about the truth value of the proposition of the complement clause since this value depends on the verb of the matrix clause rather than on its mode. Shaded cells in Table 7-12 indicate a furthering effect on complementizer deletion. The two non-negated modes show two shaded cells, the negated interrogative mode one shaded cell, and the

[234] FREY (2011: 61–62) describes another relationship between the subject of the matrix clause and the complement clause: "The Force projection of an independent sentence is directly anchored to the speaker. The Force Projection of a root-like object clause is anchored to the referent of the logical subject of the superordinated sentence, a potential speaker […]." His (2011: 61 – Footnote 17) example is: *Jeder$_i$ glaubt, dass er$_i$ eben der Richtige für die Aufgabe ist* (gloss: everyone thinks that he MP [modal particle; G.K.] the right-one for the task is; translation by G.K.: 'Everybody believes that he is just the right one for this task').

negated declarative mode none. If we downgrade the speaker's state of knowledge in comparison to the proposition of the complement clause and the subject of the matrix clause, the two non-negated modes can also be distinguished. This downgrading can be justified by assuming that the information status of the linguistic categories (subject of the matrix clause, complement clause) is more important for the linguistic shape of a sentence compound than the epistemic state of the speaker. An alternative way to distinguish the two non-negated modes would be to say that negation in declarative matrix clauses always implies a presupposed proposition of the complement clause, while this is not necessarily true in interrogative matrix clauses. The negation in questions frequently only changes the polarity of the question (cf. the discussion of sentences <3> and <4> after Table 7-7).

7.1.4.3 Separate analyses of North and South American tokens

The fact that the North American Mennonites combine two features leading to more *daut*-deletion, namely a lower competence level in SG and a higher raising value, suggests that separate analyses of the North and the South American colonies are in order. Separation of the data set, however, is not only a useful, but a necessary step. The main reason for this is not the fact that *daut*-deletion is more frequent in the North American colonies (18% vs. 5.9% in the South American colonies), but the different distribution of *daut*-deletion with regard to the two matrix clause features selected. In the South American colonies, *daut*-deletion is strongly concentrated in non-negated declarative matrix clauses (91% of all tokens as compared to only 59.7% of the tokens in the USA and Mexico) and with two of the six verbs in the matrix clause, namely *sagen* ('say') and *gleuwen* ('believe') (89.3% as compared to 43.5%). This means that in the North American colonies *daut*-deletion has left its unmarked contexts gaining new grounds and thus probably new functions. Table 7-13 presents the results of the regression analysis for the 1,059 North American tokens:

Table 7-13: Binary logistic regression analysis (method: stepwise forward conditioned) with complementizer deletion as dependent variable (North American tokens)

verb of matrix clause	**mode of matrix clause**	**scrambling index**	**competence in SG**
Wald: 101.6***	Wald: 47.4***	Wald: 5.8*	Wald: 4.3*
sagen (11.8***) sehen$_{\text{Modal}}$ (11.5***) gleuwen (8.6***)	-negated -question (7.1***)		
sehen (4.7*)	-negated +question (2.3*)		
weiten daop stone bliewe sicher sene	**+negated** **+question**		
		scrambling (0.4*)	**SG** (0.94*)
	+negated -question (0.03**)		

The “explanatory” power of Table 7-13 is comparable to that found in Table 7-11 (43.6%; Nagelkerkes R-square: 0.436; Cox & Snell R-square: 0.271). There is one important difference though. Among the four factors selected, the scrambling index appears instead of the raising index. For the hypothesis that *daut*-deletion and the V2-VPR-variant (+raising, -scrambling) are preferred for the same motive, namely a preference for a superficial sequence *V1-ObjNP-V2*, the non-selection of the raising index seems to be a fatal blow, at least at first sight. After a second inspection, however, things fall perfectly into place, since a generalized tendency towards raising is the shared feature of most North American informants. In spite of the fact that only 54.6% of the 282 informants with values for both indexes live in the USA and Mexico, 74 of the eighty raising-friendly Dutch-type informants (92.5%) and 31 of the 42 raising-friendly Flemish-type informants (73.8%) come from these two countries. This means that 105 of the 154 Mennonite informants in North America are raising-friendly (68% as compared to 13.3% in the South American colonies). The average raising value of the informants producing the North American tokens is +0.26 as compared to -0.159 in South America. However, it is not just the high absolute value, which explains the non-selection of the raising index in the North American data set; it is also the spread of the values. In the North American colonies, the variance is 0.073 and the standard deviation 0.27. Comparing these values to the ones for all informants (0.102 and 0.319), we see that separating the informants according to the continental divide leaves us with two more homogenous groups with regard to raising (the South American colonies’ values are 0.042 and 0.206 showing an even higher concentration). The lack of heterogeneity is without any doubt the main reason for the non-selection of the raising index in the separate analyses of the North and South American tokens.

As most North American informants raise anyway, the decisive point is the selection of the scrambling index. With regard to scrambling, the separation of the colonies does not have a comparable homogenizing effect. The statistical variance for all informants is 0.068 and the standard deviation 0.262. This does not differ from the values of the divided groups (North America: 0.062 and 0.249, respectively; South America: 0.073 and 0.27, respectively). Table 7-13 demonstrates that a North American informant with a scrambling index of -0.6 has a probability of *daut*-deletion that is 2.5 times higher (1:0.4) than an informant with a value of +0.4. The consequences of this scrambling behavior are illustrated in Table 7-14. This table presents most of the North American tokens of Table 7-13 with two verbal elements. Excluding tokens with one and with more than two verbal elements allows us to directly compare *daut*-deletion, which is favored by scrambling-unfriendly informants, with the unscrambled V2-VPR-variant. As we now examine actual verb cluster variants, tokens with ObjPPs will be excluded due to their scrambling-unfriendliness (cf. Tables 4-8 and 5-35).

Table 7-14: Different types of verbal sequences in North American clauses with two verbal elements separated by the type of informant (only definite ObjNPs)

	German I-type informants	German II-type informants	Flemish-type informants	Dutch-type informants
n (tokens)	22	116	102	230
NR-variants	8	86	28	63
ObjNP-V2-V1	36.4%	74.1%	27.5%	27.4%
χ^2 (6, n=470) = 100.5; p=0*** / Cramer's V: 0.33 / 1 cell (8.3%) with less than 5 expected tokens				
VR-variant	0	12	10	60
ObjNP-V1-V2	0%	10.3%	9.8%	26.1%
V2-VPR-variant/*daut*-deletion / V1-ObjNP-V2	14	18	64	107
	63.3%	15.5%	62.7%	46.5%
V2-VPR-variant	14 (63.3%)	8 (6.9%)	37 (36.3%)	68 (29.6%)
daut-deletion	0 (0%)	10 (8.6%)	27 (26.5%)	39 (17%)

Focusing first on the difference between the two raising-friendly CLUSTERS, we can see that the Flemish-type informants' shares of the V2-VPR-variant and of complementizer deletion is higher than those of the Dutch-type informants. Granted, these differences do not seem to be very big (6.7% and 9.5%, respectively), but there is a significant difference between the three superficial sequences of verbal elements and the ObjNP for these two CLUSTERS (grouping *daut*-deletion and the V2-VPR-variant together; χ^2 (2, n=332) = 12.5; p=0.002** / Cramer's V: 0.19 / 0 cells with less than 5 expected tokens). Moreover, if we subtract the cases of the V2-VPR-variant from the total number of tokens, thus sharpening the profile of *daut*-deletion as an alternative way of creating the sequence *V1-ObjNP-V2*, the additional effect of this alternative becomes visible. For the Dutch-type informants 24.1% of the remaining tokens show *daut*-deletion (39 out of 162 tokens); for the Flemish-type informants this share is 41.5% (27 out of 65 tokens). The drive for the superficial sequence *V1-ObjNP-V2* with the finite verb in second position is indeed strong among Flemish-type informants and is definitely fed from two sources, from *daut*-deletion and from the V2-VPR-variant.

One may wonder why the other scrambling-unfriendly German I-type CLUSTER does not produce a single case of *daut*-deletion. This unexpected result can, however, be explained. First of all, the CLUSTER is only represented by 22 tokens. Second, these tokens do not show a single case of *gleuwen* ('believe'), *sagen* ('say'), or $sehen_{Modal}$ ('can see'), the three matrix verbs most affine to *daut*-deletion (the tokens of the other three CLUSTERS feature these verbs in 29.5% of the cases). Third, the sequence *V1-ObjNP-V2* is already massively present in the surprisingly big share of the V2-VPR-variant in the German I-type cluster (63.3% of the 22 tokens). Grouping the CLUSTERS according to their scrambling behavior strongly supports our hypothesis. The two scrambling-friendly CLUSTERS present the V2-VPR-variant in 22% of their 346 tokens and *daut*-deletion in 14.2%. For the two scrambling-unfriendly CLUSTERS, these shares are 41.1% and 21.8%. Leaving out the cases of the V2-VPR-variant once again, the shares for *daut*-deletion become much more discriminating; they are now 18.1% (270 tokens) and 37% (73 tokens), respectively.

These results might be taken as an indication for a first step of a fundamental structural reanalysis. With the massive amount of the superficial sequence *V1-ObjNP-V2* (62.7%), at least Flemish-type informants may one day end up with a head-initial IP, thus reducing the (superficial) difference between introduced and unintroduced clauses. The share of German I-type informants is comparable (63.3%), but there are too few tokens to include them in this line of reasoning. Granted, the Flemish-type informants still use complementizers in all other dependent clauses and in most complement clauses. Therefore, there is currently too little evidence for these speakers to assume a more comparable structure for unintroduced root clauses and complementizer-less complement clauses on the one hand and for introduced dependent clauses on the other hand. A first step towards such a comparable structure, however, may already have taken place. One should not forget though that even if such a reanalysis of IP occurred, this would not necessarily mean that the more fundamental sequence *OV* would change into *VO* (in spite of the fact that Flemish-type informants also produce most of the still infrequent verb-object-sequences in dependent clauses with one verbal element; cf. Section 5-5). The verbal frame in both the V2-VPR-variant and in the complementizer-less complement clauses is still very robust, not allowing anything in the way of the English/Spanish/Portuguese sequence *V1-V2-ObjNP* (cf. the short discussion of examples (2-1) through (2-8)).

We have now seen that both types of scrambling-unfriendly informants prefer V2-complement clauses, regardless of whether V2 is caused by the finite verb appearing in the head position of CP (structural V2 by means of *daut*-deletion) or by verb projection raising without scrambling (superficial V2 by means of the V2-VPR-variant). This does not come as a surprise since we find similar cases in the literature. AXEL-TOBER (2012: 150) does not only show that both types of V2-clauses can be superficially identical in Middle High German, she (2012: 138) also refers to DE HAAN (2001), who shows that V2-clauses with or without *dat* have similar characteristics in Frisian.

> Wenn man die Möglichkeit der Extraposition und der Oberfeldbildung (wie auch sog. *Verb Projection Raising*) einkalkuliert, kommt für fast alle mhd. Belege, in denen das finite Verb in einem *daz*-Satz linear betrachtet in Zweitposition steht, ein [sic!] Analyse mit V_{fin} *in situ* (bzw. mit V*fin* im Oberfeld) in Frage.[235]

> De Haan argumentiert, dass diese Verbzweitsätze, egal ob sie mit oder ohne Komplementierer realisiert werden, syntaktisch gänzlich unintegriert sind. […] De Haan beschäftigt sich ausführlicher nur mit den *dat*- (bzw. *omdat*-)Verbzweitsätzen. Er erwähnt jedoch […], dass in den Fällen, bei denen alternativ auch die *dat*-lose Variante möglich ist, letztere Variante dieselben Eigenschaften hat. Daher gehe ich davon aus, dass sich die ±*dat*-Verbzweitsätze in Bezug auf die folgenden Kriterien parallel verhalten.[236]

---

[235] Translation by G.K.: If one assumes the possibility of extraposition and of the formation of an *Oberfeld* (as well as with so-called verb projection raising), one can assume an analysis with V_{fin} in situ (or V_{fin} in the *Oberfeld*, respectively) for almost all tokens in Middle High German in which the finite verb in a *daz*-clause superficially surfaces in second position.

[236] Translation by G.K.: De Haan argues that these V2-clauses are syntactically entirely disintegrated regardless of whether they are realized with or without a complementizer. […] De Haan only deals with the *dat*- (and *omdat*-)V2-clauses. He does mention though […] that variants where the deletion of *dat* is possible share their

If we want to know whether our informants' behavior with regard to these two derivational possibilities is comparable – and this is a necessary condition for reanalysis as, for example, suggested for causal clauses in North America (cf. Section 6.3) – we will have to show that both syntactic phenomena occur in the same linguistic contexts. In-Depth-Analysis 7.1.4.3 will deal with this question.

In-Depth Analysis 7.1.4.3: Structural and superficial V2

In order to answer the question of comparable behavior with regard to V2-complement clauses, we have to restrict the analyses to specific linguistic contexts. This is important because Tables 7-11 and 7-13 have shown that especially the mode and the verb of the matrix clause have a strong influence on *daut*-deletion. Table 7-15 shows the distribution of *daut*-deletion (line -*daut*) and the basic cluster variants in complement clauses governed by different verbs. All these verbs occur in non-negated declarative matrix clauses and all complement clauses feature two verbal elements. In total, 309 of the 350 tokens (88.3%) contain *han* ('have') as the finite verb of the complement clause. In order not to reduce the number of tokens further, we did not exclude tokens not featuring *han* in spite of the possible skewing effect with regard to the shape of the verb cluster (cf. Table 6-1).

Table 7-15: Different types of complement clauses with two verbal elements (predominantly with *han*, only definite ObjNPs) after a non-negated declarative matrix clause separated by the verb of the matrix clause

	gleuwen ('believe')	***sagen*** ('say')	***weiten*** ('know')	***sicher sene*** ('be sure')	**daop stone bliewe** ('insist')
n (tokens)	62	32	29	206	21
-daut	35	14	5	18	0
	56.5%	43.8%	17.2%	8.7%	0%
NR-variants	21	9	11	147	16
ObjNP-V2-V1	33.9%	28.1%	37.9%	71.4%	76.2%
χ^2 (12, n=350) = 102.2; p=0*** / Cramer's V: 0.31 / 7 cells (35%) with less than 5 expected tokens					
V2-VPR-variant	6	8	11	31	3
V1-ObjNP-V2	9.7%	25%	37.9%	15%	14.3%
V2-VPR/VR-ratio	>6	8	5.5	3.1	1.5
VR-variant	0	1	2	10	2
ObjNP-V1-V2	0%	3.1%	6.9%	4.9%	9.5%

The columns are ordered according to the share of *daut*-deletion (from 56.5% in the case of *gleuwen* ('believe') to 0% in the case of *daop stone bliewe* ('insist')). Just by looking at the line *V2-VPR-variant*, one may gain the impression that there is no correlation whatsoever between the share of *daut*-deletion and the one of the V2-VPR-variant. *Daop stone bliewe* has a share of 14.3% of the V2-VPR-variant and *gleuwen* has a share of 9.7%. This, however, is only part of the story. The ratio between the two raised cluster variants, i.e. the V2-VPR-variant and the VR-variant (line *V2-VPR/VR-ratio*), is more important since this ratio tells us

characteristics with cases where *dat* is present. Due to this, I assume that V2-clauses with or without *dat* exhibit a comparable behavior with regard to the following criteria.

exactly which of the two cluster variants the informants prefer when they apply verb projection raising. Here, a clear parallelism to *daut*-deletion exists. The ratio drops steadily from left to right. In the case of *gleuwen*, the ratio is more than six (not a single token with the VR-variant) and in the case of *sagen* (‘say’), it is eight. *Weiten* has a ratio of 5.5 and *sicher sene* one of 3.1. The lowest ratio of 1.5 is found in the case of *daop stone bliewe*, the matrix verb with no *daut*-deletion whatsoever. This hierarchy does not only coincide with complementizer deletion in MLG, but also with introduced V2-*dat*-clauses in Afrikaans. Stell (2011: 181–182) mentions the influence on the frequency of these introduced V2-complement clauses of both the verb in the complement clause and the verb in the matrix clause. Unfortunately though, he does not give detailed figures for individual matrix verbs in the studies he refers to. This is unfortunate because most of the verbs mentioned also occur in the MLG data set.

> The shift from VLast to V2 in dependent word order is described by Conradie (2004b: 160) as ‘very often’ affecting *dat*-clauses. Biberauer (2002: 39) observes that V2 occurs in 41% of all cases of *dat*-clauses in a corpus of spoken Afrikaans. She further found that non-standard V2 in *dat*-clauses is to a large degree determined by the nature of both the matrix verb and the embedded verb. 84% of the embedded verbs she found occurring in V2 position in *dat*-clauses were nonthematic/functional verbs (i.e. copulas, modals, auxiliaries) while she found embedded V2 in *dat*-clauses ‘almost exceptionalessly’ occurring after *verba sentiendi et dicendi*, with *dink* (‘to think’), *sien* (‘to see’), *se* (‘to say’), *weet* (‘to know’), *glo* (‘to believe’) and *voel* (‘to feel’) accounting for more than 90% of the selecting verb […].

Table 7-16 comprises three more comparisons. In all cases, tokens with ObjPPs were again excluded. The verb of the matrix clause is the same in all cases; what changes is its mode. The columns with *weiten* (66.1% of the 168 tokens with a modal verb) and *gleuwen* (47.7% and 41.1% of the 107 tokens with *han* and *dune* (‘do’), respectively) show different finite verbs in the complement clause, while all 407 tokens in the case of *sicher sene* feature *han*.

Table 7-16: Different types of complement clauses with two verbal elements (twice different finite verbs) separated by the verb and the mode of the matrix clause (only definite ObjNP)

	(i) **weiten** (‘know’)			(ii) **sicher sene** (‘be sure’)		(iii) **gleuwen** (‘believe’)	
	-negated -question	-negated +question	+negated -question	-negated -question	-negated +question	-negated -question	+negated -question
n (tokens)	29	26	113	193	214	62	45
-daut	5	3	1	17	7	35	0
	17.2%	11.5%	0.9%	8.8%	3.3%	56.5%	0%
NR-variants	11	8	65	139	136	21	45
ObjNP-V2-V1	37.9%	30.8%	57.5%	72%	63.6%	33.9%	97.8%
	χ^2 (6, n=168) = 22.8; p=0.001** / Cramer’s V: 0.26 / 3 cells (25%) with less than 5 expected tokens			χ^2 (3, n=407) = 19; p=0*** / Cramer’s V: 0.22 / 0 cells with less than 5 expected tokens		χ^2 (2, n=107) = 48.2; p=0*** / Cramer’s V: 0.67 / 2 cells (33.3%) with less than 5 expected tokens	
V2-VPR-variant	11	8	27	29	39	6	0
V1-ObjNP-V2	37.9%	30.8%	23.9%	15%	18.2%	9.7%	0%
V2-VPR/VR-ratio	5.5	1.1	1.4	3.6	1.2	>6	---
VR-variant	2	7	20	8	32	0	0
ObjNP-V1-V2	6.9%	26.9%	17.7%	4.1%	15%	0%	0%

As before, the columns of each of the three blocks are ordered with regard to *daut*-deletion. In all three cases, the parallelism between *daut*-deletion and the ratio of the V2-VPR- and the VR-variant is comparable to Table 7-15. The reader may find problems in any of the three cases, but the overall picture is consistent. (i) With regard to the matrix verb *weiten* (first block of Table 7-16), the problem is that non-negated interrogative matrix clauses show only slightly fewer cases of *daut*-deletion than non-negated declarative clauses. The ratio between the V2-VPR-variant and the VR-variant, however, is much lower in the latter case. It is even marginally lower than that of negated declarative matrix clauses although this mode only allows a single token of *daut*-deletion. These minor mismatches may be due to the rather low number of 26 and 29 tokens in the case of non-negated interrogative/declarative matrix clauses. (ii) The asset of the central block representing *sicher sene* is that there is only one finite verb in the complement clause. This constitutes the most controlled scenario in Tables 7-15 and 7-16. The parallelism between *daut*-deletion and the V2-VPR/VR-ratio again exists, but one problem may be seen in the fact that the overall share of structural V2-complement clauses and the difference between the two modes is rather low (8.8% after non-negated declarative matrix clauses; 3.3% after non-negated interrogative ones). (iii) The difference in complementizer deletion in the third block is very clear indeed. Unfortunately, there is not a single case of a raised variant after negated declarative clauses. However, as the preference for the V2-VPR-variant over the VR-variant is very clear after non-negated declarative clauses and as there is a complete lack of raised variants after negated declarative matrix clauses, this result fits into the overall picture.

All other combinations of modes and verbs of the matrix clauses either occur with too few tokens or do not show enough variation to draw reliable conclusions. Nevertheless, with the combined results in Tables 7-15 and 7-16, we feel confident in claiming that MLG informants produce both types of V2-clauses in more independent contexts than non-V2-clauses regardless of how the finite verb ends up in the second position. The base for this assumption is that complementizer deletion is generally seen as a sign of a higher degree of clausal independence. As tokens with the V2-VPR-variant show a comparable distribution to *daut*-deletion, it makes sense to assume the same semanto-pragmatic causes and effects; hence, superficial order seems to be more important than structure in this case (cf. also Table 7-31).

End of In-Depth Analysis

Let us return to the discussion of the North American tokens in Table 7-13. There are still three more predictor variables we have not yet talked about. The last factor selected is the competence in SG. Its influence is less marked than in Table 7-11. For all tokens, the probability for *daut*-deletion was 1.4 times bigger for an informant with a competence level of six points compared to one with ten points. Restricting the analysis to the North American tokens, the relevant factor is only 1.28 ($(1{:}0.94)^4$). This factor is markedly higher in the South American colonies. Due to this, we will postpone final comments to the discussion of Table

7-17. Importantly, the competence in the majority language (English in the USA; Spanish in Mexico) is not selected, i.e. the comparable phenomenon of *that*-deletion in English does not influence the MLG results. In Mexico, where we even find a slightly larger share of *daut*-deletion (cf. Table 7-1), such an influence would hardly be possible in any case, first because the informants' competence in Spanish is much lower than the competence in English in the United States and second because Spanish allows the suppression of the complementizer *que* only in few, rather particular contexts (cf. LLINÀS-GRAU & FERNÁNDEZ-SÁNCHEZ 2011).

The other two variables selected for the North American tokens are again the mode and the verb of the matrix clause. They once more constitute the most important independent variables and in general behave similar to those in Table 7-11. The only difference is that bare *sehen* ('see') in North America shows a markedly different behavior from *weiten*; it increases the probability of *daut*-deletion by a factor of 4.7. We will refrain from dwelling on this issue though since there is a straightforward explanation for this unexpected difference. The 27 tokens with bare *sehen* come exclusively from the Mexican colony and lead to a certain skewing effect. On the one hand, the Mexican raising behavior and the competence in SG is somewhat different from that found in the US-American colony; on the other hand, the Mexican colony shows the highest share of complementizer deletion of all colonies.[237] The South American tokens do not show any difference between *weiten* ('know') and *sehen* ('see'). Table 7-17 presents the results for these 997 translations:

Table 7-17: Binary logistic regression analysis (method: stepwise forward conditioned) with complementizer deletion as dependent variable (South American tokens)

verb of matrix clause	**competence in SG**	**mode of matrix clause**
Wald: 19.6**	Wald: 6.9*	Wald: 2.6 (ns)
sagen (192***) gleuwen (190.6***)		
sehen$_{Modal}$ (28.7*)		
sicher sene weiten sehen daop stone bliewe		**+negated** **+question** -negated -question -negated +question +negated -question
	-SG (0.85**)	

There is one methodological difference between Table 7-17 and the two regression analyses already discussed. As *weiten* ('know') does not show a single case of *daut*-deletion in the South American tokens, the distributionally comparable *sicher sene* ('be sure') had to be used

[237] This problem does not affect the results of the monofactorial analyses in Tables 7-7 and 7-8, where *sehen* ('see') and *sehen$_{Modal}$* ('can see') were compared in two modes. This was checked by separate analyses for the colonies.

as contrasting variant. The "explained variance" in this analysis is very high; it is 60% (Nagelkerkes R-square: 0.6; Cox & Snell R-square: 0.206). Another noteworthy characteristic is that only three variables are selected and one of them (mode of matrix clause) even loses its discriminatory power along the way. In addition to the two matrix clause features, only the competence level in SG is selected. Neither raising nor scrambling plays a role. Not surprisingly, the high concentration of complementizer-less clauses in one mode (91%) leads to a non-significant Wald-value for this factor in spite of its selection.[238] With regard to the matrix verb, we are faced with a widely spread distribution though. For *sagen* ('say') and *gleuwen* ('believe') the probability of *daut*-deletion is more than 190 times higher than for the new contrastive variant *sicher sene* ('be sure'). *Sehen* ('see'), *weiten*, and *daop stone bliewe* ('insist') group with this variant. These huge figures show once again how marked complementizer deletion after verbs other than *sagen* and *gleuwen* is in the MLG of South American Mennonites.

The selection of SG is expected since contact with SG is more intensive in the South American colonies than in the North American colonies. The average competence level is 9.4 (as compared to 7 in North America) and the chances for *daut*-deletion are 1.92 times higher for an informant with six points in SG compared to one with ten points ($(1:0.85)^4$). The reason for the greater influence of SG in the South American colony has to do not only with the higher competence level though. After all, these values are based on the informants' evaluation of their own competence, not on an objective test (cf. Section 2.1). The main reason is that SG is strongly influenced by MLG in North America making it incomprehensible for many European speakers of German, while in South America, the MLG of many informants converges towards a more European-like SG (cf. KAUFMANN 2011). One must not forget however that complementizer deletion is an option in SG and therefore, the hampering effect of a high competence in SG on *daut*-deletion is not a matter of course. The selection is due to the fact that even in the South American colonies, there are some complementizer-less tokens which occur after matrix clauses that normally do not allow complementizer deletion in SG.

Summarizing the results of the separate analyses for the North and South American informants, we see that *daut*-deletion – like many other phenomena – leads to divergence between the MLG varieties. In South America, the amount of *daut*-deletion depends strongly on the knowledge of SG. Mennonites with a good command of this variety handle this option more restrictively than Mennonites without such a command. In the North American colonies, where *daut*-deletion is more frequent and occurs in more contexts, this option is governed by the informants' general syntactic preferences. At least some of these informants, the Flemish-type informants, seem to reduce the difference between root and (introduced) dependent

---

[238] Mode of matrix clause is selected as second predictor, but even after this step, there is only a statistical tendency of $p=0.067^{(*)}$ between non-negated declarative clauses and negated interrogative matrix clauses, the contrast variant. The probability with the first mode rises by a factor of 7. In the next step, even this tendency disappears (p=0.108; factor of 6.1), but the mode of matrix clause is nevertheless maintained by SPSS.

clauses, preferring a right-branching verbal sequence with intervening non-verbal material, namely the sequence *V1-ObjNP-V2* for all clause types. So far, this convergence of (introduced) dependent clauses towards root clauses is only superficial, but superficial similarity may some day lead to structural identity. If convergence of the superficial linearization patterns between root and (introduced) dependent clauses is seen as a case of structural simplification, then these informants are simplifying their linguistic system. However, one could also say that these informants are elaborating their linguistic system by creating a new type of complement clause, breaking the hitherto fixed correlation between the syntactic position of the verb and the semanto-pragmatic status of the dependent clause. REIS' (1997: 121) characterization of dependent V2-clauses mentions such an intermediate status between root clauses and dependent clauses with the finite verb in last position:

> Diese Frage hat Tradition, die stets daran ansetzt, daß die betreffenden V2-Sätze die übliche Korrelation zwischen Verbstellung und Status im Satzgefüge zu durchbrechen scheinen: Einerseits haben sie hauptsatztypische Verbzweit-Stellung, andererseits haben sie eine für eingebettete Sätze typische Funktion, indem sie Argumentforderungen des Bezugsprädikats erfüllen.[239]

One final comment is in order. In the three regression analyses, four variables were never selected: Age, sex, and the competences in MLG and the majority language. This demonstrates two things. With regard to language competence, it shows that the structural differences between the majority languages and MLG are too big to allow for MLG convergence towards these languages in core syntactic areas. One may say that the V2-VPR-variant already shares some characteristics with the clause structure of the majority languages (e.g., early appearance of the finite verb), but if this were a first step of syntactic convergence, one would expect that those informants dominant in the majority languages would dominate the use of this variant. This is not the case. In THOMASON and KAUFMAN's (1988: 50) terms, this lack of "moderate to heavy structural borrowing" may be seen as an indication that the Mennonite colonies do not suffer from a situation of "overwhelming long-term cultural pressure from source-language speaker group," at least – one may add cautiously – not at the moment when data elicitation took place. The non-selection of age and sex supports our decision to rank structural explanations such as the general syntactic preferences for verb projection raising and scrambling higher than sociolinguistic ones. We will close Section 7.1 with an excursus examining whether some informants exhibit a general tendency to asyndetic clause linking.

Excursus 7.1.4.3: Deletion of subordinators in causal clauses

Aside from complement clauses, other clause types allow the deletion of introductory elements. Conditional clauses are one such example in SG, English, or Portuguese.

[239] Translation by G.K.: This question has a long tradition, which assumes that the relevant V2-clauses seem to destroy the usual correlation between the position of the verb and the status in the sentence compound. On the one hand, these clauses are V2-clauses like main clauses; on the other hand, by saturating the argument requirements of the related predicate they have a function typical for embedded clauses.

Unfortunately, there is not a single real token with this feature in the MLG data set (but cf. (7-46)). Relative clauses can also appear – at least in some languages – without an introductory element. English, but not MLG and SG, is one of these languages. Causal clauses are a third candidate for deletion and in this case, there are enough tokens in the MLG data set to compare the informants' behavior with regard to the deletion of the causal subordinators *wegen(s)* and *wiel(s)* (all 'because') and their behavior with regard to *daut*-deletion. Tokens (7-13a-d) illustrate four Paraguayan translations of stimulus sentence <26>:

stimulus <26> Spanish: **Necesita lentes porque no puede ver el pizarron**
English: **He needs glasses, because he can't see the blackboard**

(7-13) a. *her bruukt ne Brill wegens der nich die Tofel sehne kann* (Men-9; f/17/SG>MLG-71%)
he needs a glass because he not the blackboard see can

b. *[äh] hei bruukt [0.8] Brille wiels hei kann die [0.3] Wondtofel nich sehne* (Men-2; m/37/E>MLG-86%)
[eh] he needs […] glasses because he can the […] blackboard not see

c. *ik bruuk ne Bri:ll ik kann nich die Tofel sehne* (Men-26; f/38/MLG)
I need a glass Ø I can not the blackboard see

d. *her bruukt ne Brill sonst kann her [0.4] die: Tofel nicht sehne* (Men-1; m/40/MLG)
he needs a glass Ø ~~otherwise~~ can he […] the blackboard not see

Three of the four tokens feature the finite verb in second position, only (7-13a) is verb-final. The V2-characteristic in (7-13b-d) is achieved in different ways. The translation in (7-13b) contains the V2-VPR-variant. As the translation comes from South America, reanalysis is not a very probable option (cf. Section 6.3 for the situation in North America). Example (7-13c) shows a translation without the causal subordinators, a clear case of structural V2. The same is true for the rather exceptional example (7-14d). In this clause, we find an additional main clause phenomenon, namely the fronting of a conditional conjunctional adverb instead of the subject pronoun *her* ('he').[240] This main clause phenomenon underlines the independence of the second clause.

A total of 71 tokens without a causal subordinator can be found. The meaning of the sentence compound in these cases is not altered since a causal implicature is strongly suggested by the propositions of the two clauses. It is important to stress this fact because in contrast to the complementizer in complement clauses subordinators such as *because* and *if* possess some meaning of their own. Table 7-18 illustrates the regional distribution of the presence and absence of causal subordinators:

[240] As an ancillary aspect, the appearance of *sonst* ('otherwise') also shows the close connection between causality and conditionality (cf., e.g., the paraphrases in DAHL 1995: 251–252).

Table 7-18: Causal clauses with or without a causal subordinator separated by origin

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (tokens)	636	921	64	539	359	334	2853
+causal	606	898	61	535	350	332	2782
	95.3%	97.5%	95.3%	99.3%	97.5%	99.4%	97.5%
χ^2 (5, n=2853) = 26; p=0*** / Cramer's V: 0.1 / 1 cell (8.3%) with less than 5 expected tokens							
-causal	30	23	3	4	9	2	71
	4.7%	2.5%	4.7%	0.7%	2.5%	0.6%	2.5%

The distribution is highly significant, but its association strength is very low. In any case, the distribution seems to be quite different from the one for *daut*-deletion (cf. Table 7-1). Whereas in that case, both North American colonies show a larger share than all other colonies (77.8% of all cases come from there), the shares in Table 7-18 seem to be much more evenly spread. In spite of this superficial appearance, 74.6% (53 out of 71) of the cases still originate in either the United States or Mexico. The difference between the two distributions is mainly to be found in South America. Bolivia (with few tokens) contributes more tokens in Table 7-18 than in Table 7-1, while Brazil contributes fewer. Be this as it may, the reader must not forget that due to the generally strong syntactic disintegration of causal clauses it is much easier to achieve a V2-causal clause by means of the V2-VPR-variant (mostly in South America) or by reanalysis (mostly in North America) than in the case of complement clauses. Because of this, dropping the causal subordinator in order to generate V2 possibly constitutes a less favored or less necessary means. Furthermore – as already said – causal subordinators have their own semantics, a fact that may constitute an additional obstacle for deletion. Table 7-19 gives more information about the informants dropping causal subordinators:

Table 7-19: Characteristics of the informants producing two types of causal clauses

	competence in MLG	competence in majority language	competence in SG	raising index	scrambling index	age
n (tokens)	2465	2465	2465	2762	2676	2853
+causal	2403	2403	2403	2703	2610	2782
	12.5	8.8	8.1	+0.08	+0.008	32.7
	F (1,2463) = 6.7, p=0.01*	F (1,2463) = 6.4, p=0.011*	F (1,2463) = 5.4, p=0.02*	ns	F (1,2674) = 5.7, p=0.017*	F (1,2851) = 26.2, p=0***
-causal	62	62	62	59	66	71
	13.2	7.7	7.2	+0.134	-0.069	41.2

Here, too, things are quite different to Table 7-2. The only coinciding factor is the competence in SG. In both cases, a higher competence prevents the dropping of introductory elements. What is different is that a good competence in the majority language also prevents the dropping of *wegen(s)* or *wiel(s)*. Good knowledge of the majority language had a positive effect for complementizer deletion in Table 7-2, but was not selected in the regression analyses. Another furthering factor is a high competence in MLG suggesting that the deletion of causal subordinators is a bona fide characteristic of this variety, at least for older informants. Unlike in Table 7-2, where age did not play a role, age in Table 7-19 shows the most significant difference. Furthermore, informants who drop the causal subordinators have a significantly lower index for scrambling. This is an interesting similarity to the North American tokens in Table 7-13 and thus a first indication for some comparability between the two deletion phenomena.

It would be interesting to analyze these tokens in more structural detail, but this is not the place for this endeavor. Suffice it to say that negated matrix clauses have a significant effect on the dropping of causal subordinators, not only in a monofactorial analysis, but also in a binary logistic regression analysis. Like in the case of complement sentence compounds, negation in the matrix clause reduces the share of asyndetic linking. This is a further hint to the generally integrating effect of negation in matrix clauses. Our concern at this point is different though. We want to find out whether the informants' behavior with regard to the deletion of causal subordinators displays co-variance with their behavior with regard to complementizer deletion. In order to analyze this, the informants were categorized into four groups, from those 271 informants who did not drop causal subordinators at all to nine informants who dropped it in at least 30% of the cases. The medium share of subordinator dropping of these groups is 0% (2,495 tokens; labeled below as +*wegens*), 11.1% (189 tokens; labeled -*wegens*), 21.3% (54 tokens; labeled --*wegens*), and 43.5% (69 tokens; labeled ---*wegens*).

Separating the tokens in Table 7-1 according to these four groups, we find a steady rise of *daut*-deletion as well, starting with 11.5% for +*wegen* (2,458 tokens) and rising via 14.1% for -*wegen* (191 tokens) and 22.5% for --*wegen* (89 tokens) to 26% for ---*wegen* (77 tokens). This distribution is significant, but shows a very weak association (χ^2 (3, n=2815) = 23.9; p=0*** / Cramer's V: 0.09 / 0 cells with less than 5 expected tokens). The weak association is probably caused by the small spread between the four groups. This spread is 14.5% in the case of *daut*-deletion as opposed to 43.5% in the case of dropping causal subordinators. It is futile to linger any longer on these monofactorial analyses though, since they may be skewed by factors not controlled for. We will, therefore, resort again to the instrument of a binary logistic regression analysis. Owing to the strong relationships found in Table 7-19, we will, however, not be able to use any metrical predictors.[241] The four categorical variables used for the 2,573 relevant tokens are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Mode of the matrix clause (4 variants; contrasting variant *negated question*): negated question; non-negated question; negated declarative; non-negated declarative

[241] Maintaining the metrical predictors, the new variable would be selected along the four predictors already selected in Table 7-11. The sequence of selection would be *verb of matrix clause*, *mode of matrix clause*, *raising index*, *causal deletion*, and finally *competence in SG*.

Verb of the matrix clause (7 variants; contrasting variant *weiten*): *weiten* (‘know’); *gleuwen* (‘believe’; in sentence <2> also *meinen*); *sehen* (‘see’); *sehen*$_{Modal}$ (‘can see’); *sagen* (‘say’); *sicher sene* (‘be sure’), *daop stone bliewe* (‘insist’)

Deletion of causal subjunction (4 variants; contrasting variant +*wegens*): +*wegens*; -*wegens*; --*wegens*; ---*wegens*

Table 7-20 summarizes the results of the regression analysis:

Table 7-20: Binary logistic regression analysis (method: stepwise forward conditioned) with complementizer deletion as dependent variable and the deletion of causal subordinators as independent variable

verb of matrix clause	**mode of matrix clause**	**causal deletion**
Wald: 244.6***	Wald: 89.7***	Wald: 18***
sagen (10***) sehen$_{Modal}$ (8.1***) gleuwen (7.7***)	-negated -question (5.9***)	
	-negated +question (2.1**)	---wegens (3.3**) --wegens (2.5**)
weiten sehen sicher sene daop stone bliewe	**+negated** **+question**	**+wegens** -wegens
	+negated -question (0.04***)	

Three of the four categorical variables are selected as they significantly improve the model. The total “explained variance” is 43.3% (Nagelkerkes R-square: 0.433; Cox & Snell R-square: 0.235). As before, the verb and the mode of the matrix clause are the best predictors, but the third significant predictor selected is the grouping formed by the informants’ behavior in regard to causal clauses. There is no difference between the informants not deleting causal subordinators (+wegens) and those that rarely delete this element (-wegens). The two other groups, however, exhibit significantly different behavior. The informants most prone to deleting causal subordinators (---wegens) are 3.3 times more likely to also delete the complementizer *daut*. As expected this factor drops to a lower factor of 2.5 for the second group (--wegens). There is thus indeed a significant and noteworthy co-variance between a tendency towards deletion in complement clauses and a tendency towards deletion in causal clauses. This is especially enlightening since the informants have other, more common options to generate V2-causal clauses. We can, therefore, say that at least some informants prefer unintroduced dependent clauses and thus asyndetic clause linking across-the-board regardless of the type of dependent clause. This result concludes Section 7.1. Section 7.2 will now deal with correlates in complement sentence compounds.

7.2 Correlates in complement sentence compounds

7.2.1 Presentation of the phenomenon

In his epochal book *Prinzipien der Sprachgeschichte*, Hermann PAUL (1995: 299) pondered, among many other things, the origin of complementizers:

> Noch viel wichtiger ist es, dass gewisse Wörter, namentlich Pronomina oder Partikeln, die ursprünglich dem Hauptsatze angehören, zu Verbindungsgliedern zwischen diesem und einem psychologisch untergeordneten Satze werden, der bis dahin noch von keiner Partikel eingeleitet war, ja überhaupt noch gar kein grammatisches Zeichen der Abhängigkeit hatte. Diese Wörter pflegen dann als ein Teil des Nebensatzes angesehen zu werden. Auf diese Weise sind eine Menge den Nebensatz einleitende Konjunktionen entstanden, und dieser einfache Vorgang der Gliederungsverschiebung ist eines der wesentlichsten Mittel gewesen, eine grammatische Bezeichnung für die Abhängigkeit von Sätzen zu schaffen. Meistens waren die betreffenden Wörter ursprünglich hinweisend auf den folgenden logisch abhängigen Satz […]. Hierher gehört die wichtigste deutsche Partikel *daz* = engl. *that*, ursprünglich Nom. Akk. des Demonstrativpronomens. *Ich sehe, dass er zufrieden ist* hervorgegangen aus einem *ich sehe das: er ist zufrieden* […].[242]

PAUL's quote highlights several aspects of the generally accepted theory of the origin of complementizers in SG. AXEL-TOBER (2012: 100) calls this theory the classical transfer theory (*klassische 'Übertrittstheorie'*). The fact that an element of the main clause – *ich sehe **das**: er ist zufrieden* ('I see that: he is happy') – is reanalyzed as the introducing element of the following clause – *I sehe, **dass** er zufrieden ist* ('I see that he is happy') is interesting in a cognitive sense. Could there be a better way to express dependency than to have an element of the superordinate entity infiltrate the subordinate entity?[243] *Das* is selected by the verb of the first clause, the logically superordinate clause, and points *qua* its deictic nature to the following logically subordinate clause. Some scholars see a first sign of dependency of the second clause in this deictic quality (cf. AXEL-TOBER 2012: 92). By eventually becoming part of the adjacent, logically subordinate clause, the pronoun could be said to transmit its own dependency onto its new host. Complementizer deletion, the topic of Section 7.1, could thus be seen as a synchronic means of expulsing an "unwanted" diachronic intruder. Being so, Section 7.2 represents a grammatical cutback of Section 7.1.

Modern grammar theory calls the element, which according to this approach gave origin to the SG complementizer *daß*, a demonstrative pronoun – PAUL's description "*ursprünglich*

[242] Translation by PAUL J. HOPPER (cf. AUER & MURRAY 2015: 160): Even more significant are cases where certain words, especially pronouns and particles, which originally belonged to the main clause become links between the main clause and a psychologically subordinated clause that hitherto had not been introduced by a particle at all, indeed had not yet shown any grammatical sign of dependency. Such words tend then to become regarded as part of the subordinate clause. In this way, a host of subordinating conjunctions have originated, and this simple process of reanalysis is one of the most important means of creating a grammatical marker of subordination. For the most part the words concerned referred originally to the following logically subordinate clause […]. The most important German particle *daz* (English *that*) belongs here, originally the nominative or accusative of the demonstrative pronoun:
(47) *Ich sehe, dass er zufrieden ist < ich sehe das: er ist zufrieden*
'I see that he is happy' < 'I see that: he is happy' […]

[243] HARRIS and CAMPBELL (1995: 283) corroborate this point: "Another view is that two clauses are more tightly joined if one has some grammatical marking of a relation to the other, often in the form of a pronoun, gap, or grammatically determined tense or mood."

hinweisend auf den folgenden logisch abhängigen Satz" ('referred originally to the following logically subordinate clause') supports this identification.[244] Section 7.2 will analyze the role these demonstrative pronouns, frequently also named correlates, play with regard to clausal dependency. Examples (7-14a-d) present four US-American translations of stimulus sentence <3> illustrating all possible combinations of correlates and complementizers.

stimulus <3> English: **Don't you see that I am turning on the light?**

(7-14) a. *kos dü nich sehen daut ik du daut Licht anmeaken* (USA-47; m/19/MLG+E)
can you not see that-COMPLEMENTIZER I ~~do~~ the light on-make

b. *kos dü daut nich sehen daut ik daut Lich du anmeaken* (USA-70; f/30/E>MLG-86%)
can you ~~that~~-CORRELATE not see that-COMPLEMENTIZER I the light ~~do~~ on-make

c. *kos nich sehen ik du daut Licht anmeaken* (USA-43; m/42/E>MLG-Ø)
can Ø not see Ø I ~~do~~ the light on-make

d. *kos dü daut nich sehen ik du det Licht answitchen* (USA-31; m/29/E>MLG-Ø)
can you ~~that~~-CORRELATE not see Ø I ~~do~~ the light on-switch

Example (7-14a) shows *daut* as a complementizer, but no *daut* as a correlate. This is the most frequent type in the MLG data set (68.7% of 2,521 tokens; cf. the lower part of Table 7-21). The token in (7-14b) shows *daut* in both functions (17.9%),[245] the one in (7-14c) in neither of them (12.4%). Finally, (7-14d) features *daut* as a correlate, but not as a complementizer; supposedly the original state of affairs before the reanalysis PAUL assumes took place. Interestingly, this type is by far the least frequent (1%) and many linguists consider it outright ungrammatical (cf. REIS 1997: 139 – characteristic (68d) and BREINDL 1989: 237).

Almost one hundred years before PAUL, Wilhelm von HUMBOLDT, another prominent scholar of language, had already contemplated the bond between a correlate and the entity it relates to. Analyzing morphosyntactic rules of Nahuatl, HUMBOLDT (2002: 57) wrote in 1822:

> *Ninequia* heisst ich wollte, und indem dies die 1. pers. sing. fut. *tlaçotlaz*, ich werde lieben, in sich aufnimmt, wird aus der ganzen Phrase Ein Wort. Dasselbe Futurum kann aber auch dem regierenden Verbum, als ein eigenes Wort, nachstehen, und wird dann nur, wie im Mexicanischen überhaupt geschieht, im Verbum durch ein eingeschobenes Pronomen, *c*, angedeutet, *ni-c-nequia tlaçotlaz*, ich das wollte, nemlich: ich werde lieben.[246]

[244] Confer also HARRIS and CAMPBELL (1995: 282): "Many languages have subordinators that originated as demonstrative pronouns, and some investigators see this as evidence that those pronouns were "pointing to" a loosely adjoined clause."

[245] Superficially, the co-occurrence of MLG *daut* ('that') as a correlate in the matrix clause and as a complementizer in the complement clause could be compared to the infiltration of the matrix clause *nich* ('not') in the complement clause of sentence <5> (cf. In-Depth Analysis 7.1.3.3). Section 7.2.2.1 will analyze this possible case of syntactic doubling further. Supporting this assumption, there was a period where Old High German *thaz* routinely surfaced in both the matrix and the complement clause (cf. SZCZEPANIAK 2011: 173–174 and AXEL-TOBER 2012: 66). HARRIS and CAMPBELL (1995: 287) see in this double occurrence a consequence of language change: "After it had been reinterpreted, *daß* began to cooccur with a matrix clause demonstrative […]."

[246] Translation by G.K.: *Ninequia* means I wanted. As this form incorporates the 1st pers. sing. fut. *tlaçotlaz*, I will love, the whole phrase turns into one word. However, the same future form can also follow the governing verb as an independent word. In this case, the future form will be indicated by means of a pronoun, *c*, which is inserted in the verb, a typical operation in Mexican: *Ni-c-nequia tlaçotlaz*, I that wanted, namely: I will love.

In spite of the surprisingly modern-sounding terminology, one may criticize the indiscriminate use of *phrase* and *word* for an agglutinating language such as Nahuatl. One may also criticize the movement metaphor, which suggests that *tlaçotlaz* (*ich werde lieben*; 'I will love') is incorporated (*in sich aufnimmt*) into the governing phrase *ninequia* (*ich wollte*; 'I wanted'). Instead, one may assume – within a derivational analysis – that *tlaçotlaz* is moved out of its clause-internal original position and adjoined to the right of *ninequia*. More important than these considerations is the fact that HUMBOLDT calls the morpheme {-c-} a pronoun, which he translates into a SG deictic correlate (*das* in *ich das wollte*; 'that'). Such an element is frequently taken to not only "mark" the original position of an extraposed phrase (cf. ZIFONUN et al. 1997: 1478), but – as mentioned above – to point cataphorically to this very phrase. It is, therefore, noteworthy that HUMBOLDT uses *nemlich* (modern German *nämlich*; 'that is to say' or 'namely') in his gloss. This connecting element interprets *das* clearly as a deictic element with the function of informing the listener that more detailed information will follow.[247]

Section 7.2 shares its general structure with Section 7.1. After the presentation of the phenomenon in Section 7.2.1, we will consider some theoretical issues in Section 7.2.2. Section 7.2.2.1 deals more thoroughly with the origin of complementizers in German. On the one hand, these diachronic considerations constitute an important connection between Sections 7.1 and 7.2; on the other hand, they are necessary as we will frequently analyze complementizers and correlates together in Section 7.2. In Section 7.2.2.2, the structural and functional nature of correlates and their relationship to dependent clauses will be dealt with. As Section 7.1.3, Section 7.2.3 will present an array of monofactorial analyses. This section will be somewhat shorter than Section 7.1.3 though, because there are fewer points that need to be discussed. Section 7.2.4 will then present the results of several binary logistic regression analyses. Embedded in this section is In-Depth Analysis 7.2.4.2, a first attempt to quantify the strength of clause linkage based on the MLG translations. The following Section 7.2.5 will summarize the findings with regard to complementizers and correlates and carry over to the analysis of conditional sentence compounds.

7.2.2 Theoretical considerations with regard to complementizers and correlates

7.2.2.1 The origin of the complementizer in German

In Section 7.2.1, we presented the generally accepted hypothesis on the origin of the SG complementizer *daß* ('that'). Quite recently, AXEL-TOBER (2012) shed some doubt on this

[247] DIESSEL (2012: 45–46) quotes BÜHLER (1934: 390) who expresses this link in an almost poetic way: "*Jedenfalls aber sprächen alle anaphorischen Pfeile, wenn sie sprechen könnten, ungefähr so: schau vor oder zurück das Band der aktuellen Rede entlang! Dort steht etwas, das eigentlich hierhergehört, wo ich stehe, damit es mit dem Folgenden verbunden werden kann. Oder umgekehrt: dorthin gehört, was mir folgt, man hat es nur der Entlastung wegen versetzt*." [translation by Donald Fraser GOODWIN in BÜHLER 1990: 443: At any rate, all anaphoric arrows, if they could speak, would speak more or less as follows: look ahead or back along the band of the present utterance. There something will be found that actually belongs here, where I am, so that it can be connected with what now follows. Or the other way round: what comes after me belongs there, it was only displaced from that position for relief.]

evolutionary path. We will discuss her main arguments against the assumption that a deictic element of the matrix clause turned into the complementizer of the dependent clause. These arguments are (i) that *thaz* ('that') as a demonstrative correlate did not disappear after its assumed reanalysis (cf. AXEL-TOBER 2012: 66). Aside from this, AXEL-TOBER (2012: 96–97) points (ii) to the fact that, unlike in English, the regrouping of *thaz* with the second clause is necessarily accompanied by a new, clause-final position of the finite verb. The last problem she (2012: 99–100) sees is (iii) that once *thaz* is part of the second clause, it would still be a phrasal entity which needs to obtain an argument role and which could not simply be located in the head position of CP. Its natural landing site would rather be Spec/CP.

AXEL-TOBER's (2012: 106–121 and 126) own theory is based on a longer process of grammaticalization. She, too, starts out with a demonstrative pronoun. However, instead of assuming a structural leap from demonstrative pronoun to complementizer, she assumes a sequence of small steps. First the demonstrative pronoun is supposed to have turned into a relative pronoun, then into a relative particle, and only after these two intermediate steps into a complementizer. By assuming intermediate steps, AXEL-TOBER considerably softens the rather dramatic consequences mentioned in (ii) and (iii). Obviously, this hypothesis is crucially based on the well-known formal and semantic similarities between relative and complement clauses (cf., e.g., ARSENIJEVIĆ 2009, LEHMANN 1984: 325–329, and ZIMMERMANN 2011). That these two clause types have a lot in common in MLG as well, will be demonstrated shortly (cf. Excursus 7.2.2.1). These tendencies may, therefore, be seen as indirect support for AXEL-TOBER's (2012) hypothesis. Nonetheless, one can find alternative explanations for her three problems.

With regard to (i), the presence of *thaz* as a correlate even after its putative reanalysis into a complementizer may actually support rather than disprove PAUL's hypothesis. While *thaz* was the default correlate in Old High German and was not restricted to anaphoric contexts (i.e. pointing to discourse-old propositions; AXEL-TOBER, p.c.), the use of SG *das* is restricted both with regard to frequency (cf. AXEL-TOBER et al. (in preparation): 3) and with regard to its semanto-pragmatic function (cf. AXEL-TOBER et al. (in preparation): 13, 18, and 22). Unlike this, the SG default correlate *es* ('it') is not only much more frequent than *das*, it can also be used both as an anaphoric correlate and as a placeholder (cf. Section 7.2.2.2). The increasing frequency of *iz* (SG *es*), which was infrequent in Old High German (cf. AXEL-TOBER 2012: 71), and the concurrent specialization of *thaz* (SG: *das*) as an anaphoric correlate is exactly the scenario we would expect after the kind of reanalysis PAUL suggests.

Moreover, the simultaneous appearance of *thaz* as correlate and complementizer in Old High German (or *daut* in MLG as in (7-14b)) may be another case of syntactic doubling (cf. Footnote 245 in this chapter). BARBIERS (2013: 1) writes that "syntactic doubling is necessary to express semantic relations and that there is much hidden doubling because locally recoverable doubles can and in certain cases must be left silent at the level of phonological spell out." If we assume that both a correlate in the matrix clause and a homophonous complementizer introducing a dependent clause are indicators for syntactic integration, a meaningful explanation for the double occurrence of *thaz* or *daut* can be given (cf. In-Depth Analysis 7.2.4.2 for a more detailed explanation). Granted, contrary to most cases of syntactic doubling mentioned by BARBIERS (2013), this particular instance of doubling would – just like multiple negation in In-Depth Analysis 7.1.3.3 – cross a clause boundary. One must not forget though that many of the matrix verbs involved are bridge verbs, i.e. verbs which minimize the barrier effect of the clause boundary. In view of this, such an expansion does not seem to pose too big of a theoretical problem. BARBIERS (2013: 8 – example (5a)) himself mentions examples of clausal extraction as cases of syntactic doubling. One of them is the colloquial Dutch construction ***Wie** denk je **wie** ik heb gezien?* (gloss: who think you who I have seen; 'Who do you think I have seen?').

As for (ii), the position of the finite verb in the dependent clause, this new position may not be such a big problem after all. Granted, reanalyzing a correlate as a complementizer has more consequences in German than in English, but then again, this is what speakers of German or of MLG (cf. Section 7.1) do all the time. Both complement and conditional clauses can appear with or without introducing element in SG and this variation does not seem to constitute a challenge for speakers of SG in spite of the necessity to place the finite verb in different positions. Aside from this, finite unintroduced, but dependent verb-final clauses used to exist in Old High German (cf. PITTNER 1996: 132–133). In these cases, the verb appeared in the identical position from the very beginning. Moreover, PITTNER (1999: 213–214) like PAUL (1995: 299) mentions several other elements of the matrix clause which turned into introducing elements of dependent clauses (causal *da* ('since'), conditional *wenn* ('if'), and concessive *wenngleich* ('even though')). With regard to these elements, the finite verb also stopped moving and had to remain in its original clause-final position. Aside from this, we cannot assume the status of a relative particle in C^0 as an intervening step for *wenn* ('if') and *wenngleich* ('although'). PITTNER even mentions a temporal limited co-occurrence of these elements with the complementizer *daß* ('that'), the default element in C^0. Because of this, the traditional analysis of the development of the SG complementizer seems to be possible in principle.

Finally (iii), the problem of the phrasal nature of the demonstrative pronoun, may be solved by assuming that this element began to lose its referentiality while it was still part of the matrix clause. After all, semantic reduction is one characteristic of grammaticalization. An alternative to this explanation is the assumption that the new element of the dependent clause may still have been theta- and case-marked by the matrix verb. This could then be considered a historic case of PESETSKY's generalization.[248] The reason for this permeability may have been the fact that the reanalyzed clause boundary was transparent and/or unstable for quite some time. Structurally, transparency is a necessary condition for the reanalysis of the correlate *thaz*; sociolinguistically, instability is to be expected since there must have been

[248] This much criticized generalization states that agentive verbs must θ-mark lexical NPs across a clausal boundary in order to be able to exceptionally case-mark them.

speakers with different systems living together for quite some time, some with the old system and some with the new system.

In any case, there is nothing which impedes Spec/CP of the dependent clause as first landing site for the correlate after reanalysis. This is exactly the situation we find in SG relative clauses or SG indirect interrogative clauses, a phrasal category in Spec/CP and no or a non-realized complementizer in C^0. Overt evidence for this position can be seen in the doubly-filled COMP constructions in Southern German varieties (cf., e.g., BAYER & BRANDNER 2008). In these constructions, we have a phrasal category in Spec/CP and a phonetically realized complementizer in C^0. A MLG example for such a construction with *waut* as complementizer and the phrasal category *der* (relative pronoun) can be seen in the relative clause in (7-15):

stimulus <36> Spanish: **El doctor que quiere ver mi pie está muy preocupado**
English: The doctor who wants to see my foot is very worried

(7-15) *de Dok:tor der waut min'n Fuut sehen will is [0.5] sehr [0.6] nieschierig*
(Mex-43; m/31/MLG)
the doctor who that-RELATIVE MARKER my foot see wants is […] very […] curious

All this does not mean that AXEL-TOBER (2012) is wrong; it just means that she is not necessarily right. In the MLG data set we can also find indications supporting her view. We will deal with these in Excursus 7.2.2.1. After this excursus, Section 7.2.2.2 will focus on current analyses of correlates and their connection to the dependent clauses they relate to.

Excursus 7.2.2.1: Converging tendencies in MLG complement and relative clauses

As already mentioned, there is no doubt whatsoever that complement and relative clauses share many characteristics. One indication for this is the homophonous coding in many languages. Spanish and Portuguese, for example, introduce both clause types by means of *que* ('that'). English is another, albeit more restricted example for identical coding, since *that* as a relative particle is only possible in restrictive relative clauses. Even in SG, there is a partial overlap of the introducing elements of relative and complement clauses. The neuter relative pronoun *das* is homophonic to the complementizer *daß*.[249] Figure 7-3 shows a part of the judgment test. The changes carried out by the informant hint that similar processes take place in MLG.

[249] The fact that the orthographic distinction of these two elements (formerly *das*/*daß*; nowadays mostly *das*/*dass*) constitutes one of the biggest stumbling blocks for most Germans could be analyzed as a consequence of the structural and conceptual similarities of complement and relative clauses.

Figure 7-3: Judgment test: Mex-‘33’ (f/16/MLG) replacing the complementizer *daut* by *waut* in sentences {10} and {11}[250]

10. Henrik weit, daut hei kaun feloten daut Launt (*Enrique sabe que puede salir del país*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☐ nicht ganz richtig / *más o menos* ☑ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* Lo digo con esos palabras pero en otra forma

☐ Ich sage das so / *Uso esta forma*
☐ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*
☑ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Henrik weit, waut he daut Launt felotn Kaun.

11. Ejk weit, daut hei daut Büak haft festonen (*Yo sé que él entendió el libro*)

Meiner Meinung nach ist dieser Satz im Plattdeutschen / *En mi opinión esta frase suena en nuestro Bajo Alemán*
☐ richtig / *correcto* ☐ nicht ganz richtig / *más o menos* ☑ falsch / *errado*
Warum nicht ganz richtig oder falsch? / *¿Por qué más o menos o errado?* Lo digo con unas pocas palabras difirentes.

☐ Ich sage das so / *Uso esta forma*
☐ Ich sage das nicht, aber andere Mennoniten hier sagen das / *No la uso pero otros Menonitas usan esta forma*
☑ Das sagt hier unter den Mennoniten niemand so / *Nadie entre los Menonitas aquí usa esta forma*
Wie sagst Du das? / *¿Qué forma usas tú?* Ejk weit, waut he haf kaunt dot Büak feston.

When asked to improve the given stimulus sentences, this young Mexican informant substitutes *daut* for *waut* in four of the five complement clauses of the test. She marks both judgment sentences in this part as completely incorrect and claims that nobody in her colony would use them in the presented form. This utter rejection is understandable when one realizes that she corrects several things. Besides dropping *daut* and inserting *waut* and besides changing the position of the verbal elements in both sentences, she also changes the “pronunciation” of *hei*, *haft*, *feloten*, and *festonen*.

BREINDL (1989: 174 – examples (3-72a+b); underline and capital letters in the original; glosses and translations by G.K.) offers a structural comparison between relative and complement clauses. Crucially, she includes a correlative element in the complement sentence compound of (3-72b) here given as (7-16b):

(7-16) a. *Es geht mir <u>um</u> <u>DAS</u>, <u>was Frauen durch Diskriminierung angetan wird</u>.*

It goes me about that.REFERENCE PRONOUN what.RELATIVE PARTICLE women.DAT through discrimination caused is

‘I am concerned with the things from which women suffer because of discrimination’

b. *Es geht mir <u>DArum</u>, <u>daß Frauen immer noch diskriminiert werden</u>.*

It goes me there-about-CORRELATE that-COMPLEMENTIZER women.NOM always still discriminated are

‘I am concerned that women are still being discriminated’

BREINDL (1989: 174) says that (7-16b) shares relational (dependency), positional (correlate and complement clause can appear together in the midfield or in the prefield), and

[250] *Ejk* in the second sentence of this clip should read *Ekj*.

intonational features with (7-16a), a restrictive relative clause. Another indication for the similarity of conditional and relative clauses is the fact that *daß*, the default SG complementizer, cannot only introduce complement clauses, but also attribute clauses as in (7-17):

(7-17) *Die Tatsache, daß Mennoniten Korrelate verwenden, ist bekannt*[251]
the fact that-COMPLEMENTIZER Mennonites correlates use is known
'It is a known fact that Mennonites use correlates'

The MLG translations also show converging tendencies between complement and relative clauses. Example (7-18) is one of sixteen tokens in which *daut*, originally the default complementizer, functions as a relative particle.[252] *Daut* cannot be a relative pronoun since the head NP *der Doktor* is masculine, not neuter.

stimulus <36> English: **The doctor who wants to see my foot is very worried**

(7-18) *der Doktor daut will min Fuut besehen [0.6] is [0.9] sehr worried*
(USA-75; m/17/E>MLG-64%)
the doctor that.RELATIVE PARTICLE wants-VERB1 my foot see-VERB2 […] is […] very worried

Daut as a relative particle is especially frequent in the United States and it is used by informants with a high competence in English, a language which uses the cognate *that* in both functions. Therefore, assuming an English influence is justifiable. In analogy to this, 68 tokens with complement clauses feature *waut*, originally the default relative marker, as introducing element.[253] One of them, token (7-19), has already been presented as (1-8):

stimulus <8> Spanish: **¿Estás seguro que él arregló la silla?**
English: Are you sure that he has repaired the chair?

(7-19) *bis dü sicher waut her daut [0.6] [äh] den Stuhl haf fertiggemeakt* (Mex-13; m/28/MLG)
are you sure that-COMPLEMENTIZER he ~~the~~.NEUTER […] [eh] the.MASC chair has-VERB1 ready-made-VERB2

[251] LEHMANN (1984: 153) calls these clauses noun clauses (*Substantivsätze*) and mentions one difference between them and relative clauses. In noun clauses, all argument positions are occupied, while there is one empty position in relative clauses.

[252] The same tendency can be found in Pennsylvania German with regard to the non-cognate complementizer *as* ('that'). LOUDEN (1994: 86) writes: "In Plain Pennsylvania German, there is limited evidence of convergence involving (finite) relatives, as well. […] the finite complementizer has been generalized to appear in relatives replacing historical relative pronouns. Making the claim that convergence with English is responsible for this development is problematic, given the fact that in English both the complementizer 'that' and true relative pronouns 'who(m), which' can introduce relatives. But there is little doubt that in the spoken varieties of American English with which Plain Pennsylvania German is in contact, the former strategy ('that') enjoys greater frequency than the latter […]."

[253] Resembling the MLG situation, Yiddish, Swiss German dialects (cf. WEIß 2013: 777), and Afrikaans also allow their speakers both complementizer deletion and the use of *voz*/*was*/*wat* as complementizer. STELL's (2011: 175) comment for Afrikaans is even comparable in its considerations with regard to prestige: "We consider *dat*-retention to form the formal variant and *dat*-omission to form the informal variant. We further consider the use of *dat* as complementizer to form the standard variant and the use of *wat* instead of *dat* as complementizer to form the non-standard variant […]."

Waut in complement clauses is especially frequent after negated matrix clauses in Mexico and Bolivia (cf. Section 8.2.3 for a thorough analysis). Nevertheless, influence from Spanish, a language which marks both clause types by *que* ('that'), can be ruled out in this case, first, because the Mennonites' competence in Spanish is not that good; second, because we would – in that case – also expect *waut* as a complementizer in Brazil. This does not happen one single time however, although the Portuguese competence of the Brazilian Mennonites is very good and although Portuguese functions like Spanish in this respect.

Structural in-depth analyses of the relevant tokens reveal further highly interesting facts. We do not have the space to present them in great detail at this point, but we will at least mention two of them: (i) It is no coincidence that (7-19) features the VR-variant. Most of the complement clauses introduced by *waut* featuring two verbal elements appear with this cluster variant. As the reader may remember from Section 6.2, the VR-variant is the unmarked raised variant for relative clauses (thus coinciding with the original function of *waut* as a relative particle), but the marked variant for complement clauses (thus not coinciding with the complement clause *waut* introduces). The same co-occurrence pattern can be found for the tokens represented by (7-18). These tokens present the V2-VPR-variant almost exclusively. This variant is the unmarked raised variant for complement clauses (matching the original function of *daut* as complementizer), but the marked variant for relative clauses (not matching the relative clause *daut* introduces). With regard to this co-variance, one may either assume a static wholesale infiltration of complement/relative clause constructions into the domain of relative/complement clause constructions or a dynamic syntactic projection. This would mean that the introducing element *daut*/*waut* causes the V2-VPR-variant/VR-variant to appear online (cf. Section 8.1 for the possible role of syntactic projections in MLG).

(ii) At first glance, an effect with regard to negated (or interrogative) matrix clauses (cf. for such effects in complement sentence compounds Section 7.1 and in causal sentence compounds Excursus 7.1.4.3) seems to exist. Negated (or interrogative) matrix clauses in relative sentence compounds seem to co-occur frequently with (complex) relative markers either starting with the definiteness segment {d-} (the relative pronouns ***d****er*/***d****ie*/***d****aut*) or containing such a segment (e.g., *waut* ***d****a*). We will analyze this conspicuous behavior in more detail in Section 8.2.2.

7.2.2.2 General overview of correlates in complement sentence compounds

EISENBERG (2013b: 322–326) calls the SG correlate *das* ('that') the counterpart of *es* ('it'). According to him, *das* differs from default-*es* in three respects: (i) *Das* can be stressed and by being stressed, it integrates the clause it refers to intonationally into the matrix clause. (ii) *Das* is less restricted with regard to the position in which it can occur, i.e. unlike *es*, *das* (and non-reduced prepositional elements like *darüber*; there-over; 'about it') can occur in the prefield, either on its own or adjacent to the dependent clause it relates to. (iii) Finally and most importantly for us, stressed *das* (but not *es*) is the nucleus of an attribute construction. ZIFONUN et al. (1997: 1476–1483), basing their assumptions on BREINDL (1989), confirm this status for stressed correlates (especially for complex prepositional ones). Essential for the analysis of correlative elements is that neither EISENBERG (2013b) nor ZIFONUN et al. (1997) say that all correlates function as nuclei for attribute constructions. This only happens when the correlate possesses specific characteristics like stress or deixis. Most syntacticians, therefore, distinguish two types of correlates: On the one hand, referential expressions like stressed *das* and on the other hand, real placeholders like unstressed *es* (cf., e.g., BREINDL 1989 and REIS 1997). AXEL-TOBER (2012: 52; cf. also AXEL-TOBER et al. (in preparation): 13) writes that *es* can be used both anaphorically and as a placeholder, while *das* can replace *es* only as an anaphoric proform.

In the remainder of this section, we will deal with the following questions: (i) What is the status of the dependent clause after correlative elements? (ii) What does this status mean for MLG complement sentence compounds? (iii) Are correlative elements obligatory in matrix clauses, i.e. do phonetically unrealized correlates exist? (iv) How do correlative elements influence the degree of integration of the dependent clause into the matrix clause?

Ad (i): With regard to the dependent clause, BREINDL (1989: 157) assumes an attributive status if an unreduced correlative element like *darüber* is present, especially if the deictic part *da-* is stressed as in (7-16b). BREINDL (1989: 156) focusses on prepositional correlative elements, but compares the stressed, non-reducible ones with the correlate *das* and the unstressed, reducible ones with *es*. This means that she considers the dependent clause after the correlate *das* an attribute clause (*Gliedteilsatz*) and not a complement clause (*Gliedsatz*). Crucially, BREINDL (1989: 171 – Footnote 6) regards the placeholder *es*, but not anaphoric *das*, as a phonetically realized trace of an extraposed complement clause. This means that placeholders are not referential expressions. A consequence of this is that the matrix verb cannot theta-mark placeholders and that the complement clause is syntactically obligatory in this case. AXEL-TOBER (2012: 19 and 52) agrees with this showing that dependent clauses after the proform-*es*, but not after the placeholder-*es*, are omissible.

Ad (ii): What do these considerations mean for correlative constructions in MLG? One decisive difference between MLG and SG is that MLG has just one productive correlate, namely *daut* ('that').[254] There is not a single case of *et* ('it') in object function in 2,521 possible complement sentence compounds and the frequency of *et* or its SG cognate *es* in subject function is not very high either.[255] In this, MLG resembles Old High German, where *thaz* ('that') was the default correlate and *iz* ('it') only appeared infrequently (cf. AXEL-TOBER

[254] HEINRICH SIEMENS (p.c.), a speaker of European MLG, and JOHN THIESSEN (p.c.), one of the Paraguayan informants, regard *daut* as the MLG default correlate. They qualify this conviction somewhat saying that *et* is an option, but an option which at least THIESSEN regards as less natural. As both SIEMENS and THIESSEN have native-like fluency of SG, convergence of their MLG towards SG may have occurred explaining this qualification. Interestingly, THIESSEN's (2003: 73 and 393) dictionary translates MLG *et* into English *it* or *that*, but only offers MLG *daut* for English *it*.

[255] In sentence <1> *It is not good that he is buying the car*, SG *es* and its MLG cognate *et* appear 34 times as subject correlates (11% of the cases; cf. for SG subject correlates EISENBERG 2013b: 323). As the informants that use these correlates have a competence level in SG of 9.6, *et* and *es* have to be qualified as SG loans. Informants that use *daut* (and *daus*) in this sentence have a significantly lower competence level of 8 (F (1,248) = 6.2, p=0.014*).

2012: 71). Unlike SG *es* or rare MLG *et*, *daut* possesses a deictic-phoric quality due to its {d-}-segment. One consequence of this quality is mentioned by AXEL-TOBER et al. (in preparation: 3), who write about PÜTZ (1975) that he “speculates that in the case of correlative *das*, the content of the *dass*-clause has to be discourse-*old*.”[256]

What do these results mean for our translation data where no linguistic context was provided? Obviously, we do not necessarily need a linguistic context in order to distinguish old versus new information. In a sentence like <9> *Elisabeth insists that you must have seen the truck*, the informant is bound to consider the proposal of the complement clause as old information. Nobody is said to insist on something unless this something has been mentioned previously in discourse (cf. once again HARRAS et al. (2007: 161) for the meaning of SG *bestehen auf*). It is obviously no coincidence that both the SG verb *bestehen auf* and the MLG verb construction *daop stone bliewe* (both ‘insist’) must appear with a prepositional correlate. In a sentence like <3> *Can’t you see that I am wearing a new dress*, however, it is less probable that the informants regard the proposal of the complement clause as presupposed.

The importance of the information status is also mentioned by ZIFONUN et al. (1997: 1487). They write that a correlate is more probable with verbs of saying, thinking, and knowing – precisely the verbs used in our stimulus sentences – if the proposition of the complement clause is presupposed. We have claimed in Section 7.1 that pragmatic presupposedness correlates with syntactic integration and this is exactly what PITTNER (1999: 206–207) claims with regard to correlates. She says that the impossibility for correlates is a clear sign of a low degree of subordination. If this is correct, we expect more cases of the VR-variant (and fewer cases of the V2-VPR-variant) in dependent clauses following matrix clauses with the correlate *daut* than in dependent clauses following matrix clauses without a correlate. This is indeed the case.

Obviously, these considerations do not answer the question whether the correlate *daut* and its related dependent clause form an attributive construction. Fortunately though, there is a second point in AXEL-TOBER et al. (in preparation: 15–16) which may clarify this problem. AXEL-TOBER et al. distinguish two verb classes, those taking placeholder-*es* like *bedauern* (‘regret’), *ablehnen* (‘reject’), or *hinnehmen* (‘accept’) and those not taking placeholder-*es* like *glauben* (‘believe’), *denken* (‘think’), *sagen* (‘say’), *sehen* (‘see’), and *wissen* (‘know’). They (in preparation: 6) write:

> The latter (non-placeholder-*es*-taking verbs) require a context in which the content of the associated *dass*-clause is pre-mentioned or deducible from the context or general situation.

[256] BARBIERS (2000: 204) describes a comparable relationship for Dutch and English complementizers: “Following Davidson 1968, I assume that finite complementizers like *that* and *dat* are demonstrative both historically and synchronically. The relation C (V,IP) then, is a demonstrative relation between the matrix event denoted by V and the embedded eventuality denoted by IP. […] Transposed to propositional CPs, we can say that there is a pointer from the matrix event to the embedded eventuality, i.e., the embedded eventuality does not exist in the domain of discourse before it is introduced by the matrix event.”

All matrix verbs discussed in Sections 7.1 and 7.2 belong to the second class. If the members of this class really do not occur with placeholder-*es* in SG, it stands to reason that all occurrences of MLG *daut* in matrix clauses containing these verbs are referential expressions; a fact which qualifies the related dependent clauses as attribute clauses. Following this intuition, we have another explanation why MLG matrix clauses with the correlate *daut* co-occur more frequently with dependent clauses with the VR-variant than matrix clauses without a correlate. The VR-variant is the typical variant of relative clauses (cf. Section 6.2). With this, we can even answer an open research question which AXEL-TOBER (2012: 54, cf. also 84 and 91) mentions several times, the question whether proform-*es* and *das* really function like the stressed, non-reducible prepositional elements BREINDL (1989) deals with:

> Es ist eine offene Forschungsfrage, ob das ‚Bezugselement-Gliedteilsatz'-Muster syntaktisch gleich wie die Proform-Konstruktion bei ‚nicht-präpositionalen' Argumentsätzen zu analysieren ist […] oder nicht.[257]

Ad (iii): With one exception (*daop stone bliewe*; 'insist'), none of the verbs in the MLG data set (*weiten*, *gleuwen*, *denken*, etc.) requires a phonetically realized correlate. This brings us to the third question mentioned above. Do we have to expect structurally obligatory correlates, which sometimes may not be realized phonetically? The fact that there are languages in which correlates (or resumptive elements) always have to be realized phonetically seems to indicate that the assumption of silent correlates in languages such as SG may be correct. One of the characteristics of Hindi, for example, is the existence of relative-correlative constructions. This does not only cover relative sentence compounds like the one provided by VERMEER and SCHMITT (1988: 53) *jo kitab mez par hai, **vah** meri hai* (gloss and translation by G.K.: which book table on is, **this** mine is; 'The book which is on the table is mine'), but also conditional sentence compounds where the pair *jab* – *tab*/*to* ('if' – 'then') is virtually obligatory.[258] *Tab* and *to* can be compared to SG and MLG *dann*, the syntactic behavior of which will be investigated in Section 7.3. With regard to SG, AXEL-TOBER (2012: 49) quotes HARTUNG (1964), who argues for the obligatory presence of a demonstrative, case-bearing element in the matrix clause. This element may not be phonetically realized, but it has to be there structurally since a complement clause cannot receive case. The complement clause would thus always be a kind of adjoining attribute clause regardless of the phonetic status of the case-bearing element:

> Sie [this type of analysis] wurde u.a. von Hartung (1964) vorgeschlagen, der annimmt, dass in Konstruktionen mit Komplementsätzen in der Argumentposition ein abstraktes demonstratives, kasustragendes Element *Dem*$_S$ generiert wird, während der Nebensatz an dieses Element adjungiert wird. In einer späteren Ableitungsstufe wird *Dem*$_S$ als *das* oder als ein Bezugsnomen realisiert oder bleibt phonetisch leer. Wenn der eingebettete Satz einer Permutation unterliegt, die ihn ins

[257] Translation by G.K.: It is an open research question whether the pattern of head element and attributive clause is to be analyzed identically to the proform-construction of 'non-prepositional' complement clauses […] or not.

[258] Sometimes these correlative elements may be left out in colloquial speech, but they are definitely less optional than in SG. SNELL and WEIGHTMAN (2003: 129), for example, write in a Hindi textbook: "In English, 'then' is optional in an 'if' sentence ('if she comes [then] I'll tell her'); but in Hindi 'agar' ['if'; in the original in Devanagari; G.K.] can be dropped, while 'to' ['then'; in the original in Devanagari; G.K.] is essential."

> Nachfeld der Matrixkonstruktion rückt, kann *Dem*$_S$ auch durch das Pronomen *es* vertreten werden.[259]

Although AXEL-TOBER (2012: 62) herself ponders the possibility of phonetically empty correlates in cases of prepositional and genitive complement clauses, she does not follow HARTUNG's (1964) idea that all complement clauses are adjoined to correlates. BARBIERS (2000: 204) is another supporter of phonetically empty correlates, at least in cases of factive CPs:

> I assume that the true argument position of a verb with a factive CP […] is taken by an empty pronoun that is interpreted as an element of the set denoted by the root of the verb. Thus, the factive interpretation of *John said that Mary would call* may be described informally as: 'John said it, that Mary would call'. The pronoun may be empty because its content is licensed by the factive CP.

In BARBIERS' (2000) argumentation, factive CPs are adjunct clauses and due to this, the complement position of the matrix verb must be filled with another element, in this case a phonetically empty pronoun. Arguing against the idea of such empty elements, AXEL-TOBER (2012: 49) refers to HUANG's (1982) *Condition on Extraction Domains*, a condition, which also plays a role in HAIDER's (2010: 75; cf. also ROBERTS & ROUSSOU 2003: 117) argumentation:

> Third, the presence of *es* in combination with an extraposed clause makes the clause opaque for extraction. Opacity should be independent of the overt or covert status of the antecedent pronoun. The facts tell a different story, however. Extraction across an overt antecedent *es* is ungrammatical […].This pattern becomes understandable if the *es* in (9) is the pronominal argument, and not an expletive, and the extraposed clause is dependent on it […]. In this case, the extraposed clause is not selected and therefore opaque. If there is no *es*, the clause is argumental and hence transparent for extraction. If you assume a silent *es*, however, you are bound to assume, contrary to the facts, that it blocks extraction just like an overt one does.

Two points are important in HAIDER's reasoning. He assumes either an argumental correlate with a related extraposed clause – one may understand this as a paraphrase for an attribute clause depending on a proform-*es* – or the extraposed clause itself is argumental, i.e. a prototypical complement clause. This would be the case if there is no correlate or if *es* functions as an expletive, i.e. a placeholder-*es*. Aside from this, the presence or absence of a correlate has visible consequences; in this case the possibility to extract elements out of the dependent clause or the lack of such a possibility. According to HAIDER, this difference proves that there are no covert, i.e. phonetically unrealized correlates. As we will be able to show that there is a significantly different share of specific cluster variants in the dependent clause subject to the presence or absence of a correlate, there is a second visible consequence of the presence of correlates. Whether this alone constitutes evidence for the inexistence of

[259] Translation by G.K.: It [this type of analysis] was proposed – among others – by Hartung (1964), who assumes that an abstract demonstrative and case-bearing element *Dem*$_S$ is generated in the argument position of the main clause of complement sentence compounds. The subordinate clause is adjoined to this element. In a later derivational stage, *Dem*$_S$ is realized either as *das* or as a head noun or remains phonetically empty. If the embedded clause suffers a permutation and is moved to the postfield of the matrix clause construction, *Dem*$_S$ can also be represented by the pronoun *es*.

phonetically unrealized correlates is a different story though. We have already seen at several points in this project that structural conditions are sometimes outmatched by surface conditions (cf. Section 6.3 or In-Depth Analysis 7.1.4.3).

Ad (iv): The last point to discuss is the strength of integration of the dependent clause into the matrix clause. As we have characterized both structural (*daut*-deletion) and superficial V2 (V2-VPR-variant) as signs of disintegration, a higher share of the VR-variant in dependent clauses co-occurring with the correlate *daut* (and thus a lower share of V2-dependent clauses) indicates a higher degree of integration. This is consistent with PITTNER's (1999: 206–207) previously mentioned claim. In general, however, this assumption is not met with a lot of approval. FABRICIUS-HANSEN (1992: 471), for example, does not see an integrating, but a disintegrating effect of correlates on dependent clauses. The reason she gives is that the correlate occupies a position in the matrix clause, which the dependent clause cannot occupy anymore. ZIFONUN et al. (1997: 2251) are of the same opinion. Without any doubt, such an intervening element may be said to have a disintegrating effect with regard to the connection between the matrix clause and the dependent clause. As in the case of relative clauses, the dependent clause is further away from the central element of the matrix clause, the main verb. Nevertheless, this clause may be said to be strongly integrated by the surface link to the phonetically realized correlate *daut* in the matrix clause. Structurally the dependent clause is, therefore, more deeply embedded. Although it is not governed directly by the verb, it is governed by a phrase which itself is governed by the verb. HAIDER (1995: 262) describes the relationship between a referential correlate and the relevant dependent clause in the following way:

> 'P-dependent' refers to the dependency relation between a pronominal element and the extraposed clause […]. It is a case of indirect licensing, because the pronominal is the directly licensed element and the clause is dependent on the pronominal."

From a different point of view, DIESSEL (2012: 46) shows that syntactic pointing, i.e. the creation of hitherto unexpressed links, enables the emergence of discontinuous constituents.

> The anaphoric use of deictic expressions is of fundamental significance for the development of grammar; it provides a linguistic device that allows the speaker to establish links between non-adjacent elements in the unfolding stream of speech, weakening the tight constraints that the linear dimension of language imposes on syntactic structure.

For the constellation of MLG, this reasoning can be translated in the following way. The discontinuity between the main verb of the matrix clause and the extraposed dependent clause is less parsing-unfriendly if the dependent clause is "linked" to a correlate in the matrix clause, a correlate which is frequently adjacent to the main verb.

7.2.3 Monofactorial analyses of correlates in MLG

7.2.3.1 General screening of the tokens

Tokens (7-14a-d) in Section 7.2.1 represented the four possible combinations of a correlate and a complementizer for stimulus sentence <3>. We will give another set of these combinations for stimulus sentence <7>:

stimulus <7> English: **Peter is convinced that he has understood the book**

(7-20) a. *OK Peter weit nev daut hei det Bük verstonen haf* (USA-80; f/28/E>MLG-79%)
~~OK~~ Peter knows sure that-COMPLEMENTIZER he the book understood has

b. *Peter der weit daut ganz nev daut hei [0.5] [äh] haft daut Bük verstonen könnt* (USA-85; f/33/E>MLG-79%)
Peter ~~he~~ knows ~~that~~-CORRELATE very sure that-COMPLEMENTIZER he […] [eh] has the book understand ~~could~~

c. *Peter weit [0.4] gleuft her weit nev he:r haft daut Bük verstonen* (USA-27; f/42/E>MLG-79%)
Peter ~~knows~~ […] ~~believes~~ ~~he~~ knows sure Ø he has the book understood

d. *Peter weit daut nev hei kann daut Bük verstonen* (USA-64; f/41/E>MLG-57%)
Peter knows ~~that~~-CORRELATE sure Ø he can the book understand

With regard to the presence or absence of correlate and complementizer, the tokens appear in the same sequence as in (7-14a-d). The matrix clause of all four tokens features *weiten* ('know') as the finite verb. Many other translations, however, feature, for example, *sicher sene* ('be sure'). In (7-20c), the informant wavers between *(nev) weiten* and *gleuwen* ('know (for sure)' and 'believe'). In these infrequent cases, we always registered the matrix verb directly preceding the dependent clause although we cannot entirely exclude an additional influence of the other verbs. The translation in (7-20b) shows *Peter* in the pre-prefield. These relatively frequent cases of prolepsis will not be distinguished in the following analyses since they do not exert an influence on the presence or absence of a correlate (cf. Section 8.2.2 for an analysis of prolepsis in MLG).

Table 7-21 analyzes – just like Table 7-1 – tokens with one to four verbal element(s) in the complement clause. It exhibits the regional distribution of the four combinations (smaller fonts) represented by (7-14a-d) and (7-20a-d). Aside from this, it presents the share of the presence or absence of a correlate in the matrix clause regardless of the presence or absence of a complementizer (bigger fonts; bold print). There are fewer cases in this table than in Table 7-1 because some tokens had to be excluded for the present analysis. Sentence <1> *It is not good that he is buying the car* will be excluded for the same reasons for which it was excluded in Table 7-11. Furthermore, tokens with the complex matrix construction *daop stone bliewe* ('insist') will be excluded, because the correlate *daop* is obligatory and more complex than *daut*.

Table 7-21: Presence of *daut* as correlate in the matrix clause and *daut* as complementizer in the dependent clause separated by origin

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (tokens)	557	808	66	467	319	304	2521
+daut (correlate)	**173 31.1%**	**147 18.2%**	**16 24.2%**	**81 17.3%**	**42 13.2%**	**17 5.6%**	**476 18.9%**
+daut (complementizer)	153 27.5%	141 17.5%	16 24.2%	81 17.3%	42 13.2%	17 5.6%	450 17.9%
-daut (complementizer)	20 3.6%	6 0.7%	0 0%	0 0%	0 0%	0 0%	26 1%
χ^2 (5, n=2521) = 98; p=0*** / Cramer's V: 0.2 / 0 cells with less than 5 expected tokens χ^2 (15, n=2521) = 243.7; p=0*** / Cramer's V: 0.18 / 4 cells (16.7%) with less than 5 expected tokens							
-daut (correlate)	**384 68.9%**	**661 81.8%**	**50 75.8%**	**386 82.7%**	**277 86.8%**	**287 94.4%**	**2045 81.1%**
+daut (complementizer)	308 55.3%	499 61.8%	47 71.2%	337 72.2%	261 81.8%	280 92.1%	1732 68.7%
-daut (complementizer)	76 13.6%	162 20%	3 4.5%	49 10.5%	16 5%	7 2.3%	313 12.4%

We will initially analyze the presence of correlates without taking the presence of complementizers into account. The distribution differs somewhat from that of *daut*-deletion. In Table 7-1, Mexico led the field with 19.8% of the tokens without complementizers, while Fernheim (Paraguay) only produced 2% of such tokens. With regard to *daut* as a correlate, it is the US-American colony that shows the highest concentration (31.1%). The colonies in Bolivia (24.2%), Mexico (18.2%), and Brazil (17.3%) follow with some distance. The two Paraguayan colonies exhibit the lowest share of the phenomenon in question. Again, it seems that a good competence in SG as found in the Paraguayan colonies does not allow for a large share of the marked variant. In Table 7-1, this applies to the suppression of the complementizer; this time, it applies to the presence of a correlate.

Looking at the four possible combinations in Table 7-21, the differences between the colonies become even more marked. There is a strong tendency in the North American colonies to mark a high degree of syntactic integration with phonetically realized elements and the lack of such an integration with the lack of such elements. In the United States, 41.1% of all tokens show *daut* either twice or never. This share is 37.5% in Mexico, but only 7.9% in Fernheim, the colony with the highest competence level in SG (the other colonies have shares between 28.8% and 18.2%). This difference is another indication for the functional use of the variation in the North American varieties (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3). The most marked combination (+correlate, -complementizer) only occurs in North America. It seems that the North American informants express intermediate levels of integration either by using only a correlate or only a complementizer. In total, 23 of the 26 tokens of the most marked combination are found in (non-)negated questions, precisely the two modes, which indicated an intermediate level of integration (cf. Tables 7-3 and 7-11). These 23 tokens represent a share of 3.8% (23 out of 598 tokens) as compared to only 0.4% (3 out of 767 tokens) in (non-)negated declarative clauses, the two extreme poles with regard to integration (χ^2 (1, n=1365) = 21.5; p=0*** / Phi: 0.13 / 0 cells with less than 5 expected tokens).[260]

Table 7-22 presents age, language competence and the general syntactic behavior of the informants producing the tokens of Table 7-21 (cf. Table 7-2 for the results as for *daut*-deletion). For the raising and the scrambling index, the comment above Table 7-2 is still valid. Since we are not interested in the verb cluster actually appearing in an analyzed dependent clause when we discuss the raising and scrambling values, it is no problem that a small share of the introduced conditional clauses analyzed in Table 7-22 were used for index formation. This is true for all analyses in Section 7.2 which include the raising and the scrambling index. Table 7-22 again presents the values for correlates alone and for the four combinations of correlates and complementizers.

Table 7-22: Characteristics of the informants producing matrix clauses with or without correlates and dependent clauses with or without complementizers (scrambl.=scrambling; compl.=complementizer)

		competence in MLG	competence in majority language	competence in SG	raising index	scrambl. index	age
n (tokens)		2184	2184	2184	2455	2354	2521
total average		12.6	8.7	8.2	+0.08	+0.001	33.1
+daut (correlate)		**12.6**	**9.1**	**7.2**	**+0.169**	**+0.013**	**35.6**
	+daut (compl.)	12.6	9.1	7.3	+0.159	+0.015	35.4
	-daut (compl.)	12.8	9.6	4.8	+0.356	-0.016	39.8
		ns	F (1,2182) = 6.7, p=0.01*	F (1,2182) = 40.8, p=0***	F (1,2453) = 41.5, p=0***	ns	F (1,2519) = 19.1, p=0***
-daut (correlate)		**12.6**	**8.6**	**8.4**	**+0.059**	**-0.002**	**32.5**
	+daut (compl.)	12.6	8.5	8.7	+0.031	-0.001	32.5
	-daut (compl.)	12.3	9.1	6.8	+0.22	-0.005	32.4

The general outlook of Table 7-22 coincides with that of Table 7-2. On average, the informants who produce *daut* as correlate are somewhat more fluent in the majority language (the ANOVA-results given refer to this comparison excluding the presence or absence of the complementizer), show much less competence in SG and have a considerably stronger preference for verb projection raising. The competence in MLG and the scrambling index do not show a significant difference. This state of affairs reflects the high concentration of correlates in the Unites States and Bolivia. One deviation from Table 7-2 exists though. The differences as for SG and the raising index are less marked. While the informants producing *daut*-deletion had a competence level of 6.7 points in SG and an average raising value of

[260] Additional support for this conclusion comes from the fact that a similar distribution is found for the other combination with *daut* just appearing once (-correlate, +complementizer; 62.2% in questions versus 56.7% in declarative clauses; χ^2 (1, n=1365) = 4.2; p=0.041* / Phi: 0.06 / 0 cells with less than 5 expected tokens). The strength of association of this cross tabulation is negligible though.

+0.224, the figures of the informants producing *daut* as correlate are 7.2 and +0.168, respectively. This may be taken as evidence for a more marked status of *daut*-deletion. One further difference is that there is no age difference in *daut*-deletion, but a highly significant one in four of the six colonies with regard to correlates (not in Bolivia and Brazil). In all these colonies, the informants producing *daut* are older, i.e. correlates do not constitute an innovation in MLG. We will come back to this question in Section 7.2.4.

If we compare the four combinations and not just the question of whether a correlate is present or not, the competence in MLG and the scrambling index still do not show any significant difference. In the other three variables, there are clear-cut differences. The default combination (-correlate, +complementizer) shows the lowest competence level in the majority languages (8.5; total average 8.7), the highest level in SG (8.7; total average 8.2), and the lowest raising value (+0.031; total average +0.08). The other extreme is the most marked variant (+correlate, -complementizer), which is produced by informants with the highest raising value (+0.356), the lowest competence level in SG (4.8), and the highest one in the majority languages (9.6; mainly English). This last point seems to suggest convergence towards English, but one must not forget two things with regard to this assumption: First, it is entirely unclear what the English target structure for such a convergence would be. Second, the concentration of these tokens in the United States skews the picture since the competence level of English in the United States is much higher than the one of Spanish in Mexico, Bolivia, and Paraguay. The nine US-American informants responsible for the thirteen tokens with the marked variant have a competence level in English of 10.3 points, i.e. 2.3 points higher than the five Mexican informants responsible for six such tokens. However, this average is lower than the global average of 11.1 points for all US-American tokens in Table 7-22. Therefore, we can conclude that although the marked variant with a correlate and no complementizer is infrequent, it is nevertheless a genuine MLG construction.

After screening the origin and the characteristics of the informants responsible for the four combinations, we will now take a closer look at the distribution with regard to the four modes of matrix clauses. In the upper part of Table 7-23, the separated results for the two marked variants as for the two guises of *daut* are provided, i.e. the occurrence of the correlate (18.9% of the tokens) and the non-occurrence of the complementizer (13.4%). In the lower part of Table 7-23, the reader will find the results for the four combinations of correlates and complementizers.

Table 7-23: The frequency of *daut* as correlate in the matrix clause and complementizer deletion in the dependent clause and their combinations in complement sentence compounds separated by the mode of the matrix clause

		-question +negated	+question +negated	+question -negated	-question -negated	Total
+daut *(correlate)*		251 33.1%	178 22.1%	25 7.8%	22 3.5%	476 18.9%
χ^2 (3, n=2521) = 230.1; p=0*** / Cramer's V: 0.3 / 0 cells with less than 5 expected tokens						
-daut (complementizer)		3 0.4%	80 10%	32 10%	224 35.2%	339 13.4%
χ^2 (3, n=2521) = 381; p=0*** / Cramer's V: 0.39 / 0 cells with less than 5 expected tokens						
n (tokens)		759	804	321	637	2521
+daut (correlate)	***+daut*** (compl.)	251 33.1%	161 20%	19 5.9%	19 3%	450 17.9%
+daut (correlate)	***-daut*** (compl.)	0 0%	17 2.1%	6 1.9%	3 0.5%	26 1%
χ^2 (9, n=2522) = 603.7; p=0*** / Cramer's V: 0.28 / 1 cell (6.3%) with less than 5 expected tokens						
-daut (correlate)	***+daut*** (compl.)	505 66.5%	563 70%	270 84.1%	394 61.9%	1732 68.7%
-daut (correlate)	***-daut*** (compl.)	3 0.4%	63 7.8%	26 8.1%	221 34.7%	313 12.4%

In spite of the fact that correlates occur rarely in the MLG data set (18.9%) and complementizers frequently (86.6%), Table 7-23 exhibits a striking interrelationship between the two phenomena. Correlates are most frequent in negated declarative matrix clauses and least frequent in non-negated declarative matrix clauses. This is exactly opposite to the distribution of *daut*-deletion. The rather frequent occurrence of *daut* as a correlate in negated interrogative matrix clauses (almost 3 times more frequent than in non-negated ones) seems to destroy this correlation because in these contexts there did not seem to be a difference with regard to *daut*-deletion (cf. Table 7-3). One must not forget however that the more controlled Tables 7-11 and 7-13 showed significantly more *daut*-deletion in non-negated interrogative matrix clauses than in negated ones, i.e. the negative relationship also holds for these contexts. Obviously, we have to reckon with skewing effects with regard to correlates, too. Due to this, the negative correlation between the presence of a correlate and the presence of a complementizer is only a preliminary result (cf. Tables 7-24 and 7-25 and the regression analyses in Section 7.2.4 for more controlled scenarios). A good illustration of the influence of the mode of the matrix clause is the slightly awkward translation in (7-21).

stimulus <10> Spanish: **Él no sabía que debería haberles dado de comer a los perros esta mañana**
English: He didn't know that he should have fed the dogs this morning

(7-21) *her sagt daut nich daut der de Hung vondaag zu Morjens Ete gewe soll*
(Men-38; m/51/MLG)

he says ~~that~~-CORRELATE not that-COMPLEMENTIZER he the dogs today at morning food Ø give shall

'He does not say that he shall feed the dogs this morning'

A total of 137 of the 138 cases of *sagen* ('say') occur in non-negated declarative matrix clauses without a correlate.[261] This type of matrix clause furthers *daut*-deletion (35.2%), but rarely combines with correlates (cf. Table 7-23). Why then does the correlate appear in (7-21)? Well, (7-21) is not only the only token in which *sagen* combines with a correlate, it is also the only token where *sagen* occurs in a negated declarative matrix clause. Therefore, we may conclude that the mode of the matrix clause plays a decisive role with regard to the appearance of the correlate *daut*.

With these results, we can summarize the syntactic tendencies in MLG in the following way: If a correlate is present in the matrix clause, the chance that the complementizer *daut* is also present is high. In total, 450 of the 476 occurrences (94.5%) of *daut* as a correlate coincide with the presence of *daut* as a complementizer. Only 26 tokens show a correlate, but no complementizer as in (7-14d) and (7-20d). One is almost tempted to assume that the correlate, which appears first, primes the complementizer. This cause-effect-view should be applied with the utmost caution though, since correlates did not have any measurable effect on *daut*-deletion (cf. the discussion before Table 7-11). Moreover, *daut*-deletion will be shown to co-vary only weakly with the presence or absence of a correlate (cf. Table 7-39). In view of this, it may be necessary to recur to a third factor, a factor which furthers simultaneously, but independently, the presence of correlates and complementizers. This third factor could be the degree of integration of the complement clause (for syntactic, semantic, or pragmatic reasons). A strong linkage between matrix and complement clause would then further *daut* in both guises, while a weak one would lead to the absence of both elements.

There is more evidence for this conclusion. Concentrating on the two extreme combinations in the lower part of Table 7-23, we obtain the following picture. The ratio between tokens with *daut* in both guises and tokens with neither diminishes from the most integrated constellation on the left-hand side to the least integrated constellation on the right-hand side. It starts with 83.7 (negated declarative matrix clause; 251:3), diminishes to 2.6 (negated interrogative matrix clause; 161:63) and 0.73 (non-negated interrogative matrix clause; 19:26), and finally drops to 0.09 (non-negated declarative matrix clause; 19:221). We thus have a perfect correlation. The higher the integrating power of the matrix clause, the more tokens feature *daut* twice and the fewer tokens do not feature *daut* at all. One may indeed conclude that it takes a high degree of integration to suppress the deletion of *daut* as a complementizer and to allow the emergence of *daut* as a correlate. Thus, the idea of regarding the double appearance of *daut* as a case of syntactic doubling gains credibility.

7.2.3.2 The impact of mode and verb of the matrix clause on correlates

Tables 7-24 and 7-25 will put the results found so far on a more reliable base by controlling the context of the tokens. Table 7-24 shows the distribution of translations with *weiten*

[261] Most of these tokens come from sentence <9> *Elisabeth insists that you must have seen the truck* (cf. Table 7-10), which was frequently translated with the matrix verb *sagen* ('say').

('know'); a verb, which appears in all modes and shows some variation with regard to both correlates and complementizers.

Table 7-24: Co-occurrence of *daut* as correlate in the matrix clause and *daut* as complementizer in the dependent clause separated by the mode of the matrix clause (matrix verb *weiten*; 'know')

		-question +negated	**+question +negated**	**+question -negated**	**-question -negated**	**Total**
correlate	**complementizer**					
n (tokens)		552	257	38	71	918
+daut	***+daut***	217 39.3%	64 24.9%	7 18.4%	12 16.9%	300 32.7%
+daut	***-daut***	0 0%	4 1.6%	0 0%	3 4.2%	7 0.8%
χ^2 (9, n=918) = 66.7; p=0*** / Cramer's V: 0.16 / 7 cells (43.8%) with less than 5 expected tokens						
-daut	***+daut***	332 60.1%	184 71.6%	28 73.7%	51 71.8%	595 64.8%
-daut	***-daut***	3 0.5%	5 1.9%	3 7.9%	5 7%	16 1.7%

The results in Table 7-24 have to be interpreted with some caution since the strength of association is not very expressive (Cramer's V 0.16) and since almost half of the cells show less than five expected tokens. Within these limitations, Table 7-24 confirms the hypothesis that the complementizer must be present and the correlate will frequently surface if clause linkage is strong. For negated declarative matrix clauses, the ratio of *daut* in both functions to complete absence of *daut* is 72.3 (217:3); for non-negated declarative matrix clauses, it is 2.4 (12:5). Perfectly fitting is the intermediate ratio for negated questions (12.8; 64:5). Only non-negated questions surprise us a little bit by not showing any difference to non-negated declarative clauses. Their ratio is 2.3 (7:3). The problem here may be that this is the mode with the lowest number of tokens.

In order to disperse any pending doubts let us present another context. In Table 7-25, the tokens of sentences <3> *Don't you see that I am turning on the light?* and <4> *Can't you see that I am wearing a new dress?* are analyzed once again. The difference to Table 7-8 is that we will now distinguish all four combinations and not just sentences with or without *daut*-deletion. In sentences <3> and <4>, we can distinguish two different modes and the presence or absence of a modal verb. Again, the results show a low strength of association (Cramer's V 0.2) and one third of the cells show less than five expected tokens.

Table 7-25: Co-occurrence of *daut* as correlate in the matrix clause and *daut* as complementizer in the dependent clause in sentences <3> and <4> separated by the mode of the matrix clause and by the type of the matrix verb (*sehen* or *sehen*$_{Modal}$) →

mode and finite verb of matrix clause		**-modal**		**+modal**	
		+negated +question	**-negated** +question	**+negated** +question	**-negated** +question
correlate	**complementizer**				
n (tokens)		223	7	320	46
+daut	***+daut***	33 14.8%	2 28.6%	64 20%	9 19.6%

mode and finite verb of matrix clause		**-modal**		**+modal**	
		+negated +question	**-negated** +question	**+negated** +question	**-negated** +question
correlate	**complementizer**				
+daut	***-daut***	1 0.4%	0 0%	12 3.8%	6 13%
χ^2 (9, n=596) = 70.2; p=0*** / Cramer's V: 0.2 / 5 cells (31.3%) with less than 5 expected tokens					
-daut	***+daut***	182 81.6%	5 71.4%	193 60.3%	17 37%
-daut	***-daut***	7 3.1%	0 0%	51 15.9%	14 30.4%

For the most presupposed, i.e. the most integrated complement clause (negated question without a modal verb), the ratio of the tokens with *daut* in both functions to the tokens without a single *daut* is 4.7 (33:7). For the next mode (non-negated question without a modal verb), the ratio is at least 2 (2:0), but this does not mean much in view of the low number of tokens. The other two contexts show a higher number of tokens. The ratio is 1.3 (64:51) for negated questions with a modal verb, and 0.6 (9:14) for the least presupposed, i.e. the least integrated complement clause after non-negated questions with a modal verb. The continuously falling values of the ratio fit our hypothesis that both the presence of *daut* as correlate and the presence of *daut* as complementizer signal high levels of syntactic integration.

Aside from the mode, Table 7-25 dealt with a possible influence of an additional modal verb in the matrix clause. We will give one more example for such a mixed influence going back to the analysis of sentences <2> and <5> (cf. Section 7.1.3.3 and tokens (7-22a-d) in the following section). Table 7-26 presents the distribution of the three extant combinations of correlates and complementizers in these sentences (no token with a correlate and without a complementizer occur):

Table 7-26: Co-occurrence of *daut* as correlate in the matrix clause and *daut* as complementizer in the dependent clause in sentences <2> and <5> separated by two modes and by two verbs of the matrix clause (complem.=complementizer)

mode of matrix clause		**+negated** -question		**-negated** -question	
verb of matrix clause		***sentence <5>*** *weiten* ('know')	***sentence <2>*** *gleuwen* ('believe')	***sentence <5>*** *weiten* ('know')	***sentence <2>*** *gleuwen* ('believe')
correlate	**complem.**				
n (tokens)		250	202	28	75
+daut	***+daut***	70 28%	32 15.8%	3 10.7%	0 0%
χ^2 (6, n=555) = 367.5; p=0*** / Cramer's V: 0.58 / 1 cell (8.3%) with less than 5 expected tokens					
-daut	***+daut***	179 71.6%	170 84.2%	23 82.1%	22 29.3%
-daut	***-daut***	1 0.4%	0 0%	2 7.1%	53 70.7%

The most interesting line for the interpretation of this highly significant distribution (Cramer's V 0.58) is the line representing the simultaneous occurrence of correlate and complementizer. Its share drops steadily from left to right, from 28% to 0%. This means that correlates are more frequent after negated declarative matrix clauses and after *weiten* ('know'). Aside from this, one sees that the influence of negation is stronger than that of the matrix verb. This drop is the near perfect mirror image of the variation of complementizer deletion (cf. the last line). Where the correlate *daut* is frequent (negated declarative matrix clause with *weiten*), the complementizer *daut* is hardly deletable and vice versa (non-negated declarative matrix clause with *gleuwen* ('believe')). The ratios between tokens with two occurrences of *daut* and tokens with a complete absence of these elements correlate once more with the strength of syntactic integration. They drop from 70 (70:1; +negation; *weiten*) to >32 (32:0; +negation; *gleuwen*) and 1.5 (3:2; -negation; *weiten*) and finally to <0.018 (0:53; -negation; *gleuwen*).

7.2.3.3 Sentences <1> and <5>: The impact of correlates on verb clusters

As we have already discussed the influence of the mode and the verb of the matrix clause on complementizers and correlates, the last two monofactorial analyses in Section 7.2 are concerned with the question of whether correlates, the third element of matrix clauses, influence the complement clause by furthering the appearance of certain verb clusters. We have again chosen stimulus sentence <5> because it shows variation with regard to the presence of correlates and with regard to clusters with two verbal elements. Aside from this, the frequent infiltration of the negation particle *nich* ('not') in the complement clause (cf. In-Depth Analysis 7.1.3.3) provides an additional serialization pattern, namely tokens of the non-V2-VPR-variant as in (7-22d). Examples (7-22a-d) show four Brazilian translations, all of them featuring a negated declarative matrix clause:

stimulus <5> Portuguese: **O Enrique não sabe que ele pode sair do país**
English: Henry doesn't know that he can leave the country

(7-22) a. *Heinrich weit [0.5] nich: daut hei nich üt dem Reich: [äh] [0.7] [äh] gone darf*
(Bra-31; f/59/MLG)
Henry knows […] not that he ~~not~~ out the empire [eh] […] [eh] go-VERB2 may-VERB1

b. *Hein weit daut nich daut hei [0.3] vom Land kann rüter [0.4] fohre*
(Bra-53; m/33/P>MLG-64%)
Hein knows ~~that~~-CORRELATE not that he […] from-the country can-VERB1 out […] drive-VERB2

c. *Enrique weit daut nich daut hei kann üt dem Land gone* (Bra-36; f/31/P>MLG-Ø)
Henry knows ~~that~~-CORRELATE not that he can-VERB1 out the country go-VERB2

d. *Enrique weit nich daut her- [1.1] daut her nich kann üt dem: [0.4] Land rütfahre*
(Bra-62; f/31/MLG)
Henry knows not ~~that he~~ […] that he ~~not~~ can-VERB1 out the […] country out-drive-VERB2

Each example shows one particular cluster variant. Two tokens feature a correlate as in (7-22b+c), two present infiltrations of *nich* in the complement clause as in (7-22a+d). In order to avoid too much skewing, Table 7-27 only analyzes tokens with a negated declarative matrix clause with *weiten* ('know'). The consequence of this is that there is not a single case of *daut*-deletion, a fact which frees us from the obligation to present figures for all four combinations hitherto analyzed. All ObjNPs/PPs of the complement clauses are definite. This restriction is important because we must be able to distinguish between the two VPR-variants and the VR-variant. The only characteristic we did not control for is the question of whether the complement is an ObjNP (mostly in the USA) or an ObjPP (mostly in Mexico and the South American colonies).[262]

Table 7-27: Correlates in sentence <5> with two verbal elements in the dependent clause separated by the verb cluster and by the presence of *nich* ('not') in the dependent clause (only negated declarative matrix clauses with *weiten* ('know'), only finite modal verbs in dependent clauses)

	NR-variants	**VR-variant**	**non-V2-VPR-variant**	**V2-VPR-variant**	**Total**
without *nich* in the dependent clause					
n (tokens)	58	19		41	118
-daut	52	7		27	86
	89.7%	36.8%		65.9%	72.9%
χ^2 (2, n=118) = 21.8; p=0*** / Cramer's V: 0.43 / 0 cells with less than 5 expected tokens					
+daut	6	12		14	32
	10.3%	63.2%		34.1%	27.1%
with *nich* in the dependent clause					
n	18	6	20		44
-daut	11	4	11		26
	61.1%	66.7%	55%		59.1%
ns					
+daut	7	2	9		18
	38.9%	33.3%	45%		40.9%

Table 7-27 is divided into two parts. In the upper part, the results for the tokens without infiltration of *nich* into the complement clause are listed; in the lower part, the reader finds the distribution for the tokens with such an infiltration. Due to the presence or absence of *nich* in the complement clause, we can either compare the VR-variant as in (7-22b) with the V2-VPR-variant as in (7-22c) or with the non-V2-VPR-variant as in (7-22d).[263] We, therefore, cannot yet compare the two VPR-variants directly (but cf. the results of Tables 7-30 and 7-31). With regard to the lower part of Table 7-27 (tokens with infiltration of *nich*), there is no significant difference detectable, i.e. neither the VR-variant nor the non-V2-VPR-variant co-occur significantly more frequently with a correlate than the NR-variants. Importantly, both these variants do not feature the finite verb in second position. If we assume that the decisive

[262] This regional difference is due to the necessarily different stimulus versions in English on the one hand and Spanish/Portuguese on the other hand. One must not forget that MLG ObjPPs scramble less easily than ObjNPs and, therefore, show a stronger tendency for the VPR-variants (cf. Tables 4-8 and 5-35). Separate analyses with regard to the shape of the complement do nevertheless not show any conspicuous difference in the results of Table 7-27.

[263] The reason for this is that the position of *nich* is high in the structural tree, i.e. *nich* hardly ever raises together with the verb phrase (cf., however, one counterexample presented twice in (3-35) and (4-31)). Therefore, the presence of *nich* in the case of the VPR-variant forcefully leads to the non-V2-VPR-variant.

characteristic of more disintegrated complement clauses is V2, the lack of a significant difference between the two non-V2-variants is expected.

The picture changes when we look at the upper part of Table 7-27. This part shows a highly significant difference and a notable strength of association (Cramer's V 0.43). As informants with a high competence in SG prefer both the NR-variants (cf. Table 4-18 for the high concentration of German I- and II-type informants in Paraguay) and matrix clauses without correlates (cf. Table 7-22), it does not come as a surprise that only six instead of expected 15.7 tokens (10.3%) with these cluster variants co-occur with *daut* in the matrix clause. In any case, it is the comparison of the two raised variants that is decisive since only raised variants can cause the finite verb to appear in second position. The difference between observed and expected tokens is rather small for the V2-VPR-variant (14 instead of 11.1 expected tokens), but substantially bigger in the case of the VR-variant (12 instead of 5.2 expected tokens). These two variants share the verbal sequence *verb1-verb2*. The difference between them is the position of the ObjNP/PP. A scrambled ObjNP/PP leads to the VR-variant, an unscrambled ObjNP/PP to the V2-VPR-variant (comparing only these 2 variants, the distribution is still significant: χ^2 (1, n=60) = 4.5; p=0.035* / Phi: -0.27 / 0 cells with less than 5 expected tokens).

The conclusion we would like to draw at this point is that dependent clauses are more integrated into their matrix clauses if a correlate is present. Or to put it in a more neutral way, non-V2 complement clauses and correlates are two possibly related signs for a high degree of integration. In Chapter 6, we have argued along similar lines when we claimed that dependent clauses with a higher share of the V2-VPR-variant are more disintegrated from their matrix clauses than dependent clauses with a lower share of this variant. Extraposed dependent clauses were shown to be more disintegrated than non-extraposed ones, adverbial clauses more disintegrated than complement clauses. Now, we see that within complement clauses, an additional factor exists. Complement clauses after a matrix clause with a correlate are more integrated than those after a matrix clause without a correlate. Interestingly, if correlates are absent, both the V2-VPR-variant (27 tokens (65.9%) vs. 14 tokens (34.1%) with a correlate; cf. the upper part of Table 7-27) and structural V2-complement clauses (313 (12.4%) vs. 26 tokens (1%) with a correlate; cf. the lower part of Table 7-23) are more frequent. This can again be taken as evidence for the assumption that Mennonite informants pay more attention to the surface shape of dependent clauses than to their derivational history (cf. In-Depth Analysis 7.1.4.3).

In order to give further support for the co-occurrence of correlates and non-V2-cluster variants, a glance at the hitherto excluded sentence <1> *It is not good that he is buying the car* turns out to be helpful. This sentence was considered problematic, since many informants did not translate its dependent clause as a clause introduced by *daut* but as one introduced by *wann* ('if'; cf. Section 5.1.3.1). Besides this, the lack of variation with regard to complementizer deletion and the fact that the correlate relates to a subject clause and not to an object clause made sentence <1> unattractive for the goals of Sections 7.1 and 7.2. Sentence <1> may, nevertheless, provide independent evidence for the assumption that correlates are a sign of a stronger integration of dependent clauses, possibly turning them into attribute clauses. As almost all translations of sentence <1> feature a correlate, we expect many tokens of the VR-variant and few tokens of the V2-VPR-variant. Again, this analysis is only possible because some informants deviated from the intended shape of the stimulus sentence producing two instead of one verbal element. Examples (7-23a-d) show four relevant translations:

stimulus <1> English: **It is not good that he is buying the car**

(7-23) a. *daut's nich fein daut hei die Coa [äh] köpen dät* (USA-84; f/50/MLG)
it-CORRELATE (i)s not fine that he the car [eh] buy-VERB2 ~~does~~-VERB1

b. *daut's nich gut daut her haf de Coa gefungen* (USA-83; m/55/MLG)
it-CORRELATE (i)s not good that he ~~has~~-VERB1 the car found-VERB2
'It is not good that he has found the car'

c. *daut is nich fein daut der die Coa dät köpen* (USA-8; f/14/ E>MLG-Ø)
it-CORRELATE is not fine that he the car ~~does~~-VERB1 buy-VERB2

d. *daut's nich fein daut dei [ähm] die Coa will köpen* (USA-7; f/16/E>MLG-Ø)
it-CORRELATE (i)s not fine that he [ehm] the car ~~wants~~-VERB1 buy-VERB2
'It is not good that he wants to buy the car'

All tokens show *daut* as the subject correlate. Translations (7-23a+c) show *do*-support, once with a NR-variant, once with the VR-variant. The example in (7-23b) features the auxiliary *han* ('have') in a V2-VPR-cluster. Finally, (7-23d) contains a finite modal verb and shows the VR-variant like (7-23c). There are thirty tokens with the correlate *daut* and two tokens with the SG-influenced *daus* featuring two verbal elements in the complement clause.[264] The distribution with regard to the cluster variants is presented in Table 7-28. The columns show the results for different finite verbs.

Table 7-28: Three types of verb clusters in translations of sentence <1> with two verbal elements separated by the finite verb of the dependent clause (only definite ObjNPs)

	woare 'will'	***dune*** 'do'	***han*** 'have'	**modal verb**	**Total**
n (tokens)	7	21	1	3	32
NR-variants	2	19	0	0	21
ObjNP-V2-V1	28.6%	90.5%	0%	0%	65.6%
V2-VPR-variant	1	0	1	0	2
V1-ObjNP-V2	14.3%	0%	100%	0%	6.3%
VR-variant	4	2	0	3	9
ObjNP-V1-V2	57.1%	9.5%	0%	100%	28.1%

[264] Two tokens with SG *es* were excluded (cf. Footnote 254 and 255 in this chapter). Both feature NR-variants.

As surmised, there are nine tokens with the VR-variant (28.1%) and only two with the V2-VPR-variant (6.3%). This signals a high degree of syntactic integration, especially in complement sentence compounds, which normally favor the V2-VPR-variant over the VR-variant (cf. Section 6.2). In spite of this, the reader may allege that the share of tokens with the VR-variant following a correlate in the matrix clause were higher in sentence <5>, namely 63.2% and 33.3%, respectively (cf. Table 7-27). This difference can be easily explained since 21 of the 32 tokens in Table 7-28 feature the raising-unfriendly finite verb *dune* (‘do’; cf. Section 5.1.3), while the tokens of sentence <5> always contain a raising-friendly modal verb. The three tokens with modal verbs in sentence <1> all feature the VR-variant, manifesting an even higher share than in sentence <5>, namely 100%. Although there are only two raised tokens with *dune* in Table 7-28, it is noteworthy that both of them surface as VR-variants. Comparing this distribution with the tokens of sentence <3> *Don’t you see that I am turning on the light?* is interesting. Table 7-29 gives the pertinent information:

Table 7-29: Three types of verb clusters in complement clauses of sentences <1> and <3> with two verbal elements (finite verb *dune*) separated by the presence of a correlate and by its functional type (only definite ObjNPs)

	sentence <1> ***+daut*** (subject correlate)	**sentence <3>** ***+daut*** (object correlate)	**sentence <3>** ***-daut*** (object correlate)
n (tokens)	21	20	65
NR-variants	19	11	48
ObjNP-V2-V1	90.5%	55%	73.8%
χ^2 (4, n=106) = 9.5; p=0.049* / Cramer’s V: 0.21 / 4 cells (44.4%) with less than 5 expected tokens			
V2-VPR-variant	0	5	13
V1-ObjNP-V2	0%	25%	20%
V2-VPR/VR-ratio	<0.5	1.25	3.25
VR-variant	2	4	4
ObjNP-V1-V2	9.5%	20%	6.2%

In the complement clause of sentence <3>, *dune* appears eight times with the VR-variant and eighteen times with the V2-VPR-variant. The ratio between the V2-VPR-variant and the VR-variant in tokens without a correlate is 3.25 (13:4), a typical result for complement clauses. This changes when a correlate is present. Tokens with an object correlate show a lower ratio of 1.25 (5:4). In tokens with a subject correlate, i.e. in sentence <1>, this ratio drops even further. It is smaller than 0.5 (0:2).[265] These results are independent evidence for the co-variance of correlates and the shape of the clauses depending on them. Dependent clauses co-occurring with a correlate in the matrix clause do not behave like prototypical complement clauses regardless of whether the correlate functions as a subject or as an object. They seem to converge on the typical behavior of attribute clauses showing more tokens of the VR-variant than of the V2-VPR-variant.

[265] In spite of these coinciding results, we will not integrate the tokens of sentence <1> in the regression analyses in Section 7.2.4. The reason for this is the subject nature of the correlates and the lack of variation with regard to this correlate.

With this, we have a second piece of evidence – the first one being HAIDER's (2010: 75) discussion of the possibility of extraction – for the assumption that the presence of a correlate does in fact have visible syntactic consequences. Moreover as mentioned in Section 7.2.2.2, we are able to answer the research question formulated by AXEL-TOBER (2012: 54). If we equate SG *das* with MLG *daut*, BREINDL's (1989: 156) comparison of stressed, non-reducible prepositional correlates with the SG correlate *das* seems to be justified. Both the MLG correlate *daut* and the SG prepositional correlates create an attributive relationship to the dependent clauses they relate to. Obviously, our results still have to pass the test of multifactorial analyses in Section 7.2.4, but we will nevertheless already summarize the findings encountered so far:

Summarizing Box 7-1: The relationship of correlates and the dependent clauses they relate to

> The relationship between the MLG referential correlate *daut* and the dependent clause it relates to is comparable to that between MLG head nouns and relative clauses. Whether we really want to label such dependent clauses as attribute or even as relative clauses is a different question though. After all, conditional clauses show an even stronger tendency towards the VR-variant. A less daring formulation would be to say that the presence of the correlate *daut* signals or causes a higher degree of integration of the dependent clause into the matrix clause.

7.2.4 Binary logistic regression analyses of correlates in MLG

7.2.4.1 Analysis of tokens with two verbal elements in introduced complement clauses

Section 7.2.4 differs from Section 7.1.4 in one important aspect. In Section 7.1.4, the analysis of all tokens was subsequently split up according to the continental divide of the Americas (cf. Tables 7-13 and 7-17). We will not follow this procedure with regard to correlates since such a clear separation between the North and South American colonies does not exist (cf. Table 7-21). Instead, we will carry out a separate analysis of tokens featuring dependent clauses with two verbal elements.[266] This course of action is necessary in order to discuss the possible relation between *daut* as a correlate and the type of verb cluster in the dependent clause. After all, correlates create a cataphoric connection between the matrix clause and the dependent clause since they – contrary to complementizers[267] – form part of the matrix clause. Due to the integration of verb clusters in the following model, we will not be able to use the informants' raising and scrambling values anymore, because these variables are dependent on the informants' preference for certain verb clusters. In a second step, these indexes will enter the analysis of all complement sentence compounds regardless of the number of verbal

[266] Tokens containing dependent clauses with one or with more than two verbal elements have to be excluded in this analysis; the first ones because they show too little variation in the verb position (cf. Section 5.5), the latter because they exhibit too few tokens for most of the variants (cf. Sections 5.3 and 5.4).
[267] Granted, the complementizer in some languages governs the morphological shape of the finite verb (e.g., indicative or subjunctive mood in Latin and Romance languages), i.e. a morphological interaction between different elements of the complement clause exists. Such a connection does not exist for verb clusters, at least not as long as we are only analyzing one type of complementizer (cf. Excursus 7.2.2.1 for different types of introducing elements).

elements (cf. Table 7-39). All 724 tokens analyzed in Table 7-30 feature definite ObjNPs/PPs in the dependent clause. The following metrical and categorical variables are used:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Mode of the matrix clause (4 variants; contrasting variant *negated question*): negated question; non-negated question; negated declarative; non-negated declarative

Verb of the matrix clause (6 variants; contrasting variant *weiten*): *weiten* (‘know’); *gleuwen* (‘believe’; in sentence <2> also *meinen*); *sehen* (‘see’); *sehen$_{Modal}$* (‘can see’); *sagen* (‘say’); *sicher sene* (‘be sure’)

Verb cluster in the complement clause (4 variants; contrasting variant *NR-variants*): NR-variants; VR-variant; non-V2-VPR-variant; V2-VPR-variant

Metrical variables

Age

Competence in MLG

Competence in the majority language (English, Spanish, or Portuguese)

Competence in SG

In order to not diminish the number of tokens further, variants of some variables with few tokens were accepted. The matrix verb *sagen* (‘say’) only appears in thirteen tokens, the non-V2-VPR-variant in 23 tokens. The place of residence is not used, because – as in Section 7.1.4 – a strong relationship between the informants’ origin and their language skills exists. With regard to the four metrical variables, only one pair reaches an r-value of 0.4 or higher. There is a negative correlation of -0.4*** between the competence in MLG and the competence in SG. As this implies a co-variance of just 16%, this correlation was not corrected for. The type of finite verb in the dependent clause does not enter the model since it interacts too strongly with the verb cluster type (cf. Table 6-1). If included, this variable is not selected.

Aside from this, there are 85 tokens with definite ObjPPs. In spite of their scrambling-unfriendly behavior (cf. Tables 4-8 and 5-35), which in general should not be disregarded since we include verb clusters as independent variable, these tokens were not excluded. The reason for this is that sentence <5>, where 81 of these 85 tokens originate, provides 41 of the 92 tokens with correlates and twenty of the 23 tokens with the non-V2-VPR-variant. Including the prepositional marking of the dependent complement as variable does not change anything with regard to the other selected variables, neither here, nor in the analysis of Table 7-31. The only difference is that the new variable would be selected as last predictor variable in both models, slightly hampering the appearance of correlates. Due to the fact that the ObjPPs do not occur in English-based interviews (cf. Footnote 262 in this chapter), this selection must be qualified as artificial since the US-American colony exhibits the highest share of correlates. Table 7-30 presents the results of the regression analysis:

Table 7-30: Binary logistic regression analysis (method: stepwise forward conditioned) for the absence or presence of correlates in matrix clauses of complement sentence compounds with two verbal elements in the dependent clause

verb of matrix clause	**mode of matrix clause**	**verb cluster**
Wald: 21.1**	Wald: 16.1**	Wald: 15.3**
sehen$_{\text{Modal}}$ (6.6*)	+negated -question (5.4*)	non-V2-VPR-variant (4.2**) VR-variant (3.4**)
weiten sehen gleuwen sagen	**+negated** **+question** -negated +question -negated -question	**NR-variants** V2-VPR-variant
sicher sene (0.04**)		

The “explained variance” is 40.9% (Nagelkerkes R-square: 0.409; Cox & Snell R-square: 0.218). The model selects three variables. Among them are the mode and the verb of the matrix clause just like in Section 7.1.4. Unlike in that section, however, there are fewer variants within these variables showing a divergent behavior. With regard to mode, only a negated declarative matrix clause significantly increases the chance for a correlate by a factor of 5.4. As in the case of the disallowance of *daut*-deletion in Table 7-11, we relate this effect to the strong integration of dependent clauses after this mode. The fact that non-negated declarative and non-negated interrogative matrix clauses, which both increased the probability of *daut*-deletion, do not lead to fewer correlates than negated interrogative matrix clauses challenges the apparent negative correlation found in Table 7-23. The constellation here rather supports the assumption that the strength of integration is connected to both guises of *daut* independently.

With regard to the matrix verb, there is no difference between *weiten* (‘know’), *sehen* (‘see’), *gleuwen* (‘believe’), and *sagen* (‘say’). This, too, differs from *daut*-deletion, where these verbs showed a markedly diverging behavior. We explained this difference with differing degrees of certainty regarding the truth value of the proposition of the complement clause (connected to the speaker’s and the subject’s shared knowledge, belief, etc.). Uncertainty was said to increase the speaker’s necessity to assert or foreground the proposition of the complement clause leading to more cases of *daut*-deletion. Contrary to this, different degrees of uncertainty do not seem to suppress or further the appearance of correlates. This again undermines the assumption of a direct relationship between the presence of *daut* as a complement and as a correlate.

There are two exceptions to the otherwise homogeneous behavior of verbs. The probability of the predicative construction *sicher sene* (‘be sure’) co-occurring with the correlate *daut* is 25 times lower (1:0.04) than in the case of *weiten* (‘know’). Again, this difference has nothing to do with the degree of certainty, since the two verbs can be regarded as similar with regard to this dimension (*sicher sene* and *weiten* behave identically with regard to *daut*-deletion; cf.

Tables 7-11, 7-13, and 7-17). The difference with regard to correlates seems to be caused by structural restrictions in the case of *sicher sene*. In SG, the adequate correlate for *sicher sein* belongs to the paradigm of demonstrative pronouns (there is no genitive form for *es*; 'it'; cf. STERNEFELD 2008: 347) and appears in the genitive case (*Ich bin (mir)* ***dessen*** *sicher, daß […]*; gloss: I am (myself) that.GENITIVE sure, that […]). Although the genitive case is a rare case for complements in SG and although genitive correlates are generally rare, too (cf. ZIFONUN et al. 1997: 1481 and AXEL-TOBER 2012: 55), this rarity cannot explain the almost complete lack of correlates in MLG *sicher sene*. After all, MLG does not even possess a productive genitive case. If Mennonites insert a correlate in *sicher sene* (4 tokens), they use the default-correlate *daut* or its reduced form *det* as in (7-24):

stimulus <8> Portuguese: **Tem certeza que ele consertou a cadeira?**
English: Are you sure that he has repaired the chair?

(7-24) *bis dü det sicher daut hei dem Stuhl torechtgemoakt haft* (Bra-64; m/23/MLG+P)
are you ~~that~~-CORRELATE sure that he the.DAT chair ready-made has

Due to the fact that morphological markedness cannot be the reason for the scarcity of correlates in the case of MLG *sicher sene*, one has to assume that correlates in this predicative construction are marked in a different way. This markedness may be connected to the fact that both the predicative *sicher* and the correlate *daut* are nominal entities. In the case of SG, this leads to a special correlative element that appears in a marked oblique case; in the case of MLG, it simply leads to the suppression of the correlate since MLG adjectives may not be ideal case assigners anymore due to the general reduction of oblique cases in this variety.

The other matrix verb presenting a deviant behavior is *sehen*$_{Modal}$ ('can see'). This time, we are faced with a verb furthering the absence of *daut* as complementizer and the presence of *daut* as a correlate simultaneously (leading to 18 of the 26 tokens with the marked constellation +*correlate, -complementizer*; cf. Table 7-23). One should, however, not over-evaluate this result since there is again an uncontrolled skewing effect. Twenty of the 35 tokens with *sehen*$_{Modal}$ come from correlate-friendly US-American informants, while there is not a single US-American token with bare *sehen* ('see') (cf. Footnote 237 in this chapter).[268] Because of this effect, we need not speculate about possible reasons for the appearance of correlates in this case.

In addition to the mode and the verb of the matrix clause, only one more variable is selected, the type of verb cluster.[269] The discriminating power of this factor is comparable to that of the mode and the verb. The probability for the non-V2-VPR-variant and the VR-variant to co-occur with the correlate *daut* is 4.2 times and 3.4 times bigger than in the case of the NR-variants. The V2-VPR-variant does not exhibit a different behavior from the contrast

[268] This skewing effect is isolated. Taking out the US-American tokens, the difference between *sehen*$_{Modal}$ and *weiten* does indeed disappear. However, the one between *sicher sene* und *weiten* remains unchanged.
[269] This means that the monofactorial differences found for age and for the competences in the majority languages and in SG were the result of uncontrolled factors (cf. Table 7-22), at least with regard to the data analyzed here. One must add though that the competence in SG was very close to being selected (p=0.055$^{(*)}$) and will – like age – be selected in the regression analyses below (cf. Tables 7-31 and 7-39).

variant. We do not need to discuss the behavior of the NR-variants in detail since these variants are not the result of verb projection raising; they always serialize as *(adverb-)ObjNP-(adverb-)V2-V1* thus never allowing non-verbal material between the verbal elements. Because of this, the NR-variants cannot turn V2 in principle. All Mennonite speakers using raised variants, however, generate clauses that are more or less similar to structural V2-clauses. The common feature of these variants is that the finite verb linearizes before the non-finite verb. Due to the fact that non-verbal elements can interrupt the verbal sequence in this case, raising-friendly Mennonites may either generate superficial V2-clauses by leaving the ObjNP/PP and a possibly extant adverb within the verb phrase (V2-VPR-variant) or they may generate non-V2-clauses by either scrambling the ObjNP/PP out of its verbal phrase (VR-variant) or by generating an adverb or a negation particle outside the raising domain (non-V2-VPR-variant). If we again consider V2 as a sign for syntactic disintegration of the dependent clause, the preference for the non-V2-VPR-variant and the VR-variant and the lack of such a preference for the V2-VPR-variant in sentence compounds with a correlate is an indication for a rather strong integration.

7.2.4.2 Analysis of all tokens with two verbal elements in complement clauses

In order to add more empirical support to the assumption put forward in In-Depth Analysis 7.1.4.3, 94 tokens without complementizer will be added to the tokens analyzed in Table 7-30. These additional tokens follow the same criteria, i.e. they contain two verbal elements in the dependent clause and definite ObjNPs/PPs. In order to correctly evaluate the question of cognitive similarity of structural and superficial V2, we do not add the variable *daut-deletion* as a new independent variable, but code the unintroduced tokens as an additional type of "verb cluster". Table 7-31 offers the results for the 818 relevant tokens:

Table 7-31: Binary logistic regression analysis (method: stepwise forward conditioned) for the absence or presence of correlates in matrix clauses of complement sentence compounds with two verbal elements in the dependent clause (enlarged by tokens with complementizer deletion)

verb of matrix clause	**mode of matrix clause**	**verb cluster**	**competence in SG**	**age**
Wald: 24.2***	Wald: 17.4**	Wald: 11.9*	Wald: 6*	Wald: 6*
$\text{sehen}_{\text{Modal}}$ (6.5*)	+negated -question (6.7*)			
		non-V2-VPR-variant (3.2*) VR-variant (2.9**)		**age** (1.02*)
weiten sehen gleuwen sagen	**+negated** **+question** -negated +question -negated -question	**NR-variants** V2-VPR-variant *daut*-deletion		
			SG (0.9*)	
sicher sene (0.04**)				

The “explained variance” in Table 7-31 is 42.2% (Nagelkerkes R-square: 0.422; Cox & Snell R-square: 0.22); five of the eight independent variables are selected. In addition to the variables selected in Table 7-30, the competence in SG and age contribute significantly to the model. Their effect coincides with the results of the monofactorial analyses (cf. Table 7-22). With regard to SG, an informant with a competence level of six points increases the probability of the correlate *daut* by 1.52 ($(1:0.9)^4$) in comparison to an informant with ten points. With regard to age, older informants use the correlate more frequently than younger ones. A difference of ten years increases the probability of a correlate by 1.22 (1.02^{10}). One may see in this result an innovative tendency towards loosening the clause linkage between matrix and dependent clause, especially because we will encounter corresponding behavior with regard to the resumptive element *dann* (‘then’) in conditional sentence compounds in Section 7.3. Granted if this loosening were a general tendency, we would also expect more *daut*-deletion among younger informants and this is not the case. There is, however, one further indication that loosening of clause linkage may indeed be an innovation among younger speakers of MLG. The informants producing the 134 tokens with the V2-VPR-variant in Tables 7-30 and 7-31 have an average age of 31.3 years; i.e. they are significantly younger than the informants producing the other 684 tokens (on average 35.1 years old; $F(1,816) = 8.4$, $p=0.004$**).

As the effect of the mode and the verb of the matrix clause is stable, the most important result of Table 7-31 is the influence of the different verb constellations. There is indeed no difference between the behavior of the V2-VPR-variant and the tokens with *daut*-deletion, i.e. the speakers’ behavior with regard to correlates really seems to depend on the superficial position of the finite verb and not on the different derivational histories of these variants. The behavior of the other cluster variants does not change. The probability for the co-occurrence of the non-V2-VPR-variant and the VR-variant on the one hand and a correlate on the other hand is still 3.2 and 2.9 times bigger than in the case of the NR-variants.

What does this similar behavior mean for the role of scrambling in MLG? The informants’ scrambling behavior has been used to separate different types of speakers (cf. Section 4.3). As this separation turned out to be a powerful predictor with regard to several syntactic phenomena, scrambling has to be considered an important mechanism in the syntax of MLG. However, it seems that the normal scrambling behavior of informants can be overridden, for example, in order to mark the strength of clause linkage. If scrambling could not be overridden, we would have expected that the two unscrambled VPR-variants showed comparable behavior. This is not the case though. The unscrambled non-V2-VPR-variant sides with the scrambled VR-variant, not with the unscrambled V2-VPR-variant. This means that the informants sometimes regard the position of the finite verb as more important than their preference for scrambling. Scrambling-friendly Dutch-type informants faced with a disintegrated dependent clause, for example, may abstain from scrambling, because marking a weak clause linkage by means of the V2-VPR-variant may be more important than following their individual syntactic preferences.[270] With this, we can qualify the status of scrambling in MLG more precisely:

Summarizing Box 7-2: The nature of scrambling in MLG (part I)

Although it is possible to identify generally scrambling-friendly and generally scrambling-unfriendly informants, scrambling does not seem to be as basic a syntactic mechanism as verb projection raising. This means that in the right syntactic context scrambling-unfriendly informants may scramble and scrambling-friendly informants may refrain from scrambling. They may do this in order to create particular verb clusters or rather specific superficial word orders which express the strength of clause linkage, i.e. the degree of syntactic integration of the dependent clause in the matrix clause.

Scrambling, however, is but one means of distinguishing different degrees of syntactic integration, the other two being the presence or absence of correlates and complementizers. Our hypothesis is that at least some Mennonite informants use complex combinations of these three phenomena to indicate different types of linkage between two clauses. If correct, one could compare this kind of combinatorial marking with LEISS' (2000) intriguing assumption that many grammatical regularities, for example definiteness in Russian or Old High German, are marked combinatorically. We will have to show, however, that Mennonites really use the different phenomena mentioned functionally. A necessary, but insufficient condition for this is the existence of a variation pool large enough to enable speakers to follow different paths. Since raising-friendly speakers do not only show more variation with regard to verb clusters, but also with regard to the use of correlates and complementizers, this condition is fulfilled.[271]

Comparing SG and the MLG of raising-friendly informants, one can say: (i) A speaker of SG can insert correlates in fewer contexts than a raising-friendly speaker of MLG. (ii) A speaker of SG can delete the complementizer in fewer contexts than a raising-friendly speaker of MLG. (iii) A speaker of SG cannot produce the same array of verb clusters than a raising-friendly speaker of MLG. In spite of these differences, the assumption that raising-friendly MLG informants use their greater variation pool to indicate different degrees of clause linkage is, at this point, nothing more than a plausible hypothesis based on isolated analyses of complementizers, correlates, and verb clusters. As one of the principles of our research

[270] In any case, scrambling is not seen as a fundamental syntactic mechanism by many linguists. HAIDER (2010: 142) does mention semantic consequences related to scrambling such as binding effects (his property (iv)) and scope ambiguities (his property (v)). Such cases, however, do not occur in the MLG data set. Aside from this, HAIDER (2010: 136) states: "Syntax provides several options, pragmatics singles out one of them." CHOMSKY and LASNIK (1977: 433) seem to support this point of view: "We will see below that there is good reason to have the filters that determine surface structure well-formedness apply after deletion. Phonological rules then assign a representation in UP [universal phonetics; G.K.]. Stylistic rules (scrambling, etc.), [sic!] may then apply. We have nothing to say about these, though we assume that they may refer to phonetic properties. One might just as well say that sentence grammar, or at least core grammar, abstracts away from these phenomena."

[271] The 488 tokens of Table 7-30 with unraised cluster variants co-occur with correlates in 8.6% of the cases. The 236 tokens with raised variants do so in 21.2%. With regard to colonies this means that the Paraguayan informants use the NR-variants in 91.5% of 224 tokens (the other informants only in 56.6%) and they use correlates in only 7.6% of their tokens (the other informants in 15%). We can thus conclude that the variation pool of non-Paraguayan, predominantly raising-friendly informants is bigger for both phenomena. The affinity of raising-friendly informants for complementizer deletion has already been shown in Tables 7-1 and 7-2.

project is to offer solid empirical foundations for far-reaching theoretical assumptions, we will analyze these phenomena conjointly in In-Depth-Analysis 7.2.4.2 (cf. also Section 8.2.3).

In-Depth Analysis 7.2.4.2: Indicating the strength of clause linkage by linguistic means

For the following analyses, we can only use complement sentence compounds featuring two verbal elements in the dependent clause, i.e. the tokens of Table 7-31. The restriction to two verbal elements is necessary since right-branching verbal structures hardly exist in complement clauses with one verbal element (cf. Section 5.5) and are almost obligatory in complement clauses with three or four verbal elements (cf. Sections 5.3 and 5.4). In both cases, the informants cannot freely “decide” which type of verb cluster to use, i.e. their language production is governed by overriding principles of grammatical well-formedness (1 verbal element) and of ease of production and perception (3 and 4 verbal elements). With this restriction, the three phenomena to be analyzed conjointly have two levels (correlate, complementizer) and four levels (verb cluster), respectively.

For the reader’s convenience, Table 7-32 shows once again that the variation pool of raising-friendly informants is indeed bigger than the one of raising-unfriendly informants. The cutoff point for this division has been chosen somewhat differently in order to obtain a more balanced distribution. For the four CLUSTERS, the cutoff point for raising lies in between +0.123 and +0.14 (cf. Table 4-16), now it is zero. In order to avoid skewing, the results for verb clusters in Table 7-32 is restricted to tokens with a complementizer and without a correlate. The reason for expelling tokens without a complementizer is obvious; correlates were not accepted since they have shown to co-vary with the verb cluster type (cf. Table 7-30 and 7-31 and Section 7.2.3.3). The presence of complement clauses with ObjPPs is not problematic in this table since they are evenly distributed between raising-unfriendly and raising-friendly informants.

Table 7-32: Distribution of correlates, complementizers, and verb clusters separated by the informants’ raising behavior (only sentence compounds with dependent clauses with two verbal elements; var.=variant(s))

	correlate		**complementizer**		**verb cluster** (+complementizer; -correlate)			
	+daut	***-daut***	***+daut***	***-daut***	**NR-var.**	**VR-var.**	**VPR-variant**	
							non-V2	V2
weight	0	1	0	2	0	0.5	1	2
n (tokens)	942		942		723			
raising ≤ 0	40	385	405	20	334	12	4	15
	9.4%	90.6%	95.3%	4.7%	91.5%	3.3%	1.1%	4.1%
	χ^2 (1, n=942) = 10; p=0.002** / Phi: 0.1 / 0 cells with less than 5 expected tokens		χ^2 = 29.3 (1, n=942); p=0*** / Phi: -0.18 / 0 cells with less than 5 expected tokens		χ^2 (3, n=723) = 202.7; p=0*** / Cramer’s V: 0.53 / 0 cells with less than 5 expected tokens			
raising > 0	85	432	436	81	150	60	13	135
	16.4%	83.6%	84.3%	15.7%	41.9%	16.8%	3.6%	37.7%

For all three phenomena, the raising-friendly informants exhibit a (slightly) more balanced distribution, i.e. they use the minority option(s) more frequently (+correlate, -complementizer, -NR-variants). In spite of the fact that all distributions show significant differences, the association strength for complementizers and especially for correlates is weak and the difference in the case of verb clusters is obviously artificial since tokens of three of the four variants were used for the basic grouping of the informants into raising-friendly and raising-unfriendly ones (cf. Sections 4.2).[272] A better indication for the actual lack of variance in the case of the raising-unfriendly informants is the fact that 334 of their 425 tokens (78.6%) belong to one specific combination of the three phenomena (-correlate, +complementizer, +NR-variants). This combination in only responsible for 29% of the 517 tokens of the raising-friendly informants (cf. Table 7-34).

At this point, the question may arise of how the different weights for (dis)integration in Table 7-32 were allotted (cf. line *weight*). Table 7-33 deals with this question. Basically, the answer is that the weights correlate with the competence in SG of the informants who produce the variants. This procedure is justified since a low competence in SG has been shown to exert a strong influence on the variation of all three phenomena.

Table 7-33: Competence in SG of informants producing different variants as for correlates, complementizers, and verb clusters (only sentence compounds with complement clauses with two verbal elements)

correlate		**complementizer**		**verb cluster** (+complementizers; -correlate)	
818 tokens		818 tokens		632 tokens	
-daut (n=719)	8.2	-daut (n=94)	6	NR-variants (n=446)	9.1
F (1,816) = 15.5, p=0***		F (1,816) = 39.2, p=0***			
+daut (n=99)	6.8	+daut (n=724)	8.2	VR-variant (n=61)	6.7
				F (3,628) = 23.9, p=0***	
				non-V2-VPR-variant (n=12)	7.6
				V2-VPR-variant (n=113)	6.8

The differences in the competence in SG are highly significant for all three phenomena. There are nevertheless considerable dissimilarities. The interval as for correlates is 1.4 points (8.2-6.8), for complementizers it is 2.2 points (8.2-6), and for verb clusters it ranges between 1.5 (9.1-7.6) and 2.4 points (9.1-6.7). Due to these different intervals, the absence of an integrating complementizer counts two points (bigger interval), while the absence of an integrating correlate only counts one point (smaller interval). Phonetically realized correlates and complementizers count 0 points, i.e. higher values signal a higher degree of disintegration. With regard to verb clusters, not only the absolute competence levels in SG, but also the respective linearization facts were taken into account. The V2-VPR-variant

[272] Nevertheless, one must not forget that only 371 of the 706 tokens with complementizers, no correlates, and without the non-V2-VPR-variant are actually used for the formation of the raising index. This means that 47.5% of the tokens have not been used. For the 371 tokens, raising-unfriendly informants produce the NR-variants in 94.8% of the cases and raising-friendly informants in 38.9%. The shares for the unused and uncontrolled 335 tokens are 90% and 48.5%, respectively. These comparable shares are another piece of evidence for the validity of the raising index.

counts two points since the competence in SG is very low and especially since the position of the finite verb is superficially identical with that of a structural V2-clause. The non-V2-VPR-variant will count one point (main clause-like sequence *V1-ObjNP-V2* without V1 surfacing in second position) although the competence in SG is somewhat higher than in the other two raised variants (7.6 instead of 6.7 and 6.8, respectively). As the VR-variant only coincides in the sequence of the verbal elements with a main clause, but not in the position of the ObjNP, it will only count 0.5 points. The NR-variants count 0 points.

As we regard the presence or absence of certain MLG elements and structures as phonetically realized signs for the strength of clause linkage, we can distinguish ten different combinations of correlates, complementizers, and verbal sequences. Table 7-34 shows these sentence models, their overall value for disintegration, and the share of tokens exhibiting the combinations for all informants and separately for raising-unfriendly and raising-friendly informants. Again, the ninety tokens with ObjPPs are evenly distributed between these groups and thus should not skew the results.

Table 7-34: Ten possible combinations of correlates, complementizers, and verb cluster types (only sentence compounds with complement clauses with two verbal elements)

Example	**correlate** (0/1)	**comple mentizer** (0/2)	**Verb cluster** (0/0.5/1/2)	**(dis)inte gration**	**Total**	**raising ≤ 0**	**raising > 0**
n (tokens)					965	425	517
(7-25)	+daut	+daut	NR-variants	0	5.6%	7.1%	4.6%
(7-27)	+daut	+daut	VR-variant	0.5	2.3%	0.9%	3.5%
(7-26)	-daut	+daut	NR-variants	1	50.9%	78.6%	29%
(7-29)	+daut	+daut	non-V2-VPR-variant	1	1.2%	0.5%	1.7%
(7-28)	-daut	+daut	VR-variant	1.5	7.7%	2.8%	11.6%
(7-30)	-daut	+daut	non-V2-VPR-variant	2	1.8%	0.9%	2.5%
(7-31)	+daut	+daut	V2-VPR-variant	2	3.3%	0.9%	5.2%
(7-32)	-daut	+daut	V2-VPR-variant	3	15.9%	3.5%	26.1%
(7-33)	+daut	-daut	structural V2	4	0.9%	0%	1.4%
(7-34)	-daut	-daut	structural V2	5	10.5%	4.7%	14.3%

One crucial structural interdependency between the ten sentence models in Table 7-34 is that the four verb cluster types can only occur in introduced complement clauses (+complementizer), while structural V2-clauses are restricted to unintroduced complement clauses (-complementizer). In spite of this, it is justified to allot four and five points to the sentence models with complementizer deletion (and not just 2 or 3 points as in the case of the V2-VPR-variant), because both the lack of a complementizer and the position of the finite verb are signs of syntactic disintegration. Complement clauses with the V2-VPR-variant only coincide in one of these signs.[273] Two of the most integrated sentence models are represented

[273] This differentiated marking of disintegration is comparable to indirect speech in German, in which different features can also be combined. Marking is especially strong when there is a combination of several features: (i) An introducing matrix clause like ***Peter hat gesagt*** *[…]* (‘Peter said […]’); (ii) an introduced complement clause (*Peter hat gesagt,* ***daß*** *[…]*; ‘Peter said that […]’); and (iii) the marking of the finite verb of the dependent clause by means of the subjunctive (*Konjunktiv I* or *Konjunktiv II*) (*Peter hat gesagt, daß er später* ***komme/käme***;

by tokens (7-25), already presented as (1-4), and (7-26). Their disintegration values are 0 and 1 point, respectively:

stimulus <3> English: **Don't you see that I am turning on the light?**

(7-25) [0 pts.] *kos dü daut nich sehen daut ik det Lich answitchen du* (USA-86; f/18/E>MLG-64%)
~~can~~ you ~~that~~-CORRELATE not see that-COPLEMENTIZER I the light on-switch-VERB2 ~~do~~-VERB1

stimulus <2> English: **John doesn't think that you know your friends well**

(7-26) [1 pt.] *John gleuft nich daut ik mine Friend sehr gut kennen du* (USA-14; f/49/MLG)
John believes not that-COMPLEMENTIZER I my friends ~~very~~ well know-VERB2 ~~do~~-VERB1

Token (7-25) is distinguished from (7-26) by the presence of the correlate *daut*. The immense concentration among the raising-unfriendly Mennonites on sentence model (7-26) (78.6%; -correlate, +complementizer, NR-variants) is exhibited in the second to last column in Table 7-34. The next most frequent model for these informants is (7-25), the model showing the highest level of integration (7.1%; +correlate, +complementizer, NR-variants). The shares for raising-friendly Mennonites are 29% and 4.6%, respectively. Importantly, these are the only sentence models which are more frequent among raising-unfriendly informants. The other eight models show higher shares for raising-friendly Mennonites indicating their much more balanced distribution. Raising-friendly informants use four sentence models in more than 10% of the tokens (just 1 model among raising-unfriendly informants in this category) and none with a share lower than 1% (5 in the case of raising-unfriendly informants).

One of the four frequently used models among raising-friendly informants is (7-28), a model with the VR-variant (11.6% vs. 2.8% among raising-unfriendly informants; -correlate, +complementizer, VR-variant). Model (7-27), its pendants with a correlate, occurs in 3.5% of the cases of raising-friendly informants (0.9% among raising-unfriendly informants):

stimulus <5> English: **Henry doesn't know that he can leave the country**

(7-27) [0.5 pts.] *Henrik wei- [0.3] weit daut nich daut her de:- [0.8] de country kann verloten* (USA-42; f/47/MLG+E)
Henry ~~kno~~ […] knows ~~that~~-CORRELATE not that-COMPLEMENTIZER he ~~the~~ […] the country can-VERB1 leave-VERB2

stimulus <8> English: **Are you sure that he has repaired the chair?**

(7-28) [1.5 pts.] *weits dü nev daut der den Stuhl haft fertiggemeakt* (USA-70; f/30/E>MLG-86%)
know you sure that-COMPLEMENTIZER he the chair has-VERB1 ready-made-VERB2

'Peter said that he would come later'). Especially in spoken versions of German, indirect speech can be marked by just two or even just one of these factors, i.e. it is completely normal to hear sentences like ***Peter hat gesagt*, *daß* *er später kommt*** (no subjunctive mood) or ***Peter hat gesagt*, *er kommt später*** (only an introducing matrix clause; cf. ZIFONUN et al. 1997: 1764–1771). In this respect, German marking of indirect speech and MLG marking of the strength of clause linkage is different from the multiple marking of plurals in German (*das schöne Haus – d**ie** schöne**n** **Häuser***; 'the nice house – the nice houses'). Multiple marking of German plurals is not iconic, i.e. it does not intensify the concept of plurality in comparison to the single marking of English (*the nice house**s***).

Even more disintegration can be found in the models with the non-V2-VPR-variant in (7-29) and (7-30). The raising-friendly informants use these models in 1.7% and 2.5% of the cases, while these shares drop to 0.5% and 0.9%, respectively, for raising-unfriendly informants. The distinguishing factor is again the presence or absence of a correlate:

stimulus <5> English: **Henry doesn’t know that he can leave the country**

(7-29) [1 pt.] *Henry weit daut nich daut hei nich kann üt de- üt de Country rütfahren* (USA-69; m/29/E>MLG-71%)

Henry knows ~~that~~-CORRELATE not that-COMPLEMENTIZER he ~~not~~ can-VERB1 ~~out the~~ out the country out-drive-VERB2

stimulus <10> English: **He didn’t know that he should have fed the dogs this morning**

(7-30) [2 pts.] *der hat nich gewißt daut der nich soll die Hund fodere* (USA-47; m/19/MLG+E)

he has not known that-COMPLEMENTIZER he Ø ~~not~~ should-VERB1 the dogs feed-VERB2

‘He didn’t know that he should not feed the dogs’

The separation of (7-29) and (7-30) with the non-V2-VPR-variant from the next two models with the V2-VPR-variant (cf. (7-31) and (7-32)) is somewhat problematic. We have mentioned the rather fixed position of the negation particle *nich* (’not’) in Footnote 263 (this chapter). *Nich*, which is responsible for 28 of the 29 tokens of (7-29) and (7-30), hardly ever raises together with the verb phrase (cf., however, the counterexample (4-31)). The V2-VPR-variant would thus be a strongly marked option in these cases. Due to this, (7-29) and (7-30) can hardly turn into (7-31) and (7-32). We nevertheless separate them from models featuring the V2-VPR-variant. After all, the presence of *nich* is the only fixed parameter. The informants using (7-29) and (7-30) could have produced the NR-variants or the VR-variant, at least some of them might have dropped the complementizer, and some of them produced correlates. The raising-friendly informants produce the sentence models (7-31) and (7-32) with the V2-VPR-variant in 5.2% and 26.1% of the tokens (0.9% and 3.5%, respectively, for raising-unfriendly informants). This makes sentence model (7-31) the second most frequent model for raising-friendly informants after sentence model (7-26).

stimulus <10> English: **He didn’t know that he should have fed the dogs this morning**

(7-31) [2 pts.] *hei wisst daut nich daut der soll de Hung foderen* (USA-17; f/14/E>MLG-Ø)

he knew that-CORRELATE not that-COMPLEMENTIZER he Ø should-VERB1 the dogs feed-VERB2

‘He didn’t know that he should feed the dogs’

stimulus <8> English: **Are you sure that he has repaired the chair?**

(7-32) [3 pts.] *weitst dü nev daut der haft den Stuhl fertiggemeakt* (USA-27; f/24/E>MLG-79%)

know you sure that-COMPLEMENTIZER he has-VERB1 the chair ready-made-VERB2

The most disintegrated sentence models are (7-33) and (7-34). For the maximally disintegrated model (7-34), which has already been presented as (1-5), the respective shares for raising-friendly and raising-unfriendly informants are 14.3% and 4.7%, respectively. Model (7-33) with a correlate occurs only among raising-friendly informants (0.9%). The fact that this is the rarest model of all can now be explained. *Daut* as a correlate is an indicator of a strongly integrated dependent clause. As the lack of a complementizer leads to a structural V2-clause, there are two indicators for a strongly disintegrated dependent clause at the same time. The listener of token (7-33) thus receives contradictory information.

stimulus <3> English: **Don't you see that I am turning on the light?**

(7-33) [4 pts.] *kos dü daut nich sehen ik du det Licht answitchen* (USA-31; m/29/E>MLG-Ø)
~~can~~ you ~~that~~-CORRELATE not see Ø I ~~do~~-VERB1 the light on-switch-VERB2

stimulus <7> English: **Peter is convinced that he has understood the book**

(7-34) [5 pts.] *Peter gleuft hei: haft daut Bük verstonden* (USA-39; m/46/MLG)
Peter <u>believes</u> Ø he has-VERB1 the book understood-VERB2

Having introduced all ten sentence models, we will now compare eight homogenous contexts of modes and verbs in the matrix clause. Controlling these variables, we will be able to show that raising-friendly informants do indeed use the three phenomena to mark the level of disintegration of the dependent clause. At this point, it is important to keep in mind that the interdependency of these phenomena (cf. Tables 7-30, 7-31, and 7-39) is no problem, since these phenomena are supposed to co-vary at least partly due to the fact that they all indicate the strength of clause linkage. Table 7-35 shows the values for the eight contexts for all informants and separated for raising-friendly and raising-unfriendly informants. As 81 of the 85 tokens with ObjPPs are concentrated in one context with a total of 210 tokens (+negated/-question as matrix mode; *weiten* as matrix verb), the comparison between the different groups is not problematic. Only the absolute value of (dis)integration in this context is bound to be a little bit too high in comparison to the other contexts. The other four tokens with ObjPPs can be found in the context of non-negated and declarative matrix clauses with *weiten*. As this context with 37 tokens will in any event be marked as somewhat problematic (two different finite verbs in the complement clause), we simply have to exercise even more caution during its interpretation.

Table 7-35: Strength of (dis)integration of eight linguistic contexts

mode	**+neg. -quest.**	**+neg. -quest.**	**-neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**	**+neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**
verb	***gleuwen***	***weiten***	***sicher sene***	***sicher sene***	***weiten***	***sehen$_{Mod}$***	***sagen***	***gleuwen***
finite verb	*dune*	modal	*han*	*han*	*han* modal	*dune*	*han*	*han*
n (tokens)	44	210	214	181	37	60	26	51
all tokens	0.86	1.39	1.57	1.7	2.22	2.29	2.88	3.43
raising ≤ 0 (n)	0.85 (13)	0.94 (98)	1.1 (108)	1.16 (95)	1.22 (9)	1.13 (8)	1.8 (10)	2.64 (28)
	ns	p=0***	p=0***	p= p=0***	p=0.012*	p=0.065(*)	p=0.006**	p=0.001**
raising > 0 (n)	0.86 (29)	1.79 (88)	2.05 (103)	2.24 (82)	2.54 (28)	2.4 (49)	3.56 (16)	4.33 (21)

As just mentioned, all but one context feature one specific finite verb in the dependent clause. In the case of non-negated declarative clauses with *weiten* ('know'), an exception was made in order to be able to offer one more context. Importantly, the distribution of tokens with *han* ('have') (24 tokens) and with modal verbs (13 tokens) in this context is not significant with regard to the raising behavior of the informants. Looking at the disintegration values of all tokens, one can see that they follow our expectations. Negated declarative matrix clauses representing the most integrating mode are to be found in the left-hand side of Table 7-35, i.e. they have the lowest disintegration values. On the right-hand side, non-negated declarative clauses are found, the most disintegrating mode. With regard to the verbs of the matrix clause, we can compare *sicher sene* ('be sure') on the one hand and *sagen* ('say') and *gleuwen* ('believe') on the other hand. All of them co-occur with non-negated declarative matrix clauses and *han* in the dependent clauses. Here, too, the integrating verbal construction *sicher sene* shows a much lower value (1.7) than the tokens with *sagen* and *gleuwen* (2.88 and 3.43, respectively).

For all informants, the span between the most integrating context (2nd column) and the most disintegrating context (last column) is 2.57 (3.43-0.86). For raising-unfriendly informants, this value drops to 1.97, while it increases to 3.47 for raising-friendly informants. This is strong empirical support for the assumption that raising-friendly informants use correlates, complementizers, and different verb cluster types to mark the degree of syntactic (dis)integration. If we take out the two most disintegrating contexts (the last two columns), this difference becomes even more marked. For all tokens, the span is 1.43 (2.29-0.86). For raising-unfriendly informants the remaining six contexts are hardly distinguishable, their maximum span is 0.37 (1.22-0.85), while it is more than four times bigger for raising-friendly informants (1.68; 2.54-0.86).

It is important to realize that raising-friendly informants are not using the three phenomena across-the-board. This can be seen in the most integrating context in the second column, which is the only context that does not show a significantly different disintegration value for raising-friendly and raising-unfriendly informants. The reader must not forget either that raising-friendly informants operate in both directions. Dropping complementizers and producing V2-VPR-variants are clear indications for a weak clause linkage (weight for disintegration of 2 points in both cases). On the other side, however, raising-friendly informants also produce many tokens with the VR-variant (disintegration weight of only 0.5 points) and they indicate a strong clause linkage by using more correlates than raising-unfriendly informants (disintegration weight of 0 points vs. 1 point for the absence of the correlate).

As telling as the data in Table 7-35 are, there are many factors which may have influenced the outcome. Besides the mode (4 types) and the verb of the matrix clause (5 types), one has to reckon with the influence of three types of finite verbs in the dependent clauses. Finite verbs have been shown to influence the verb cluster of the dependent clause (especially its raising behavior; cf. Tables 6-1 and 6-2). The other problem is that five of the eight constellations are represented by sixty tokens at most, creating problems of reliability. We will, therefore, carry out two more detailed comparisons. Besides sharpening our understanding about the marking of different degrees of syntactic (dis)integration, this will enable us to refine our understanding of scrambling in MLG

One of the comparisons deals with two constellations with more than 180 tokens each in Table 7-35. Both of them feature the matrix construction *sicher sene* ('be sure') and the dependent finite verb *han* ('han'). The only difference between them is the mode of the matrix clause. As expected, the less integrating mode, non-negated declarative matrix clauses, shows a higher disintegration factor of 1.7 in comparison to the more integrating mode, non-negated interrogative clauses, whose factor is 1.57. In spite of the fact that this difference is not significant, Tables 7-36 and 7-37 will provide important information:

Table 7-36: Distribution of correlates, complementizers, and verb cluster types separated by two different modes of the matrix clause (matrix verb construction *sicher sene*; dependent finite verb *han*, only definite ObjNPs)

mode	-negative **+question**	-negative **-question**
n (tokens)	214	181
(dis)integration	1.57	1.7
correlate	1 (0.5%)	3 (1.7%)
daut-deletion	7 (3.3%)	17 (9.4%)
NR-variants	135 (65.5%)	125 (77.6%)
χ^2 (2, n=367) = 12.6; p=0.002** / Cramer's V: 0.19 / 0 cells with less than 5 expected tokens		
raising	+0.037	-0.013
scrambling	-0.005	-0.005
VR-variant	32 (15.5%)	7 (4.3%)
V2-VPR/VR-ratio	1.2	4.1
V2-VPR-variant	39 (18.9%)	29 (18%)

In the upper part of Table 7-36, we see that correlates in these constellations are rare. This rarity is connected to the matrix verb (cf. the discussion of token 7-24) rather than to the matrix mode. In any case, a total of four tokens makes it difficult to say anything enlightening about their distribution. The story changes when we look at complementizer deletion. This phenomenon does not occur just four, but 24 times and it occurs three times more frequently in the declarative mode; a clear sign of the disintegration power of this mode. Surprisingly, however, this clear picture is counter-balanced on first sight by the lower part of Table 7-36, where the information about verb clusters appearing in the dependent clauses are presented (this part only contains tokens with a complementizer and without a correlate; the percentages are given for this reduced sample). Only the distribution of the VR-variant complies with our expectations. This variant was only allotted a weak disintegrational power of 0.5 points and it occurs less frequently after the disintegrating mode (3.9% vs. 15%). This difference is mainly responsible for the highly significant distribution. The integration-signaling NR-variants, however, occur slightly more frequently after the supposedly less integrating mode (77.6% vs. 65.5%). Likewise, the comparable shares of the V2-VPR-variant are somewhat surprising

(18% vs. 18.9%), since we would have expected this variant more frequently after declarative matrix clauses.

It is not difficult, however, to find explanations for these unexpected results. First, the slightly higher share of the NR-variants after declarative clauses may be connected to the fact that – by chance – the raising value of these informants is 0.05 points lower than that of the informants who produce interrogative matrix clauses (line *raising*). This may seem a minuscule difference, which does not even reach a statistical tendency (p=0.136), but it nevertheless represents 4.4% of the maximal distance of 1.13 points for the raising interval (cf. Table 4-16). It is thus close to the 5%, which LIND (2014: 15) regards as considerable (cf. Footnote 91 in Chapter 5). Moreover, this difference must not be underestimated in view of the fact that the informants' scrambling values are identical (line *scrambling*). Even more telling is the fact that there are four times as many tokens with the V2-VPR-variant than with the VR-variant after less integrating declarative clauses (29 vs. 7 tokens; V2-VPR/VR-ratio: 4.1), while these numbers are almost identical after the more integrating interrogative clauses (39 vs. 32 tokens; V2-VPR/VR-ratio: 1.2). The relative frequency fits our expectation perfectly since superficial V2 (V2-VPR-variant) – like structural V2 (*daut*-deletion) – are indications for syntactic disintegration.

In Table 7-35, the informants were separated according to their raising behavior. In the following Table 7-37, they are separated according to their scrambling behavior. The two columns on the left-hand side present the information for scrambling-friendly informants with an index value higher than zero, whereas the two columns on the right-hand side present the behavior of the scrambling-unfriendly informants with a value lower than or identical to zero. As above, this separation does not coincide with the four CLUSTERS of informants (cutoff zone between -0.103 and -0.108; cf. Table 4-17). The reason for the changed cutoff point is again the desire to obtain a more balanced distribution of the extant tokens.

Table 7-37: Distribution of correlates, complementizers, and verb cluster types separated by the informants' scrambling behavior and by two different modes of the matrix clause (matrix verb construction *sicher sene*; dependent finite verb *han*, only definite ObjNPs)

informants	**scrambling ≤ 0**		**scrambling > 0**	
mode	-negative **+question**	-negative **-question**	-negative **+question**	-negative **-question**
n (tokens)	83	62	117	102
(dis)integration	1.87	1.83	1.4	1.64
correlate	1 (1.2%)	2 (3.2%)	0 (0%)	1 (1%)
***daut*-deletion**	4 (4.8%)	4 (6.5%)	3 (2.6%)	11 (10.8%)
NR-variants	47 (60.3%)	36 (64.3%)	75 (65.8%)	76 (83.3%)
	ns		χ^2 (2, n=204) = 14.3; p=0.001** / Cramer's V: 0.27 / 0 cells with less than 5 expected	
raising	+0.076	+0.059	+0.042	-0.016
scrambling	-0.263	-0.275	+0.172	+0.163
VR-variant	3 (3.8%)	2 (3.6%)	29 (25.4%)	5 (5.6%)
V2-VPR/VR-ratio	9.3	9	0.34	2
V2-VPR-variant	28 (35.9%)	18 (32.1%)	10 (8.8%)	10 (11.1%)

Concentrating first on the results for scrambling-unfriendly informants on the left-hand side of Table 7-37, we see that there is not a single noteworthy difference. The disintegration value and the share of *daut*-deletion are almost identical and the distribution of the verb cluster types in the lower part does not show a significant distribution either. The explanation for this could be that the unmarked raised cluster variant for both scrambling-unfriendly informants and for complement sentence compounds is the unscrambled V2-VPR-variant. Perhaps because of this coincidence, scrambling-unfriendly informants are not sensitive to just one change in the matrix clause.

The scrambling-friendly informants, who are faced with a dependent clause which favors the emergence of an unscrambled variant, behave completely differently. The first difference is that the disintegration index shows a slightly higher value for the more disintegrating context (weak statistical tendency of $F(1,217) = 2.8$, $p=0.096^{(*)}$). This difference depends mainly on the fact that the scrambling-friendly informants produce four times more tokens with *daut*-deletion after declarative matrix clauses than after interrogative ones (10.8% vs. 2.6%). Aside from this, declarative matrix clauses combine twice as often with the V2-VPR-variant in the dependent clause than with the VR-variant, while interrogative matrix clauses show a V2-VPR/VR-ratio of 0.34. Unexpectedly, however, the scrambling-friendly informants produce the NR-variants significantly more often in the less integrated dependent clauses (83.3% vs 65.8%). The reason for this could again be the higher raising value of the informants who produce the interrogative matrix clauses. Although this difference is again not significant, its difference is even higher than in Table 7-36; it is 0.058 (line *raising*) representing 5.1% of the entire interval span thus surpassing the level LIND (2014: 15) calls considerable. The scrambling value is again virtually identical (line *scrambling*). Be this as it may, it is obvious that the difference in Table 7-36 depends exclusively on scrambling-friendly informants. They do react to the change in the linguistic constellation, whereas the scrambling-unfriendly informants are inert with regard to this change.

This difference could mean that there is a certain point of disintegration at which scrambling-friendly informants, who in general prefer integration-signaling variants (e.g., the VR-variant), have to abide by overriding linguistic necessities. In our case, the consequence of this is that some of them suppress scrambling. One may, therefore, imagine that the tables will be turned in a constellation which favors the scrambled VR-variant. In such a constellation, scrambling-unfriendly informants should start scrambling. In order to check this hypothesis, we will focus on the relative clauses in sentences <37> *I have found the book that I have given to the children* and <38> *The man who caused the accident has disappeared*, which were already analyzed in regard to the effect of adjacency in In-Depth Analysis 5.1.1. Three relevant tokens from (5-1a+b) and (5-2a) are repeated here as (7-35a+b and 7-36):

stimulus <37> English: **I have found the book that I have given to the children**

(7-35) a. *ik funk daut Bük waut ik de Kinder gegeft ha* (USA-15; f/35/MLG)
I found the book that I the children given-VERB2 have-VERB1

b. *ik hat daut Bo- Bük gefungen waut ik [0.4] de Kinder gegeft ha*
(USA-4; m/14/E>MLG-∅)
I had the ~~bo~~- book found that I […] the children given-VERB2 have-VERB1

stimulus <38> English: **The man who caused the accident has disappeared**

(7-36) *de Mann waut det accident gemeakt haf is furt* (Mex-54; f/19/MLG)
the man that the accident made-VERB2 has-VERB1 is away

Unlike in In-Depth Analysis 5.1.1 (cf. Table 5-1), scrambling-friendly and scrambling-unfriendly informants will be analyzed separately in Table 7-38:

Table 7-38: Distribution of basic cluster variants in the relative clauses of sentences <37> and <38> in all colonies separated by the informants' scrambling behavior and by the superficial adjacency between the relative clause and its head noun (only definite ObjNPs; finite verb *han*)

informants	**scrambling ≤ 0**			**scrambling > 0**		
sentence	**<38>**	**<37>**		**<38>**	**<37>**	
adjacency	**+**	**+**	**-**	**+**	**+**	**-**
n (tokens)	62	8	29	96	19	55
NR-variants	52 (83.9%)	8 (100%)	23 (79.3%)	79 (82.3%)	17 (89.5%)	50 (90.9%)
	ns			ns		
raising	+0.021	-0.174	+0.079	+0.033	+0.121	-0.018
scrambling	-0.278	-0.277	-0.289	+0.168	+0.137	+0.202
VR-variant	2 (3.2%)	0 (0%)	1 (3.4%)	14 (14.6%)	2 (10.5%)	3 (5.5%)
V2-VPR/VR-ratio	4	---	5	0.21	<0.5	0.67
V2-VPR-variant	8 (12.9%)	0 (0%)	5 (17.2%)	3 (3.1%)	0 (0%)	2 (3.6%)

As these sentences are not complement sentence compounds, we cannot quantify the general degree of disintegration any longer. What we can do is to analyze the verb clusters. Both distributions in Table 7-38 are not significant, mainly because the predominant NR-variants are quite evenly distributed over informants, sentences, and adjacency features (variation span between 79.3% and 100%). This predominance is a clear sign for the highly integrated nature of the relative clauses under consideration. For the scrambling-friendly informants on the right-hand side of the table, the disintegrated non-adjacent relative clauses show the highest V2-VPR/VR-ratio (0.67 vs. <0.5 vs. 0.21; adjacent clauses combined 0.19). In spite of this seemingly undramatic difference, one should again not underestimate this result, especially after having glanced at the line *scrambling*. The 55 informants that produce non-adjacent relative clauses in the right-hand block of Table 7-38 are not only scrambling-friendly, they are very scrambling-friendly showing the highest scrambling value in the three conditions. If we pool the two adjacent conditions, the difference shows a statistical tendency (+0.202 vs. +0.163; F (1/168) = 3.4; p=0.066$^{(*)}$). In spite of the higher scrambling value of the informants that produce non-adjacent relative clauses, they end up with two tokens of the unscrambled V2-VPR-variant out of five raised tokens (40%). The informants of the two adjacent relative clauses produce only three tokens with the V2-VPR-variant out of nineteen raised tokens (15.8%). This difference is not significant though. Nevertheless, as the scrambling-unfriendly informants (left-hand side of the table) show much more comparable results with regard to the raised variants and no difference in the scrambling values (the difference in the raising values is of no interest here), it seems that scrambling-friendly informants generally exhibit more sensitivity to changing linguistic conditions than scrambling-unfriendly informants. By further refining the applied methodology, Section 8.2.3 will strongly support this hypothesis.

Granted, none of the individual analyses in Tables 7-36 through 7-38 were beyond any doubt, but as they all point in the same direction, we must not disconsider them lightly. We could actually add more analyses with comparable results as for different modes, verbs, and correlates in the matrix clauses of complement sentence compounds. We will, however, refrain from doing so since most of these constellations contain only few tokens. Importantly, not a single analysis carried out shows more sensitivity among scrambling-unfriendly informants. Summarizing the results of this In-Depth Analysis, one can, therefore, say:

Summarizing Box 7-3: The nature of scrambling in MLG (part II)

> It seems that it is easier for scrambling-friendly informants to suppress scrambling than it is for scrambling-unfriendly informants to apply it. The reason for this could be that movement operations increase the derivational costs of a construction. Therefore, suppressing such an operation may be a non-preferred, but a more economical option. Applying a movement operation, however, may not only be the non-preferred option, but also the less economical one. The behavior of scrambling-friendly informants is thus consistent with OT-constraints like STAY or minimalist principles like PROCRASTINATE and may be taken as a further indication that the VR-variant is indeed the consequence of two movement operations, namely verb projection raising and scrambling.

7.2.4.3 Analysis of all tokens

In the last regression analysis of Section 7.2, some decisive changes are made. Tokens with one, three, and four verbal elements in the dependent clause are, for example, included. This enlarges the database considerably. Furthermore, tokens with indefinite ObjNPs/PPs can be used since the distinction between scrambled and unscrambled cluster variants is of no importance anymore. This is connected to the inclusion of the informants' general syntactic behavior expressed by their raising and scrambling values instead of the variable *verb cluster*. As this variable does not play a role anymore, the variable *daut-deletion* was added as well. This may seem highly problematic at first since we have seen in Tables 7-11, 7-13, and 7-17 that *mode of the matrix verb*, *verb of the matrix verb*, *competence in SG*, and the *raising* and the *scrambling indexes* were selected as predictors for *daut-deletion* and since all these factors will be used here as well. The tests for multicollinearity carried out did, however, not show a single problematic value for the Variance Inflation Factors (VIF). None of these values did reach the figure 1.6, let alone the critical value of 3. An alternative model without *daut-deletion* did not change any of the results of the other selected variables in Table 7-39 in any decisive way. The ten independent variables used are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Mode of the matrix clause (4 variants; contrasting variant *negated question*): negated question; non-negated question; negated declarative; non-negated declarative

Verb of the matrix clause (6 variants; contrasting variant *weiten*): *weiten* (‘know’); *gleuwen* (‘believe’; in sentence <2> also *meinen*); *sehen* (‘see’); *sehen*$_{Modal}$ (‘can see’); *sagen* (‘say’); *sicher sene* (‘be sure’)

complementizer deletion (2 variants; contrasting variant *+daut*): *+daut*; *-daut*

Metrical variables

Age

Competence in MLG

Competence in the majority language (English, Spanish, or Portuguese)

Competence in SG

Raising index

Scrambling index

The regression analysis comprises 1,998 tokens. Table 7-39 presents the results:

Table 7-39: Binary logistic regression analysis (method: stepwise forward conditioned) for the absence or presence of correlates in matrix clauses of nine complement sentence compounds (without sentence <1>; without the verbal construction *daop stone bliewe* (‘insist’))

verb of matrix clause	**age**	**mode of matrix clause**	**competence in SG**	**raising index**	**complementizer deletion**
Wald: 63.1***	Wald: 37***	Wald: 31.9***	Wald: 15.6***	Wald: 9.4**	Wald: 6.7**
	age (1.03***)	+negated -question (2.2***)			
				raising (2.2**)	
weiten sehen$_{Modal}$		**+negated +question** -negated +question			**+daut**
		-negated -question (0.54(*))			
sehen (0.48*) gleuwen (0.28***)			**SG** (0.91***)		-daut (0.45**)
sagen (0.07*) sicher sene (0.01***)					

Six of the ten variables are selected as significantly improving the model. In spite of this high number, the “explained variation” is lower than in Tables 7-30 and 7-31 (31.4%; Nagelkerkes R-square: 0.314; Cox & Snell R-square: 0.191), i.e. the discrimination power of the single variables is weaker. The behavior of the metrical variables now coincides with the monofactorial analysis (cf. Table 7-22). An age increase of ten years heightens the probability for *daut* as a correlate by 1.34 (1.03^{10}), while a higher competence in SG of four points decreases it by 1.46 ($(1{:}0.91)^4$). The raising index is selected as in the case of *daut*-deletion because like *daut*-deletion, correlates are more frequent in the raising-friendly colonies. The fact that the scrambling index is not selected (not even if we analyze the North American tokens on their own) is not only expected, but imperative since we have seen in Table 7-31 that it was the position of the finite verb, not the position of the possibly scrambled ObjNP/PP, which showed a significant co-variance with correlates.

With regard to the important question of the relationship between correlates and complementizers, Table 7-39 presents conflicting evidence. The reader may remember that there are two points at stake: First, these two phenomena may be directly interrelated, one influencing the other. The second possibility is that the degree of syntactic integration may influence both guises of *daut* independently. With regard to the first point, a possible causal relationship, it is important that *daut*-deletion is indeed selected in the model presented. This means that the chance for *daut* as a correlate decreases by a factor of 2.2 when *daut* as complementizer is dropped (1:0.45). In spite of this apparent support for a direct relationship, it is still hard to say whether this is indeed the case. There are two reasons for our caution: On the one hand, *daut*-deletion is the last variable selected, i.e. its contribution to the "explained variance" is low. On the other hand, almost all relations between matrix and complement clause (control, scope relationships, and morphological influence) feature the governing part in the matrix clause and the governed entity/structure in the complement clause. Due to this, it is hard to consider (the lack of) complementizers as a predictor for correlates. One should, therefore, rather talk of co-variation.

If clause linkage, i.e. syntactic integration, is indeed the factor influencing both correlates and complementizers as we suggested in In-Depth-Analysis 7.2.4.2, one may expect the same variables to be selected in the regression analyses of all tokens in Sections 7.1.4 and 7.2.4, and one may also expect that their overall effect and the effect of their variants are of a comparable magnitude. The first point is largely borne out, while the second point confirms the hypothesis only partly. The only predictor variable selected here, but not in Table 7-11, is age (complementizer deletion could obviously not be selected in Table 7-11). This single difference should not be underestimated though since age is selected as the second of six predictor variables in Table 7-39. Its impact is, therefore, considerable. With regard to the overall effect, the Wald-value, there is one important difference. While the verb and the mode of the matrix clause show a roughly comparable dimension of difference (ratio of 2 here (63.1 : 31.9) and of 3.2 (170.2 : 54) in Table 7-11), this is different for the raising index and the competence in SG. In Table 7-11, raising was more important than the competence in SG (ratio of 3.9; 28.7 : 7.3). In Table 7-39, the ratio is 0.6 (9.4 : 15.6), i.e. competence in SG is selected earlier and loads stronger on the model. Another indication for this difference is that a one-point-rise in raising in Table 7-11 increased the probability for *daut*-deletion by a factor of 5.2, while the effect for the probability of the correlate *daut* is only 2.2.

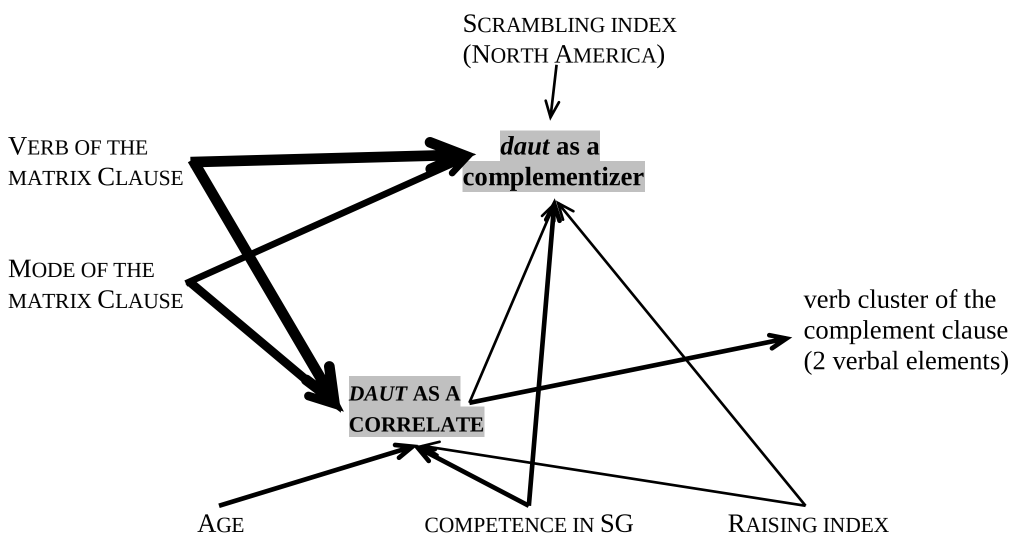
Looking at the variants of the selected categorical variables, the results are comparable for the verb of the matrix clause, the variable selected first in both tables: *Sagen* ('say'), *gleuwen* (believe'), and bare *sehen* ('see') all decrease the probability of a correlate and this coincides with their furthering effect for *daut*-deletion. With regard to *sagen* and *sehen*, even the size of this effect is comparable (*sagen*: 12.4 with regard to *daut*-deletion (cf. Table 7-11); 14.3 (1:0.07) with regard to correlates; *sehen*: 2.7 and 2.1 (1:0.48), respectively). On the other side, *sehen*$_{Modal}$, which furthered *daut*-deletion by a factor of 12.1, behaves exactly like *weiten* as far as correlates are concerned. However, we have already seen that this last result is at least partly an artificial effect related to the geographical distribution of this verb (cf. the discussion after Table 7-30). Finally, *sicher sene* ('be sure'), which decreases the chance for *daut* as a correlate by 100 in comparison to *weiten* ('know') (1:0.01), did not show any difference as in terms of complementizer deletion. However, there exists a special restriction in the case of *sicher sene* against the presence of a correlate (cf. the discussion of token 7-24). Such grammatical restrictions may impede the informants' syntactic drive thus masking the overall degree of clausal integration and making meaningful interpretations difficult.

With regard to the mode of the matrix clause, there is also a limited relationship between correlates and complementizers. Negated declarative matrix clauses do not allow *daut*-deletion and increase the chance of correlates; non-negated declarative matrix clauses behave opposite in both cases. The dimensions of influence are not comparable though. In Table 7-11, the chance for *daut*-deletion was seven times higher for a non-negated declarative matrix clause than for a negated interrogative one, while the hampering effect of this mode in Table 7-39 is only 1.9 (1:0.54) and only shows a statistical tendency. The chances for a correlate in negated declarative matrix clauses are 2.2 times higher than in negated interrogative ones, while the hampering effect with regard to complementizer deletion is fifty (1:0.02). Aside from this, Table 7-39 does not show any difference between negated and non-negated interrogative matrix clauses.

7.2.5 Final considerations about complementizers and correlates in MLG

Figure 7-4 visualizes the connections between the factors dealt with in Sections 7.1 and 7.2. Small caps represent factors, which are interpreted as causatives, the thickness of the arrows reflects the effect strength of the factor in question (as calculated by the selection frequency in the regression analyses and by the selection ranking).

Figure 7-4: Factors influencing the variation of *daut* as correlate and *daut* as complementizer



A low competence in SG and a high raising value further the marked variant of both dependent variables (appearing shaded and in bold print), i.e. the appearance of *daut* as a correlate and the dropping of *daut* as a complementizer. A low scrambling value only furthers complementizer deletion in the North American colonies. The combination of the North American informants' low scrambling value and their generally high raising value was seen as a first indication for a comparable behavior with regard to structural (*daut*-deletion) and superficial V2-complement clauses (V2-VPR-variant). The second indication for this was the fact that correlates increase the probability of raised non-V2-variants (VR-variant, non-V2-VPR-variant), but exhibit a comparable behavior with regard to the V2-VPR-variant and *daut*-deletion.

Like *daut* as a complementizer, *daut* as a correlate is influenced by five factors (among them age, the only non-linguistic variable selected in all regression analyses). In contrast to *daut* as a complementizer, however, *daut* as a correlate also influences at least one, possibly two variables. The first of these is the type of verb cluster, the second *daut* as a complementizer. By far, the most important factors for both guises of *daut* are the verb and the mode of the matrix clause. The fact that the lion's share of the influence on both correlates and complementizers goes to these two factors (indicated by particularly thick arrows) proves the decisive role of the matrix clause.[274] It is because of this role that we – in spite of some inconclusive results – cautiously interpret the co-variance of correlates, another matrix clause feature, and complementizers as causal. Correlates exert a weak, but measurable influence on complementizers. This interpretation also seems justified since *daut* as a correlate is higher up in the structural tree than the complementizer *daut* and precedes this element with regard to linearization and history (cf. Sections 7.2.1 and 7.2.2.1).

In Section 7.3, we will turn to conditional sentence compounds. As conditional clauses are not selected directly by the verb of the matrix clause, but rather by the event variable related to this verb, conditional clauses play a different role than complement clauses. In spite of this difference, there are also similarities. On the one hand, one can compare the correlate *daut* in complement sentence compounds with the resumptive element *dann* in conditional sentence compounds. SZCZEPANIAK (2011: 174) does exactly this. On the other hand, one can match the disintegration by means of *daut*-deletion with disintegrated conditional clauses occurring in the pre-prefield (conditional clauses without subordinator do not occur in the MLG data set; cf., however, the translation in (7-46)). Granted, the former clauses are V2-clauses, while the latter ones are V-final-clauses, but FABRICIUS-HANSEN (1992: 473–474) groups these two clause types together with regard to subordination. Aside from this, there are cases showing that V2-clauses and disintegrated clauses in the pre-prefield can express comparable

[274] Detailing this influence, one sees that the verb influences both guises of *daut* even more strongly than the mode. Without any exception, the verb of the matrix clause was selected as the most important independent variable in all regression analyses carried out in Sections 7.1 and 7.2.

pragmatic functions. König and van der Auwera's (1988: 110) example (21), which is given here as (7-37) with the original gloss and translation, is a case in question:

(7-37) *um es deutlich zu sagen, wir sind bankrott*
in order it clearly to say we are broke
'To put it clearly, we are broke'

König and van der Auwera (1988: 110) call the infinitival adverbial clause in (7-37) a "speech act qualifier", i.e. this clause is not a purpose clause like integrated *um zu*-clauses or *um zu*-clauses in the postfield, but qualifies the attitude in which the speaker utters the matrix clause *wir sind bankrott* ('we are broke'). The non-propositional status of the *um zu*-clause in (7-37) reminds one of "causal" speech act qualifiers like (7-38):

(7-38) hast du Hunger weil ich hab' noch 'ne Pizza im Kühlschrank
have you hunger because I have still a pizza in-the fridge
'Are you hungry? Because there is still a pizza in the fridge'

Quite like the adverbial clause in (7-37), the *weil*-V2-clause in (7-38) is not to be understood factually. The fact that there is a pizza in the fridge does not cause hunger, it rather explains the motive for asking the question *hast du Hunger?* ('Are you hungry?'). This means that this *weil*-clause, too, has to be understood on the speech act level. This shows that disintegrated verb-last-clauses and introduced V2-clauses can serve the same function. Because of this, we will associate unintroduced V2-complement clauses with disintegrated conditional clauses. We will do this despite the fact that all clausal propositions of the MLG translations have to be understood on the propositional level.

7.3 Conditional sentence compounds

7.3.1 Presentation of the phenomena

In meinem Herzen flattert leise ein blau und weißes Fähnelein

from the song *Zeig mir den Platz in der Kurve*

Sometimes, dramatic changes in meaning are caused by minor changes in intonation and word order. The following SG examples are telling proof of this (sentence foci are marked with capital letters):

(7-39) a. *wenn er AUCH Schalker ist, können wir uns treffen*
if he also Schalker is can we us meet
'If he is also a supporter of Schalke [like the likable speaker is], we can meet'

b. *wenn er auch SCHALker ist, wir können uns TREFfen*
if he PARTICLE Schalker is we can us meet
'Although he is a supporter of Schalke [and although the dislikable speaker does not seem to like this team], we can meet'

Example (7-39a) is uttered by an intelligent, friendly, good-looking person with good manners, while (7-39b) reveals the speech and spirit of an uncouth bloke. In spite of these speaker characteristics and in spite of the concommitant meaning differences, only a few features distinguish (7-39a) from (7-39b). In (7-39a), a conditional sentence compound forming one intonational phrase, the main stress is on AUCH (a connective particle) and the position of the finite verb *können* ('can'; 1st person plural) shows that the first clause is located in the prefield of the matrix clause (i.e., in Spec/CP). In (7-39b), a concessive sentence compound consisting of two intonational phrases (cf. for the concessive meaning of *wenn (...) auch* ZIFONUN et al. 1997: 2312[275]), the clausal stress of the *wenn*-clause is not on the modal particle *auch*, but on the first syllable of *SCHALker* ('supporter of Schalke 04') and the second clause does not start with the finite verb *können*, but with the subject pronoun *wir* ('we'). Thus, it is the pronoun, which occupies Spec/CP, while the *wenn*-clause is located in the pre-prefield. Both sentences become markedly odd, if not outright ungrammatical, if stress in (7-39a) is shifted to *Schalker* or to *auch* in (7-39b).

The type of particle in the first clause of (7-39a+b) is – among other things – responsible for these restrictions. The use of *auch* as a modal particle is severly restricted in non-root clauses since the presence of such particles indicates that the clause in which they occur possesses its proper illocutionary force. Due to this, the first clause in (7-39b), which contains the modal particle *auch*, cannot occur in the prefield; it must appear in a disintegrated and thus root clause-compatible position.[276] If *auch* in (7-39b) received stress, it could hardly be interpreted as a modal particle; it would rather be interpreted as a connective particle.[277] With such an interpretation, it would be odd to put the *wenn*-clause in a pragmatically important position like the pre-prefield. To cut a long story short. The first clause in (7-39b) is not a dependent clause, let alone a conditional clause, i.e. it does not set a condition like the first clause in (7-39a). Its major function is to tell the listener something about the speaker's (abominable) attitude. Like the comparable clauses in (7-37) and (7-38), the first clause in (7-39b) is not to be understood on the propositional level.

We have already mentioned the fact that there are structural differences between complement clauses with *daut*-deletion in the postfield and disintegrated adverbial clauses

[275] ZIFONUN et al. (1997: 2314; cf. also KÖNIG & VON DER AUWERA 1988: 125–127) see concessive clauses introduced by *wenn auch* ('albeit' or 'even though') parallel to causal clauses introduced by *da* ('since'), while they analyze concessive clauses introduced by *obwohl* ('although') parallel to causal clauses introduced by *weil* ('because'). Supporting the comparison of *wenn auch* and *da*, AUER (2000a: 177–178) assumes that "pre-positioned *wenn auch*-clauses […] co-occur with non-integrative word order in the consequent, and always receive a factual interpretation."

[276] AUER (2007: 111) gives an example with a concessive clause in the pre-prefield featuring *so (...) auch*, an archaic pendant to *wenn (...) auch*. "*[S]o er auch klagte, es wurde ihm nicht geholfen*" (gloss and translation by G.K.: so he PARTICLE moaned, it was him not helped; 'Even though he moaned, nobody helped him'). This is not to say that all concessive clauses with *wenn auch* have to appear in the pre-prefield. EISENBERG (2013b: 428 – exercise 125 – example (a)), for example, uses an integrated concessive clause with *wenn (...) auch*: "*Wenn das Buch auch gut ist, ist es doch für mich wenig hilfreich*" (gloss and translation by G.K.: if the book PARTIKEL good is, is it PARTICLE for me little helpful; 'Even though the book is good, it is of little help to me').

[277] It is often difficult to describe the correct function of the particle *auch* (cf. for this (4-60b) and (4-64a+b) and ZIFONUN et al. 1997: 1225–1226).

like (7-37) and (7-39b) occurring in the pre-prefield. Luckily, one can easily find disintegrated complement clauses in the pre-prefield supporting the comparability of these clause types. The following token (7-40a) was produced by the mayor of the city of Leverkusen REINHARD BUCHHORN (sentence foci marked by capital letters; cf. 10:22 minutes of *Spiegel-TV: Der Teppichhändler-Trick: Die Masche der Familie xxx*):

(7-40) a. *daß das wirklich DAUerhaft besser wird [ähm] ich GLAUbe es nicht […]*
that this really permanently better becomes [ehm] I believe it not […]
'That the situation will improve permantently, I don't believe this'

b. *daß das wirklich dauerhaft besser wird glaube ich (*es) nicht […]*

c. *daß das wirklich dauerhaft besser wird ich glaube $^{?}$(es) nicht […]*

The complement clause in (7-40a) is preposed, but it cannot be located in the prefield of the matrix clause *ich glaube es nicht* ('I don't believe it'), since this position is occupied by the subject pronoun *ich* ('I'). Consequently, the complement clause has to be located in the pre-prefield just like (7-39b). The separation of the two clauses in (7-40a) is further stressed by the filled pause (cf. examples (7-42a-c) for the effect of pauses). Structurally, the sentence compound is comparable to (7-37) and (7-39b), but unlike these examples, the complement clause is clearly connected to the propositional level. The disintegration is necessary because the mayor wants to assert two things. First, the stress on negated *glaube* ('believe'; 1st person singular) highlights the dim outlook of an improvement of the situation – the city experiences problems with an allegedly criminal family clan – and second, if an improvement is at all possible, it will – according to the mayor's opinion – not be permanent (cf. the stress on *dauerhaft*; 'permanently'). We will see later on that the desire to assert the proposition of the formally subordinate clause is one important motive for disintegration.

Intriguingly, *es* ('it') in (7-40a) is ungrammatical if the complement clause occurs in the prefield as in (7-40b).[278] Unlike this, (7-40a) sounds somewhat odd if *es* does not surface as in (7-40c).[279] In view of what has been said about the integrating effect of the presence of MLG correlates in Section 7.2, the distributional facts about *es* in (7-40a-c) may sound like a contradiction. The complement clause in the sentence compound in (7-40a) is disintegrated, but *es* nevertheless makes the sentence compound sound better. *Es*, however, is impossible in case of an integrated complement clause. The explanation for this state of affairs is that *es* in (7-40a) is an argument, not a correlate or a resumptive element. A disintegrated preposed complement clause cannot satisfy the selection requirements of the transitive verb *glauben* ('believe'). Therefore, *es* in the matrix clause of (7-40a) constitutes the preferred option. If the complement clause is part of the matrix clause though, *es* is ungrammatical since it would

---

[278] Confer also EISENBERG's (2013b: 338) comparable example (13c): **Dass du nicht kommst, bedauern wir es* (gloss and translation by G.K.: that you not come regret we it; 'We regret (it) that you will not come').
[279] Confer also EISENBERG's (2013b: 323) comparable example (3d), in which *es* is obligatory: *Dass/ob/wie du nach Berlin fährst, er weiß es* (gloss and translation by G.K.: that/if/how you to Berlin go, he knows it; 'That/If/How you will go to Berlin, he knows it'). Because of the position of *es* (after the V-final-clause and not before it) and because of its obligatory appearance, EISENBERG (2013b: 323) does not call *es* a correlate. He calls it the argument of the second clause.

constitute a second direct object violating the θ-criterion.[280] Hence, one can conclude that a complement clause in the prefield of a matrix clause is highly integrated. In the postfield, the complement clause is syntactically less integrated than in the prefield (cf. Section 6.1.1) – after all, it is extraposed –, but more integrated than a complement clause in the pre-prefield.

Let us return to example (7-39b). With the speaker-related, non-propositional contribution of *auch* in this sentence compound, we have left the level of clausal semantics and entered the realm of pragmatics. Again, the MLG data set does not constitute the best source for either modal particles (cf. (4-60b) and (4-64a+b) for possible exceptions) or for disintegrated "conditional" clauses expressing the speaker's attitude or his intention with regard to a particular speech act. In spite of this, 6.4% of the more than 3,000 usable MLG conditional sentence compounds are structurally similar to (7-39b) (cf. Table 7-40), i.e. after the prepositioned *wann*-clause, the matrix clause starts with a subject or an object pronoun. These cases, however, are not connected to particular epistemic readings or to the speech act level as the examples in (7-37), (7-38), or (7-39b). Moreover, they are connected to an interpretation which König and van der Auwera (1988: 126) offer with regard to concessive sentence compounds. In this interpretation, König and van der Auwera link syntactic non-integration with assertive emphasis of the main clause saying that "[a]s to the factors determining the choice between integration, resumption, and non-integration, it seems clear that assertive emphasis [of the consequent; G.K.] favors non-integration." As this interpretation affects main clauses, one is reminded of the opposite effect of the downgrading of matrix clauses in complement sentence compounds and the concurrent upgrading of the dependent clause by complementizer deletion (cf. Section 7.1.4.2). Obviously the comparable upgrading of V2-complement clauses and disintegrated conditional clauses is not affected by the opposed assertive weight of the involved main/matrix clauses. We will come back to this topic in the analysis of the conditional sentence compounds.

In (4-19a-h), we already gave examples for different types of matrix clauses in conditional sentence compounds. For the reader's convenience, we will – at this point – offer translations of sentence <15>:

stimulus <15> Spanish: **Si tiene que vender la casa ahora, se va a poner muy triste**
English: **If he has to sell the house now, he will be very sorry**

(7-41) a. *wann dü vondaa:g muts din Hüs verköpe wirsch dü sehr trürig sene* (Bol-4; m/44/MLG)
if you today must-VERB1 your house sell-VERB2 will you very sad be

b. *wann dü muts vondaag din Hüs verköpe dann [0.6] wirsch dü trürig sene* (Bol-9; m/43/MLG)
if you must-VERB1 today your house sell-VERB2 ~~then~~ […] will you Ø sad be

[280] The reader may remember that Axel-Tober et al. (in preparation: 15–16) claim that *glauben* only co-occurs with correlates functioning as reference expressions, not as placeholders. If we compare (7-40a) to (7-39b), it can be easily shown that the governing relationship with the verb of the matrix clause (7-40a) is indeed the decisive point for the necessity of *es* ('it'). Unlike (7-40a), (7-39b) without *dann* ('then') sounds perfect. Example (7-43b) below will show that the presence of *dann* with this kind of disintegrated clause is not even possible. Eisenberg (2013b: 325), too, mentions that correlative elements in adjunct clauses are never obligatory precisely because they do not satisfy verbal selection necessities.

(7-41) c. *wann hei [0.3] mut sin Hüs verköpen vondaag her wird sick sehr [0.6] trürig verholen* (Mex-32; m/38/MLG)
if he […] must-VERB1 <u>his</u> house sell-VERB2 <u>today</u> he will himself very […] sad <u>behave</u>
'If he has to sell his house now, he will behave in a very sad way'

d. *wann hei daut Hüs nü betohlen soll [0.3] ihm würd daut trürig meaken* (Mex-40; f/33/SG>MLG-86%)
if he the house now <u>pay</u>-VERB2 <u>shall</u>-VERB1 […] him would that Ø sad make

e. *wann hei daut Hüs verköpen mu:t daut wird ihm sehr trürig meaken* (Mex-33; m/55/MLG)
if he the house Ø sell-VERB2 must-VERB1 this will him very sad make

Example (7-41a) represents a conditional sentence compound with an integrated conditional clause, the first possibility mentioned by KÖNIG and VAN DER AUWERA (1988: 126). The conditional clause features a non-V2-VPR-variant. Tokens with this characteristic were excluded from the formation of the raising and scrambling indexes (cf. point (c) in Section 4.1), but like in Section 7.2 (cf. Tables 7-30 and 7-31), they will now provide important information. Token (7-41b) shows a matrix clause with a resumptive element *dann* ('then'), the second possibility mentioned by KÖNIG and VAN DER AUWERA. Its conditional clause features the V2-VPR-variant. The examples in (7-41c-e) feature matrix clauses with an initial pronominal element. In (7-41c), this is the subject pronoun *her* ('he'), in (7-41d), the object pronoun *ihm* ('him'), and in (7-41e), an impersonal subject demonstrative *daut* ('this'). The three tokens represent KÖNIG and VAN DER AUWERA's third possibility, which they call non-integration and which we call disintegration.[281] The informant of (7-41d) produces the NR-variant II (*ObjNP-adverb-V2-V1*), while the precise NR-variant cannot be identified in (7-41e) due to the lacking adverb. In (7-41c), the conditional clause features a V2-VPR-variant. Contrary to (7-41b) however, the adverb appears clause-finally. This rare variant was also excluded from index formation, but can be used here since it shares the central characteristic of superficial V2 with (7-41b). This characteristic is important because we have already seen on several occasions that at least some Mennonites use introduced V2-clauses to signal a higher degree of disintegration of dependent clauses. If matrix clauses starting with a nominal instead of a verbal element are indeed a sign of a disintegrated conditional clause, we would expect an above-average number of V2-conditional clauses preceding this type of matrix clause.

That disintegration is probably the correct analysis for these tokens can be seen in the translations in (7-42a-c). In each of these tokens, the informant interrupts his or her translation due to the necessity to reconfirm the second part of the stimulus with the interviewer (passage in bold print; interviewer's speech in small caps). This interruption disrupts the sentence

[281] In Chapter 4 (cf. tokens (4-19a-h)), all clauses featuring *dann* ('then') were considered to belong to resumptive sentence compounds with regard to index formation. This grouping did not depend on the question of whether *dann* was the first element of the matrix clause or not. In contrast, the only characteristic distinguishing the three types of sentence compounds in Section 7.3 is the first element of the matrix clause. This change turned out to be necessary because without it, it would have been difficult to carry out binary logistic regression analyses. The change, however, only affects a few tokens.

compound leading to a type of disintegration which causes the ensuing matrix clause to recommence with the indefinite subject pronoun *keiner* (‘nobody’).

stimulus <17> Spanish: **Si realmente mató al hombre, nadie lo puede ayudar**
English: **If he really killed the man, nobody can help him**

(7-42) a. *wann hei [4.0] ap iernst den Mann haft [0.6] umgebracht [1.6]* – ***now what was it again* / NO- NOBODY CAN HELP HIM / *OK*** – *[0.8] [ähm] keiner kann ihm helpen* (USA-15; f/35/MLG)
if he […] in earnest the man has […] killed […] – ~~now what was it again~~ / ~~no- nobody can help him~~ / ~~OK~~ – […] [ehm] nobody can him help

b. *[ähm] wann her wirklich de Mensch todgemeak haf [0.8] dann [1.0]* – **NADIE LO PUEDE AYUDAR** – *keiner kann den helpen* (Mex-93; f/39/MLG)
[ehm] if he really the person killed has […] ~~then~~ […] – ~~nobody him can help~~ – nobody can him help

c. *wann der wirklich den Mensch:- den Junge haf todgemeakt [2.0]* – ***como* / NADIE LO PUE- LO PUEDE AYUDAR** – *[0.4] keiner kann die he- die helpe* (Bol-4; m/44/MLG)
if he really ~~the person-~~ the boy has killed […] – ~~how~~ / ~~nobody him ca- him can help~~ – […] nobody can ~~them he-~~ them help

One may speculate that interruption is only possible at this point because of a disintegrated first clause. After all, in all three tokens there are rather longish unfilled pauses after the conditional clause.[282] However, these pauses may also be caused by the translation problem. Clear support for this is the translation in (7-42b). Here, the Mexican informant has already started the matrix clause with the resumptive element *dann* (‘then’). After the interruption however, she changes her construction, now beginning with *keiner*. Obviously, none of these examples was included in the following analyses.

There is one more crucial point to discuss, namely the relationship of matrix clauses starting with resumptive elements like *dann* (‘then’) and matrix clauses starting with a SubjNP or an ObjNP. With regard to their linearization patterns, these variants seem to be identical. In both cases, there is one phrase preceding the finite verb in second position. However considering examples (7-39a+b) once again, striking differences become obvious when *dann* is added:

(7-43) a. *wenn er AUCH Schalker ist dann können wir uns treffen*
if he also Schalker is then can we us meet
‘If he is also a supporter of Schalke [like the likable speaker is], then we can meet’

b. *wenn er auch SCHALker ist (*dann$_1$) wir können uns (*dann$_2$) TREFfen*
if he PARTICLE Schalker is (then) we can us (then) meet
‘Although he is a supporter of Schalke [and although the dislikable speaker does not seem to like this team], we can meet then’

The grammaticality difference in (7-43a+b) does not come as a surprise because *dann* is a typical resumptive element of conditional (and temporal) sentence compounds and only (7-43a) was classified as such. As (7-43b) is not a conditional sentence compound, *dann* simply

[282] FREY (2011: 51; cf. also GÜNTHNER 1999: 215 and 223) writes about the combination of disintegrated concessional clauses with *obwohl* (‘although’) and a pause between first and second clause: “An *obwohl*-introduced verb-final clause may precede a V2-clause. Note that in this case a pause is obligatory.”

does not fit semantically regardless of its position.[283] While *dann*$_1$ is ill-formed both syntactically and semantically, *dann*$_2$ is only ill-formed semantically. Its syntactic position in the midfield of the matrix clause is unproblematic. If *dann*$_2$ is interpreted as temporal instead of conditional, its insertion is somewhat less disturbing.

Unlike in tokens (7-39a+b) and (7-43a+b), there is no semantic difference betweeen the tokens in (7-41c-e) and (7-41a+b).[284] On the one hand, this is to be expected since all five tokens are translations of the same stimulus sentence; on the other hand, it may be somewhat surprising since (7-41c-e) feature a disintegrated conditional clause like (7-39b), while (7-41a+b) feature an integrated and a resumptive conditional sentence compound like (7-39a) and (7-43a). If there is indeed no semantic difference between the tokens in (7-41a-e), one would surmise that *dann* should not cause a semantic clash in comparable translations. This is indeed the case as examples (7-44) and (7-45) show:

stimulus <13> Spanish: **Si él deja el trabajo, ya no voy a ayudar a su familia**
English: If he quits his job, I won't help his family anymore

(7-44) *wann hei wird die Arbeit tochloten [0.3] daut wird dann nich sine Familie helpen* (Mex-25; f/14/MLG)
if he ~~will~~ the job leave […] <u>this</u> will ~~then~~ not his family help

stimulus <17> English: **If he really killed the man, nobody can help him**

(7-45) *wann der den Mann wirklich: todgemeakt haft dann: keiner kann den helpen* (USA-37; f/43/MLG)
if he the man really killed has ~~then~~ nobody can him help

There are three tokens like (7-44) in the data set and six tokens like (7-45). In spite of their rarity, these tokens show that the combination of a disintegrated conditional clause and *dann* is possible in MLG. This demonstrates that syntactically disintegrated conditional clauses in the MLG data set do not lose their role as protasis; the speakers in these cases just assert them more strongly. With regard to syntax, the example in (7-44) with *dann* in the midfield of the matrix clause is grammatical. Due to this, these translations will enter the following analyses. This may be different with regard to (7-45). Just focusing on the superficial linearization pattern, one is tempted to consider the possibility of the finite verb *kann* ('can'; 3rd person singular) occupying V3. As this would be a dramatic change in a core area of MLG syntax, we will rather assume that *keiner* ('nobody') is located in the prefield of the matrix clause.

[283] Confer also the comparable examples in AXEL-TOBER (2012: 14 – (31b) and 15 – Footnote 12): (31b) *Wenn du mitkommen willst, ich habe nichts dagegen* (gloss and translation by G.K.: If you come-along want I have nothing against-it; 'If you want to come along, that is fine with me'). The sentence compound with resumptive *dann* ('then') in Footnote 12 is not possible in the intended resumptive reading: **Wenn du mitkommen willst, dann habe ich nichts dagegen*. FABRICIUS-HANSEN (1992: 474) and GÜNTHNER (1999: 216; cf. also IZVORSKI 1996: 136) also show that disintegrated *wenn*-clauses normally cannot be combined with *dann*.

[284] GÜNTHNER (1999: 213) distinguishes *wenn*-clauses in the pre-prefield which can be put in the prefield without a propositional change – this is parallel to our case – and *wenn*-clauses, where the position in the prefield instead of the pre-prefield changes the proposition. AXEL-TOBER (2012: 15), too, mentions disintegration of adverbial clauses without propositional effects for older varieties of German.

Dann may then either occupy the pre-prefield or a position completely outside the clause.[285] In either case, one wonders where the preposed clause is to be localized. One possibility would be to qualify it as an attribute clause to *dann*. In this case, the dependent clause would not occupy Spec/CP or the pre-prefield on its own, but be contained in a phrase in the respective position. In any case, this constellation is positionally unclear. Therfore, the six tokens represented by (7-45) will not enter the following analyses.

On the whole, the structure of Section 7.3 resembles the structures of Sections 7.1 and 7.2. The major difference is that resumptive and disintegrated conditional sentence compounds will be analyzed in the same section. The reason for this will become clear shortly. In Section 7.3.1, we already touched on theoretical issues with regard to conditional sentence compounds. In spite of this, Section 7.3.2 will present some further aspects, among them the nature of the clause linkage in conditional sentence compounds, the structural position of the different types of conditional clauses, and the relationship between resumptive elements and the clauses related to them. Section 7.3.3 will present monofactorial analyses. Section 7.3.4 will then apply several binary logistic regression analyses. As in the comparable Sections 7.1.4 and 7.2.4, the motive of these analyses is to find out which of the independent variables are important.

7.3.2 Theoretical considerations with regard to conditional sentence compounds

As already shown, there are three major ways in which introduced conditional clauses can be connected to their matrix clause in SG and in MLG. AUER (2000a: 175) mentions all of them:

> In spoken German, however, the fully integrated placement of the pre-positioned adverbial clause in the front-field is only one possibility. Alternatively, pre-positioned *wenn*-clauses may be followed by a resumptive particle (a local-temporal adverbial such as *dann* or one of its regional equivalents, e.g. *na*, *denn*, *no*, etc.: […]); or they may even be used in a non-integrative way, rather like English […].

Just like in examples (7-41c-e), the non-integrative way AUER comments on refers to sentence compounds where the matrix clause starts neither with the finite verb nor with a resumptive element (AUER calls them resumptive particles). AUER (2000a) deals with preposed and postposed *wenn*-clauses (often ambiguous between a conditional and a temporal reading).[286] He does not deal with conditional clauses without an introducing element. In the MLG data set, there is just one informant who produces two asyndetic pseudo-conditional sentence compounds, one of them for stimulus sentence <18>:

[285] In three of the six tokens represented by (7-45), one can find additional hints giving away their special status. In (7-45) itself, the speaker pronounces the [n] of *dann* in a markedly prolonged way; the following subject *keiner* (‘nobody’) is pronounced with a strong stress. Such a peculiar stress is also detectable in a second token. A third token shows a very long, partially filled pause of 2.6 seconds before the matrix clause, i.e. before *dann*, not between *dann* and *keiner*.

[286] In the MLG data set, there are only five tokens where the informants swapped the sequence of conditional and matrix clause thus producing postposed conditional clauses (cf. also Figure (2-4)). Due to this scarcity, the analyses in Section 7.3 will not deal with these tokens.

stimulus <18> Spanish: **Si robó el libro, no voy a confiar más en él**
English: If he stole the book, I won't trust him anymore

(7-46) *[äh] na her haf mi det Bük ge- [äh] [äh] ge- weggenummen [0.6] und ik- ik kann nich mehr vertrüen op ihm* (Mex-79; f/69/MLG)

[eh] ~~well~~ Ø he has ~~me~~ the book ~~sto-~~ [eh] [eh] ~~sto-~~ taken-away […] ~~and I~~ I can not anymore trust in him

'He has taken the book away from me and (therefore) I cannot trust him anymore'

Obviously, the first clause in (7-46) does not constitute an unintroduced V1-conditional clause. It does not set a condition, but – deviating from the stimulus sentence – states a fact by means of a V2-declarative clause. Translation (7-46) with two independent main clauses is thus nothing more than a crude approximation to unintroduced conditional clauses. Despite the lack of real examples of unintroduced conditional clauses, we will briefly discuss them because they can teach us something about the relationship of dependent and matrix clauses in conditional sentence compounds. FREY (2011: 50 – example (17)) analyzes a sentence compound, which we repeat here as (7-47):

(7-47) *Sind sie zu stark, bist du zu schwach*
Are they too strong are you too weak
'If they are too strong, then you are too weak'

He comments this example in the following way:

> According to Reis (2008) and Wöllstein (2009), in (17) there are two verb first sentences involved, which are paratactically linked. Reis (2008) and Wöllstein (2009) suggest that for principled reasons verb-first sentences cannot be embedded and, as a consequence, cannot be positioned in the prefield of a V2-clause.

Unintroduced preposed V1-conditional clauses thus have to be considered as independent, as postposed V2-complement clauses without complementizers. EISENBERG (2013b: 336) adds another important detail for the syntactic specifications of V1-conditional clauses:

> Bei vorangestelltem Antezedens können in diesem Typ von Konditionalsatz die Korrelate **dann** und **so** stehen (**Kommt Karl, dann/so gehe ich**). Das Korrelat ist auf die Position zwischen den Teilsätzen beschränkt, es nimmt insbesondere nicht die Spitzenstellung im Satz ein (***Dann, kommt Karl, gehe ich**) […]. Der Stirnsatz kann also nicht als Attributsatz zu einem Korrelat aufgefaßt werden. Darin besteht ein wichtiger Unterschied zum **wenn**-Satz […].[287]

Although V1-conditional clauses can co-occur with *dann* ('then') – it is interesting to note that FREY's (2011: 50) English translation in (7-47), but not the German original, features resumptive *then* –, a resumptive element can only directly precede a conditional clause in the prefield if this clause is introduced. EISENBERG (2013b: 336) calls such introduced clauses attribute clauses. The conclusion he draws from the impossibility of combining *dann* with a V1-conditional clause in the prefield is that these clauses cannot possibly be (dependent)

[287] Translation by G.K.: In the case of a preposed antecedent, the correlates **dann** and **so** can occur in this type of conditional clause (**Kommt Karl, dann/so gehe ich**; comes Karl then/so go I; 'If Karl comes, then I will go']. The correlate is restricted to the position in between the two clauses; in particular, it cannot occupy the first position in the sentence compound (***Dann, kommt Karl, gehe ich**) […]. V1-clauses can, therefore, not be regarded as attribute clauses to a correlate. This is the most important difference to a **wenn**-clause […].

attribute clauses. In addition, KÖNIG and VAN DER AUWERA (1988: 115–116) come up with an interesting hypothesis with regard to the function of a Dutch resumptive element after a temporal complex consisting of one V-last clause and a coordinated V2-clause:

> A clause that has V-2 and that is nevertheless subordinate both lacks a canonical signal of subordination, and furthermore exhibits a confusing signal. Hence there is a greater need for another, clear sign of subordination. It is plausible to think that resumptive *dan* is such a signal.

According to KÖNIG and VAN DER AUWERA, the resumptive element has a kind of compensatory effect making up for the lack of markers of subordination in the dependent clause. If we transfer this reasoning to conditional sentence compounds, we have a first indication for the integrating effect of MLG *dann*. PITTNER (1999: 206–207) corroborates this by mentioning, among other indicators for a low degree of subordination, the impossibility of correlates in the matrix clause and the position of the dependent clause in the pre-prefield. Importantly, PITTNER (1999) only deals with adverbial clauses, i.e. the possible counterexamples in (7-40b+c) do not constitute a problem for her argument. FREY (2011: 47) offers a comparable hint to the integrating effect of correlative elements in adverbial clauses writing that "German central adverbial clauses allow a correlative element (COR) while PACs [peripheral adverbial clauses like adversative or concessive clauses; G.K.] do not have a correlative." The impossibility of correlative elements with peripheral adverbial clauses underlines their disintegration, this time in spite of their clear marks of subordination (subordinator and V-last).

An important question for our analysis is whether EISENBERG's (2013b: 336–337) assumption that introduced conditional clauses are attribute clauses when they co-occur with a resumptive element is feasible. In his temporal or conditional sentence compound (7a), given here as (7-48), and in BREINDL's (1989: 170) temporal sentence compound (3-57), given here as (7-49), this really seems to be the case (to both examples, we add glosses and translations; BREINDL's example appears with original capital letters and underline):

(7-48) *Dann, wenn Karl kommt, werde ich Paul treffen*
then-CORRELATE when/if Karl comes will I Paul meet
'At the time/provided Karl comes, I will meet Paul'

(7-49) *Ich suche diese meine Magie <u>DANN</u> zu überraschen, <u>wenn sie gerade bis zur Schwelle des Bewußtseins vordringt</u>*
I search this my magic then-CORRELATE to surprise when it just up to-the threshold the consciousness.GENITIVE advances
'I am trying to surprise this magic of mine exactly in the moment when it is reaching the threshold of my consciousness'

Attribute clauses in German appear to the right of their head element, exactly as in (7-48) and (7-49), where the conditional and/or temporal clauses *wenn Karl kommt* ('at the time/provided Karl comes') and *wenn sie […] vordringt* ('when it […] advances') (immediately) follow the correlative element *dann*. Contrary to this, the preposed conditional clauses in the MLG data set precede the resumptive element. This is a deviation from the unmarked sequence of head element and attribute clause. However, at this moment the more important question is in which position we are to localize the resumptive element and the preposed conditional clause when they both precede the finite verb of the matrix clause. In the literature, one finds many rather vague indications with regard to this. GÜNTHNER (1999: 211), for example, states that “[i]n the case that the apodosis is introduced by resumptive “dann”, the *wenn*-clause occupies the prefield-position together with “dann”[.]”[288] Technically, it is at best unclear, what GÜNTHNER (1999: 211) means by saying that the *wenn*-clause and resumptive *dann* occupy the prefield position together. ZIFONUN et al. (1997) distinguish the prefield and a left external field (*linkes Außenfeld*). The *linke Außenfeld*, however, just seems to be a rather underspecified position for miscellaneous elements. One can find interjections, conjunctions such as *und* (‘and’) and *denn* (‘for’), stressed themes before resumptive pronouns (i.e. left dislocations), conditional clauses preceding a resumptive element there, or even topologically disintegrated clauses like examples (7-41c-e) (cf. ZIFONUN et al. 1997: 1577–1579, 2289, and 2322). IATRIDOU and KROCH (1992: 14 – Footnote 11) offer a more satisfactory explanation:

> The ‘if’-clause can adjoin to the projection containing ‘then’ when the latter is present in English, Dutch and German. When ‘then’ is absent, in Dutch and German the ‘if’-clause occupies the [SPEC, CP] and is of course immediately followed by the verb[.]

IATRIDOU and KROCH’s Figure (65) on the same page contains two recursive CP-layers for Dutch, the lower one with *dan* (‘then’) in the specifier position and the finite verb in the head position, the higher one with the preposed conditional clause. This is topologically possible, but it does not automatically qualify the conditional clause as an attribute clause. An additional hint as for the positioning of MLG conditional clauses comes from head-final relative clauses in Japanese. ISHIZUKA (2008: 1) writes:

> Raising the question how the crosslinguistic positioning of the head with respect to the relative clause should be construed, Kayne (1994, 2005) argues that head-final relatives are derived from head-initial relatives by an extra step of leftward IP movement from a universal order [D CP]. The A’ movement of the relativized NP to Spec,CP yields a head-initial relative, as shown in (1). Additional fronting of the remnant IP to Spec,DP yields a head-final relative clause, as shown in (2).
>
> (1) [$_{DP}$ [$_{D}$ the [$_{CP}$ [book]$_{i}$ [$_{C}$ that [$_{IP}$ John read t_i]]]] [Head-initial relative]
> (2) [$_{DP}$ [$_{IP}$ John read t_i]$_{j}$ [$_{D}$ the [$_{CP}$ [book]$_{i}$ [$_{C}$ t_j]]]] [Head-final relative]

In (2), *that* should probably show up in [$_{C}$ *tj*] to make the relative clause head-final. Be this as it may, if we change DP in the second example into something like AdvP with *dann* instead of missing *that* as the head, we would end up with the correct sequence and hierarchy of conditional clauses appearing before the resumptive element. Importantly, such a comparison of relative and conditional clauses is nothing unusual. IZVORSKI (1996: 140), for example, compares English *then* in conditional sentence compounds with relative clauses with correlatives in Modern Greek and Hindi.

[288] Translation by G.K.; the original reads: *Wird die Apodosis mit einem resumptiven „dann“ eingeleitet, so teilt sich der wenn-Satz mit „dann“ zusammen die Vorfeldposition[.]*

> The discussion so far shows that the presupposition associated with conditional *then* is a property of all correlative proforms. Because this presupposition leads to a conflict in a number of environments, the proform is not always allowed. The same environments that prohibit *then* in conditionals also prohibit correlative proforms.

We will not pursue this discussion further. Suffice it to state the following hypothesis at this point. If the MLG correlate *daut* in a preceding matrix clause is the head of an attributive construction and the MLG resumptive element *dann* in a following matrix clause is also the head of an attributive construction, we expect *dann* like *daut* to co-occur frequently with integration-signaling non-V2-cluster variants like the VR-variant. If this is indeed the case, it suggests that structure is more important than linear sequence (cf. Section 8.1).

Having formulated our assumption with regard to resumptive elements, we now have to do the same for disintegrated conditional clauses. Like many others, VOLODINA (2006: 370) describes them as occupying the pre-prefield and exhibiting the lowest degree of syntactic integration. In this respect, they stand in stark contrast to fully integrated conditional clauses in the prefield.

> Generell kann die Subjunktorphrase mit *wenn* syntaktisch anteponiert, postponiert, ins externe Konnekt parenthetisch eingeschoben oder auch desintegriert vorkommen […]. Den höchsten Grad der syntaktischen Integration weist das *wenn*-Konnekt in seiner anteponierten Stellung bei der Einbettung in das externe Konnekt auf, den niedrigsten bei seiner Desintegration. Diese liegt vor, wenn das interne Konnekt das sogenannte Vor-Vorfeld besetzt […].[289]

This high level of disintegration leads us to expect many tokens of the V2-VPR-variant in case the matrix clause commences with the SubjNP or the ObjNP instead of the finite verb or a resumptive element. The reader must not forget however that the existence of disintegrated conditional clauses in the MLG data set cannot be linked to non-propositional readings. Furthermore, it cannot be linked to factual readings either. According to BREINDL (2009: 286–287), factuality of the conditional clause (*faktische Konditionalsätze*; EISENBERG (2013b: 339–340) calls them epistemic) furthers disintegration in SG (cf. also AUER's (2000a: 177–178) comment in Footnote 275 in this chapter). The ten conditional sentence compounds in our translation task do not allow for such a reading. Therefore, the only reasons for disintegration in the informants' translations can be either a general drive for more paratactic sentence compounds or the desire to assert the propositions of the two clauses independently.

In this respect, it is important to include the matrix clause in our considerations. Although the mode and the verb of the matrix clause do not play the role they have played in complement sentence compounds, the possibility of influence exists. While the matrix clauses of the complement sentence compounds in the MLG data set were mostly short and – with regard to their semantic content – not complex, this is not true for many of the matrix clauses of the conditional sentence compounds. Disintegration, therefore, may not only be the

[289] Translation by G.K.: The subjunctor phrase with *wenn* can generally occur preposed, postposed, parenthetically inserted in the external connect or disintegrated […]. If the *wenn*-connect occurs preposed, embedded in the external connect, it exhibits the highest degree of syntactic integration; if it is disintegrated, it exhibits the lowest degree. In the case of disintegration, the internal connect occupies the so-called pre-prefield […].

consequence of the wish to foreground/assert the proposition of the conditional clause, it may also be a means to foreground/assert the proposition of the matrix clause. After all, a conditional clause in the prefield blocks this pragmatically important position. A conditional clause in the pre-prefield does not do this. The consequence of this is described by GÜNTHNER (1999: 221):

> Die inhaltlich lockere Beziehung zwischen Protasis and Apodosis wird ikonisch durch die lose Anbindung des Vor-Vorfeldes an das folgende Syntagma reflektiert. Die Apodosis zeigt die Wortstellung eines eigenständigen Hauptsatzes und kann folglich auch typische „main clause phenomena" […] aufweisen, wie beispielsweise Linksversetzungen […] oder Adverb- und Adjektivvoranstellungen […].[290]

In spite of the fact that GÜNTHNER (1999: 221) refers to the class of *wenn*-clauses in the pre-prefield which cannot appear in the prefield, the syntactic consequences are the same for the MLG *wenn*-clauses that can appear in both positions. In any case considering the manifold shapes and functions of conditional clauses we have discussed in Sections 7.3.1 and 7.3.2, it is hard to completely agree with KÖNIG and VAN DER AUWERA's (1988: 127) rather general conclusion:

> These three strategies are easily interpreted as positions on a continuum from parataxis to embedding […]. This continuum also has a diachronic significance. German and Dutch show how subordinate clauses have tended to develop from non-integration to integration via resumption.

Granted, the age distribution of the MLG tokens seems to support KÖNIG and VAN DER AUWERA's diachronic assumption synchronically. Informants that produce disintegrated conditional clauses and resumptive elements are significantly older than informants that favor completely integrated conditional clauses (cf. Table 7-41). Nevertheless, we do not follow KÖNIG and VAN DER AUWERA's (1988) assumption for two reasons: First, the Mennonite situation cannot be compared to the history of German. The variation found in the MLG data set does not show one direction, but many directions. Second, although the sequence *disintegration* > *resumption* > *integration* is superficially justified – after all, the conditional clause comes closer and closer to the finite verb of the matrix clause –, there is a structural problem we have to consider. If conditional clauses preceding a resumptive element show more signs of integration (e.g., more tokens with the VR-variant than with the V2-VPR-variant) than conditional clauses appearing without such an element, we will – due to the findings of Chapter 6 and Sections 7.1 and 7.2 – have to regard them as more integrated. However, this mismatch may be more imagined than real; it may just boil down to a difference in perspective. Our point of departure is the dependent clause, whereas it seems that KÖNIG and VAN DER AUWERA's (1988) point of departure is the (finite verb of the) matrix clause.

---

[290] Translation by G.K.: The loose connection between protasis and apodosis with regard to contents is iconically represented by the loose linkage of the pre-prefield to the following syntagm. The apodosis exhibits the word order of an independent main clause and can, therefore, exhibit typical main clause phenomena […] such as dislocation to the left […] or prepositioning of adverbs and adjectives […].

7.3.3 Monofactorial analyses of conditional sentence compounds in MLG

7.3.3.1 General screening of the tokens

Table 7-40 presents the distribution of the three types of matrix clauses in ten conditional sentence compounds. As introducing elements, only *wann* (and its phonetic counterpart *wenn*; both 'if') and the English loan *if* were allowed (Spanish *si* or Portuguese *se* do not occur). In the 3,021 tokens, there are only ten tokens whose conditional clause contain an ObjPP. Due to the fact that all of them occur in clauses with one clause-final verbal element, we will not have to worry about their scrambling-unfriendly behavior.

Table 7-40: Shape of the matrix clause of ten conditional sentence compounds separated by origin

	USA	Mexico	Bolivia	Brazil	Menno	Fernheim	Total
n (tokens)	649	990	76	543	402	361	3021
integrated	149	342	20	287	288	208	1294
without *dann*	23%	34.5%	26.3%	52.9%	71.6%	57.6%	42.8%
χ^2 (10, n=3021) = 399; p=0*** / Cramer's V: 0.26 / 1 cell (5.6%) with less than 5 expected tokens							
resumptive	408	566	53	251	105	150	1533
with *dann*	62.9%	57.2%	69.7%	46.2%	26.1%	41.6%	50.7%
disintegrated	92	82	3	5	9	3	194
	14.2%	8.3%	3.9%	0.9%	2.2%	0.8%	6.4%

In 42.8% of the 3,021 tokens, the matrix clause starts with the finite verb. The majority of 50.7% begins with resumptive *dann* or a similar element (among these 1,533 tokens, there are 112 tokens with *da* ('there') and 9 tokens with *na* ('then'; probably a short form of *dann*)[291]). Finally, 194 tokens, i.e. 6.4% of all tokens, start with a nominal phrase preceded by a disintegrated conditional clause. Besides subject pronouns like *hei* and *dei* (both 'he') as in (7-41c), the indefinite subject pronoun *keiner* ('nobody'), and object pronouns as in (7-41d) (6 tokens), there are 27 tokens with impersonal *daut* ('this') as in (7-41e). Comparing these numbers to AUER's (2000a: 180) figures for a smaller data set of 280 preposed *wenn*-clauses in spoken German is quite enlightening. In AUER's data, 25.7% of the matrix clauses start with the finite verb (all figures rounded), 47.8% start with a resumptive element, and 18.5% exhibit disintegrated conditional clauses (other cases make up 9%). The higher share of disintegrated *wenn*-clauses is probably due to the fact that AUER (2000a) analyzes real conversations where disintegration serves several functions, which are not present in the MLG

[291] Looking at the occurrence of the two frequent resumptive elements *da* and *dann* (both 'then'), one can see that *da* is particularly frequent in matrix clauses with future time reference. The five stimulus sentences featuring *will* or *won't* in the matrix clause occur with *da* in 12.8% of the cases, while in the two counterfactual sentences <19> and <20> and in sentences <12>, <16>, and <17> with matrix clauses in the present tense (not necessarily present time reference), *da* appears in only 4.1% and 0.8%, respectively (χ^2 (2, n=1524) = 66.8; p=0*** / Cramer's V: 0.21 / 0 cells with less than 5 expected tokens). These distributional facts are not specific to MLG. ZIFONUN et al. (1997: 1493) mention that in SG *dann* can be found after conditional *wenn*-clauses both with a conditional and a temporal interpretation, while *da* is used after temporal clauses preferably, but not exclusively introduced by *als* ('when').

data set. HILPERT (2010: 194) confirms AUER’s (2000a) and our results writing that “Figure 2 illustrates that linkage [+dann] represents the default case in German […].”

Concentrating on resumptive sentence compounds, we see that 29 informants never use *dann* or its variants (19 in the Paraguayan colonies, only 1 in the North American colonies). 38 informants use resumptive elements in all conditional sentence compounds (28 in the North American colonies, only 3 in the Paraguayan colonies). Judging from this, it seems that much contact to SG diminishes the use of *dann* (cf. Table 7-41). Another intriguing interdependency exists between the use of resumptive elements and the preference for certain verb clusters. For 32 of the 38 informants, who use *dann* in all translations, we can establish their cluster preference with regard to dependent clauses with two verbal elements. Thirteen of these are scrambling-friendly Dutch-type informants, i.e. they prefer the VR-variant. This reflects a share of 40.7% of these 32 informants, clearly higher than the general share of Dutch-type informants, which is 25.6%. For scrambling-unfriendly Flemish-type informants, these shares are 9.4% and 14.9%, respectively, i.e. in their case there are fewer informants among the obligatory *dann*-users than expected. The superficial linearization pattern caused by scrambling does indeed seem to play exactly the same role in this distribution as in the case of *daut* as a correlate in complement sentence compounds.

As for the 194 matrix clauses following disintegrated conditional clauses, there are 96 informants who produce such sentence compounds. 81 of these come from the North American colonies, only seven come from the Paraguayan ones. 56 informants produce such a sentence compound just once; 24 produce them at least three times (23 from North America; 1 from Menno, Paraguay). Unlike in the case of *dann*, there is not a single informant who produces disintegrated conditional clauses across-the-board. As in the case of resumptive elements and correlates, a distributional relationship between disintegrated conditional clauses and the phenomenon of *daut*-deletion can be detected. The 24 informants who are responsible for at least three disintegrated conditional clauses, produce 20.2% of their complement clauses without a complementizer, a share significantly higher than the 11.8% of the other informants (χ^2 (1, n=2830) = 12.8; p=0*** / Phi: -0.07 / 0 cells with less than 5 expected tokens). In spite of the very low association strength, this result might present an indication that both complementizer deletion and disintegration of conditional clauses serve the same purpose. They may signal a general preference for weak clause linkage, i.e. for syntactic disintegration (cf. the summarizing comments in Section 7.4).

There is one more important piece of information to be found in Table 7-40. If we disregard integrated conditional sentence compounds, it becomes clear that eventually the other two variants will have to be analyzed separately. There are two reasons for this, one empirical and one theoretical reason. The empirical reason is that the North American colonies generate 174 of the 196 tokens with disintegrated conditional clauses (89.7%; just 12 Paraguayan tokens (6.2%)), but “only” 974 of the 1,533 tokens with *dann* (63.5%; 255 Paraguayan tokens (16.6%)). Furthermore, with regard to *dann*-insertion, the most active colony, Bolivia, produces 2.7 times more tokens than the least active one, Menno in Paraguay. The disintegrated conditional clauses, however, are 17.8 times more frequent in the US-American colony than in the Paraguayan colony of Fernheim.

At first glance, the necessity to separate the following analyses does not seem to be a problem; after all, we did exactly the same thing with complement sentence compounds in Sections 7.1 and 7.2. There is, however, one important difference: *Daut* as a correlate and *daut* as a complementizer can appear independently from each other, since correlates form part of the matrix clause, whereas complementizers are part of the dependent clause. This is different in conditional sentence compounds. Both the resumptive element *dann* and the linearization pattern after disintegrated conditional clauses affect the matrix clause. This is probably the reason for the fact that they hardly ever appear together (cf. the exceptions in (7-44) and (7-45)). For the decisive binary logistic regression analyses, we, therefore, have to compare the integrated type either with translations featuring *dann* or with translations featuring disintegrated conditional clauses.

The differences between complement and conditional sentence compounds in the MLG data set do not end here. Like Tables 7-2 and 7-22, Table 7-41 presents the informants' index values for the competence in three languages, the raising and scrambling values, and age separated by the three types of conditional sentence compounds. The table thus still covers all variants; split analyses will only start in Section 7.3.4, when binary logistic regression analyses will be carried out. In spite of the conjoined analysis of the three types of matrix clauses, a post-hoc-test (Scheffé) allows us to compare individual pairings.

Table 7-41: Characteristics of the informants producing three types of matrix clauses in conditional sentence compounds

	competence in MLG	**competence in majority language**	**competence in SG**	**raising index**	**scrambling index**	**age**
n (tokens)	2631	2631	2631	2926	2821	3021
integrated without *dann*	1172	1172	1172	1268	1183	1294
	12.6	8.5	9	-0.006	-0.009	31.4
	ns	F (2,2628) = 4.5, p=0.011*	F (2,2628) = 75.7, p=0***	F (2,2923) = 100.9, p=0***	F (2,2818) = 5.1, p=0.006**	F (2,3018) = 14.6, p=0***
resumptive with *dann*	1295	1295	1295	1481	1449	1533
	12.6	8.8	7.7	+0.118	+0.022	34,3
disintegrated	164	164	164	177	189	194
	12.4	9.1	6.5	+0.309	-0.012	33.7

The comparison between the informants preferring the integrated variant and the informants inserting resumptive elements reveals some differences. Informants with a liking for resumptive elements show a lower competence in SG and a somewhat higher one in the majority language. Their raising index clearly surpasses that of the informants producing the integrated variant. Furthermore, informants who insert *dann* scramble significantly more frequently than the informants using the integrated variant. This is another hint for the connection between resumptive elements and the scrambled VR-variant; a hint we can take seriously because the influence of resumptive elements has been controlled for in point (h) of Section 4.1. Finally as already mentioned, age plays a role. The informants inserting *dann* are significantly older than the ones generating integrated conditional clauses. This difference reflects the situation in three of the six colonies (USA, Menno, Fernheim). With two exceptions, these results are similar to the ones in Table 7-22, which dealt with *daut* as a correlate. The first difference is the non-significant result for scrambling in Table 7-22 (the VR-variant was nevertheless more probable after *daut*; cf. the regression analyses in Tables 7-30 and 7-31), the second is that there was one more colony with an age difference in Table 7-22 (Mexico).

Comparing the disintegrating informants with those that produce the integrated variant, we can see that the first ones have much less competence in SG and are much more raising-friendly. Importantly, this is exactly the scenario we found in the case of complementizer deletion. There were also differences with regard to SG and raising, and there was also no difference with regard to scrambling (cf. Table 7-2). These coinciding results support the hypothesis that *daut*-deletion and disintegrated conditional clauses are fed by the same syntactic preferences. One problem with disintegrated conditional sentence compounds must be mentioned though. In contrast to resumptive conditional sentence compounds, disintegrated conditional sentence compounds were not controlled for in the sociolinguistically balanced basic distribution used for index formation (cf. point (h) in Section 4.1). As most of these tokens do not feature a resumptive element in the midfield, the raising and scrambling value for the informants that produced them were calculated with regard to the expected value for integrated conditional sentence compounds. Due to the fact that there is a preference for the V2-VPR-variant in disintegrated conditional sentence compounds (cf. the following section) and due to the fact that this propensity was not reflected in the expected values of the balanced basic distribution, the raising value for the informants responsible for disintegrated tokens are slightly higher and their scrambling value slightly lower than they should be. This skewing effect obviously enters all analyses using the raising and scrambling values, but it is more marked in cases where disintegrated conditional clauses are analyzed. In spite of this, it is highly improbable that the huge differences of the raising index and the smaller or non-existing difference of the scrambling index in Table 7-41 are exclusively due to these slightly skewed index values. After all, only a minuscule fraction of 67 tokens exhibited this problem in index formation.

For the sake of completeness, we will briefly deal with the last pairing. The tokens that exhibit disintegration are produced by informants with less competence in SG and with a stronger drive for verb projection raising than the informants that insert resumptive elements. As for SG and raising, all three pairings thus show significant differences. In both cases, the values for tokens with resumptive elements lie in between the values for disintegrated tokens and integrated tokens.

7.3.3.2 Sentences <15> through <18>: The impact of the matrix clause on verb clusters

In this section, we will analyze whether the shape of the matrix clause influences the type of verb cluster in the dependent clause. Unlike complement clauses, conditional clauses are not directly selected by the verb of the matrix clause, but rather by the event variable related to this verb. Because of this, one should not expect a comparably strong influence of the verb of the matrix clause in conditional sentence compounds. Nevertheless, the matrix clause may have a certain impact. As we have already seen, matrix clauses in conditional sentence compounds can start with three different elements, namely the finite verb ($+verb_{finite}$ in Table 7-42), a resumptive element (*+dann*), or a pronominal element (*+nominal*). Among the three initial elements, resumptive and nominal elements are crucial for our analysis. With regard to these elements, we have postulated the following hypotheses in Section 7.3.2:

(i) If resumptive elements like *dann* function like the correlate *daut* in MLG (cf. Section 7.2), the presence of *dann* should increase the share of raised non-V2-variants (the unscrambled non-V2-VPR-variant and the scrambled VR-variant). As usual, the raised variants are more important than the NR-variants, because the latter ones cannot possibly appear with the finite verb in second position and because the colonies which show higher shares of raised variants also show higher shares of resumptive elements. It is this bigger variation pool which makes a functional use of the different variants possible. (ii) If the matrix clause starts with a nominal element, we have surmised a disintegration effect comparable to unintroduced complement clauses (cf. Section 7.1). We would, therefore, expect the unscrambled V2-VPR-variant to surface more frequently, because it is the only extant variant leading to a V2-conditional clause. As we are dealing with actual verb clusters in these analyses, the problem with the index values for raising and scrambling just mentioned does not exist here.

In order to check these hypotheses, a look at the four stimulus sentences with two verbal elements is useful. Two of them, sentences <16> and <18> do not feature an adverb in the conditional clause. In Section 4.1, we already provided Mexican examples for sentence <16> (cf. (4-19a-d)). Here, we present three additional translations from the United States:

stimulus <16> English: **If he can solve this problem, he is very smart**

(7-50) a. *wann dü dit Problem lösen kos bist dü sehr klüg* (USA-12; m/36/MLG)
if you this problem solve-VERB2 can-VERB1 are you very smart

b. *wann der den: [äh] problem kann solven dann is der sehr klüg* (USA-42; f/47/MLG+Engl)
if he the.MASC [eh] problem can-VERB1 solve-VERB2 ~~then~~.RESUMPTIVE is he very smart

c. *wann hei kann dies trouble lösen hei is: [0.5] well smart that's what I* (USA-79; m/68/MLG)
if he can-VERB2 this trouble solve-VERB2 he-PRONOUN is […] ~~well~~ Ø smart ~~that's what I~~
'If he can solve this trouble, he is very smart – well that is the way I…'

The three translations represent the expected combinations of the verb cluster in the conditional clause and the initial element of the matrix clause. (7-50a) shows a NR-variant together with a matrix clause beginning with the finite verb. Example (7-50b) features the

VR-variant and the resumptive element *dann* (‘then’), and finally, (7-50c) illustrates a disintegrated conditional clause with the V2-VPR-variant.[292] The distribution of the cluster variants in the dependent clause and different types of matrix clauses is shown in Table 7-42:

Table 7-42: Three types of verb clusters with two verbal elements in conditional clauses in sentences <16> and <18> separated by the first element of the matrix clause

	sentence <16> (modal verb)			**sentence <18>** (han)		
	+verb$_{finite}$	***+dann***	**+nominal**	**+verb$_{finite}$**	***+dann***	**+nominal**
n (tokens)	95	150	15	110	148	14
NR-variants	73	72	2	100	134	8
ObjNP-V2-V1	76.8%	48%	13.3%	90.9%	90.5%	57.1%
	χ^2 (4, n=260) = 36; p=0*** / Cramer’s V: 0.26 / 2 cells (22.2%) with less than 5 expected tokens			χ^2 (4, n=272) = 27.7; p=0*** / Cramer’s V: 0.23 / 3 cells (33.3%) with less than 5 expected tokens		
V2-VPR-variant	10	18	5	2	4	4
V1-ObjNP-V2	10.5%	12%	33.3%	1.8%	2.7%	28.6%
V2-VPR/VR-ratio	0.83	0.3	0.75	0.25	0.4	2
VR-variant	12	60	8	8	10	2
ObjNP-V1-V2	12.6%	40%	53.3%	7.3%	6.8%	14.3%

Both sentences show comparable distributions although – depending on the finite verb in the conditional clause (modal verb or temporal auxiliary *han* (‘have’)) – the absolute shares of the types of verb clusters are different. One can detect an above-average co-occurrence of the V2-VPR-variant in disintegrated conditional clauses. If the conditional clause features a V2-VPR-variant, the chance that the matrix clause will start with a pronoun is 15.2% (5 instead of expected 1.9) in sentence <16> and 40% (4 instead of expected 0.5 tokens) in sentence <18>.

The result with regard to resumptive elements does – at least at first glance – not match our hypothesis since *dann* is the most frequent option after the V2-VPR-variant in the two sentences (22 out of 43 tokens; 51.2%). Granted, the concentration after conditional clauses with the VR-variant is even higher (70 out of 100 tokens; 70%), but this difference is not very marked. However, by just comparing the two raised variants the plausibility of our hypothesis with regard to the effect of *dann* increases. The ratio of the V2-VPR-variant and the VR-variant is always smaller with *dann* than with disintegrated conditional clauses (0.3 vs. 0.75 and 0.4 vs. 2, respectively; cf. the line *V2-VPR/VR-ratio*), i.e. the VR-variant is relatively more frequent before matrix clauses with *dann* than in disintegrated conditional clauses. Table 7-43 shows the distribution of stimulus sentences <15> and <17>, both of which feature an adverb (cf. (7-41a-e) for examples of sentence <15> tokens):

[292] In this token, the informant makes a meta-linguistic comment on his use of the English loanword *smart* (*well […] that’s what I*; one may add *would use*). Importantly, this comment appears after the crucial start of the matrix clause *hei is:* (‘he is’), i.e. it does not call into question the disintegration of the conditional clause.

Table 7-43: Four types of verb clusters with two verbal elements in translations of sentences <15> and <17> separated by the first element of the matrix clause

	sentence <15> (modal verb + *now*)			**sentence <17>** (*han* + *really*)		
	+verb$_{finite}$	***+dann***	**+nominal**	**+verb$_{finite}$**	***+dann***	**+nominal**
n (tokens)	95	97	15	76	103	27
NR-variants	54	42	3	63	54	16
ObjNP-V2-V1	56.8%	43.3%	20%	82.9%	52.4%	59.3%
	χ^2 (6, n=207) = 17.2; p=0.009** / Cramer's V: 0.2 / 2 cells (16.7%) with less than 5 expected tokens			χ^2 (4, n=206) = 18.7; p=0.001** / Cramer's V: 0.21 / 2 cells (22.2%) with less than 5 expected tokens		
V2-VPR-variant	5	8	3			
V1-ObjNP-V2	5.3%	8.2%	20%			
V2-VPR/non-V2-V(P)R-ratio	0.14	0.17	0.33	---	---	---
non-V2-VPR-variant	13	9	0	8	23	5
adv-V1-ObjNP-V2	13.7%	9.3%	0%	10.5%	22.3%	18.5%
VR-variant	23	38	9	5	26	6
ObjNP-V1-V2	24.2%	39.2%	60%	6.6%	25.2%	22.2%

The distribution in these two sentences is somewhat inconclusive. With regard to sentence <15> featuring the adverb *now*, there is only a slight predominance of the V2-VPR-variant in disintegrated conditional clauses (cf. the line *V2-VPR/non-V2-V(P)R-ratio*). The significant distribution in sentence <17> is caused by the differences between the unraised and the raised variants rather than by a difference between the raised variants themselves. This does, however, not contradict our hypothesis since, due to the presence of the sentence adverb *really*, neither of the raised variants is a V2-variant. Including slightly erroneous translations, things become more expressive. In twenty and 23 tokens, respectively, the informants did not translate the adverb in sentences <15> and <17>. These tokens are not presented in Table 7-43, but their distribution is given in Table 7-44:

Table 7-44: Three types of verb clusters with two verbal elements in translations of sentences <15> and <17> with no adverbial element separated by the first element of the matrix clause

	sentence <15> (modal verb + *now*)			**sentence <17>** (*han* + *really*)		
	+verb$_{finite}$	***+dann***	**+nominal**	**+verb$_{finite}$**	***+dann***	**+nominal**
n (tokens)	8	10	2	5	9	9
NR-variants	4	2	1	2	2	1
ObjNP-V2-V1	50%	20%	50%	40%	22.2%	11.1%
	ns			ns		
V2-VPR-variant	1	1	1	0	3	4
V1-ObjNP-V2	12.5%	10%	50%	0%	33.3%	44.4%
V2-VPR/VR-ratio						
VR-variant	3	7	0	3	4	4
ObjNP-V1-V2	37.5%	70%	0%	60%	44.4%	44.4%

Due to the low number of tokens, the results in Table 7-44 are neither significant nor very reliable. They nevertheless offer additional support for our hypothesis. With regard to sentence <17>, seven of the 23 translations without adverbs feature the V2-VPR-variant and four of these seven tokens occur in nine disintegrated conditional clauses (a share of 44.4%).

The share for this variant in resumptive sentence compounds is 33.3% (3 out of 9 tokens). In five tokens with integrated conditional clauses, it even drops to 0%. In sentence <15>, there are two sentence compounds with disintegrated conditional clauses. One of them features the V2-VPR-variant (50%). This share drops to 12.5% for integrated sentence compounds (1 of 8 tokens) and to 10% for resumptive sentence compounds (1 of 10 tokens). Pooling the translations of both sentences together, the ratio *V2-VPR/VR-variant* is 1.25 for disintegrated conditional clauses (5:4), 0.36 for sentence compounds with *dann* (4:11), and 0.17 for integrated conditional clauses (1:6). Although this difference is again not significant, the differences in Table 7-44 point toward the expected preference for V2-clauses in disintegrated conditional clauses.

7.3.4 Binary logistic regression analyses of conditional sentence compounds in MLG

7.3.4.1 Integrated and resumptive conditional sentence compounds

As mentioned above, we will carry out two pairwise analyses of the three types of matrix clauses in conditional sentence compounds. Table 7-45 deals with integrated and resumptive tokens with dependent clauses with two verbal elements and definite ObjNPs (no ObjPPs). The central question of this analysis is whether resumptive elements really co-occur more frequently with raised non-V2-variants. Besides the four sentences analyzed in Tables 7-42 through 7-44, there are two more sources for conditional clauses with two verbal elements. On the one hand, some informants applied simplification strategies in stimulus sentences <19> and <20> producing two instead of three verbal elements. On the other hand, many informants used the auxiliaries *woare* (‘will’) and *dune* (‘do’) in sentences <11> through <14> producing two instead of one verbal element (cf. Sections 5.1.2 and 5.1.3).

As conditional clauses are not directly selected by the verb of the matrix clause, a direct influence of this variable on resumptive elements is not to be expected. Therefore, the verb of the matrix clause will not enter the analysis. BREINDL (1989: 170) confirms this assumption:

> In allen Fällen weist das gliedteilsatztypische Akzentmuster das Pro-Adverb als echtes Bezugselement aus. Bei Adverbialsätzen sind Bezugselemente in der Regel nicht obligatorisch – sie sind auf jeden Fall nicht matrixverbspezifisch und es existieren nicht zu allen Adverbialklassen passende Pro-Adverbien.[293]

The mode of the matrix clause will not enter the analysis either. On the one hand, there are no interrogative matrix clauses in the stimulus sentences; on the other hand, negation of the apodosis of conditional sentence compounds does not produce the same semantic effect as negation in declarative complement sentence compounds. Negation of the apodosis is more similar to the polarity effect in yes-no-questions as in Section 7.1.3.4. New variables for the following analyses are the subjects of the matrix and the conditional clause. In complement sentence compounds, the role of subjects could not be properly analyzed, since the matrix

[293] Translation by G.K.: In all cases, the stress contour typical for attribute clauses signals that the pro-adverb is a true head element. In adverbial clauses, such elements are normally not obligatory – in any case, they are not sensitive to the verb of the matrix clause and there do not exist pro-adverbs for all classes of adverbial clauses.

clauses of the stimulus sentences exhibit an artificial interrelationship between subject and mode. Stimulus sentences with interrogative matrix clauses all feature the second person singular as subject (sentences <3>, <4>, <6>, and <8>), while those with declarative matrix clauses all feature a subject in the third person singular. Aside from this, regression analyses including these variables did not select them. In conditional sentence compounds, no such artificial distribution exists, but there is another problem. All ten conditional clauses and seven of the ten matrix clauses feature *he* as the subject (cf. our self-criticism after Table 2-7). In spite of this, enough variation exists in the translations to justify their inclusion. The most interesting variation is between non-deictic *her*/*hei* and deictic *der*/*dei* (both 'he'). With the inclusion of this variation, we can, for example, check whether identical subjects are indeed a useful parameter for defining the degree of syntactic integration of the conditional clause (cf. PITTNER 1999: 205). The following independent variables enter this model for conditional clauses with two verbal elements:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Verb cluster in the complement clause (4 variants; contrasting variant *NR-variants*): NR-variants; VR-variant; non-V2-VPR-variant; V2-VPR-variant

Subject of the conditional clause (4 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*

Subject of the matrix clause (6 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*; *daut*; *keiner*

Metrical variables

Age

Competence in MLG

Competence in the majority language (English, Spanish, or Portuguese)

Competence in SG

Like in Section 7.2.4.1, the raising and scrambling index cannot be used since the type of verb cluster, the base for index formation, is one of the variables entering the model. The type of finite verb in the verb cluster was checked for a possible influence, but no such influence was detected. There is not a single correlation between the four metrical variables reaching an r-value of 0.4. The regression analysis comprises 1,271 tokens:

Table 7-45: Binary logistic regression analysis (method: stepwise forward conditioned) for integrated and resumptive conditional sentence compounds with two verbal elements in the dependent clause

competence in SG	**age**	**verb cluster**	**subject conditional clause**
Wald: 33.3***	Wald: 24.3***	Wald: 17.3**	Wald: 14.2**
	age (1.02***)	VR-variants (1.8***)	der (1.8***)
		NR-variants V2-VPR-variant non-V2-VPR-variant	**her** ik dü
SG (0.9***)			

The “explained variance” of Table 7-45 is much lower than that in the regression analyses in Sections 7.1 and 7.2. It is just 10.6% (Nagelkerkes R-square: 0.106; Cox & Snell R-square: 0.079). This low share proves the towering influence of the mode and the verb of the matrix clause in complement sentence compounds. We must not forget though that linguistic analyses count with innumerable influences, many of them probably not covered by the information available to us. In this light, even accounting for just 10.6% is a noteworthy albeit not spectacular result. Three of the four variables selected are well known by now. After the results in Table 7-41, it does not come as a surprise that older informants use resumptive elements more frequently than younger ones, and that informants with a good knowledge of SG refrain from using them. Ten additional years of age increase the probability of a resumptive element by 1.22 (1.02^{10}). With regard to SG, an informant with six points increases the probability of the appearance of *dann* by 1.52 ($(1:0.9)^4$) in comparison to an informant with ten points.

The third variable selected is the type of verb cluster. As expected the presence of the VR-variant in the conditional clause increases the probability of a resumptive pronoun by 1.8 in comparison to the NR-variants. Both the V2-VPR-variant and the non-V2-VPR-variant do not show such a difference. This is expected in the case of the V2-VPR-variant, but not with regard to the non-V2-VPR-variant. We would have expected this variant to behave like the VR-variant since both of them share the non-V2-characteristic and since they were grouped together with regard to correlates in complement sentence compounds (cf. Tables 7-30 and 7-31). As the very frequent VR-variant (310 tokens) and the frequent V2-VPR-variant (134 tokens) confirm our expectations, one can nevertheless see additional evidence for the integrating effect of correlative elements in the difference between these two variants. Therefore, we can draw the following preliminary conclusion with regard to the question whether linearity or structural configuration is more decisive for the relation between correlative elements (correlates and resumptive elements) and the dependent clauses they relate to (cf. also the discussion in Section 8.1).

Summarizing Box 7-4: The syntactic effects of MLG correlative elements

> The presence of a correlative element in a matrix clause in MLG, be this the cataphoric correlate *daut* (‘that’) in a complement sentence compound or the anaphoric resumptive element *dann* (‘then’) in a conditional sentence compound, increases the dependency of the dependent clause. Evidence for this is the frequent co-occurrence of the correlative elements with raised non-V2-cluster variants in the dependent clause. As the particularly prominent VR-variant is the raised variant typical for relative clauses, one can assume that correlative conditional and complement clauses have turned into something similar to attribute clauses. As conditional clauses in the MLG data set precede their matrix clause, but complement clauses follow it, structural superiority of the correlative element, not linearization, seems to be the decisive feature.

The last factor selected is the subject of the conditional clause. Remember, all conditional clauses feature 3rd person singular *he*, but there was quite a lot of variation in the actual translations. No difference between non-deictic *her* (‘he’; 955 tokens) and the deviating translations with *dü* (‘you’; 106 tokens) and *ik* (‘I’; 18 tokens) is detectable. However, if the informants translated the conditional clause with deictic *der* ('he'; 192 tokens), the probability of *dann* increases significantly by a factor of 1.8. As *dü* and *ik* are also deictic in nature and as they do not influence the appearance of *dann*, the presence of the morphological segment {d-} in *der* seems to be decisive. One could surmise that the informants like to match the catadeictic quality of ***d**er* in the preceding conditional clause with the anadeictic quality of ***d**ann* in the following matrix clause. The identical morphological marking of these two elements by means of the segment {d-} thus may increase the integration of the dependent clause into (an element of) the matrix clause. Unlike this, identical subjects in the two clauses (*her–her*; *der–der*; *dü–dü*; *ik–ik*) do not have a measurable effect. This was checked in additional analyses.[294]

Table 7-46 shows the results for all usable translations regardless of the number of verbal elements in the conditional clause and regardless of the definiteness of its ObjNPs/PPs. There are eight tokens with ObjPPs. As in Section 7.2.4.2, the variable *verb cluster* does not enter the analysis anymore, opening the way for the application of the raising and the scrambling index. Again, the inclusion of these variables is possible since the two indexes were calculated separately for integrated and for resumptive conditional sentence compounds (cf. point (h) in Section 4.1). Among the six metrical variables, there is one correlation with an r-value of 0.4 or more. The competence in SG again correlates negatively with the raising index. The strength is -0.513** (co-variance of 26.3%). The analysis was not adjusted for this correlation. The independent variables used are:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women
Subject of the conditional clause (4 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*
Subject of the matrix clause (6 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*; *daut*; *keiner*

Metrical variables

Age
Competence in MLG
Competence in the majority language (English, Spanish, or Portuguese)
Competence in SG
Raising index
Scrambling index

The model for Table 7-46 comprises 2,224 tokens:

[294] LEHMANN (1988: 205) writes about the effect of shared properties of sentence compounds: "I will skip here the whole issue of relative clauses and just observe that the correlative diptych […] is essentially held together by anaphora, i.e. by the fact that the two correlative clauses share an actant (or another nominal or adverbial concept)." Interestingly, what is shared in the clauses in MLG is a sub-lexical entity, the deictic segment {d-}.

Table 7-46: Binary logistic regression analysis (method: stepwise forward conditioned) for integrated and resumptive conditional sentence compounds

age	**subject conditional clause**	**raising index**	**competence in SG**	**scrambling index**
Wald: 43.1***	Wald: 31.7**	Wald: 30.8***	Wald: 21.4***	Wald: 11.6**
age (1.02***)	der (2.1***)	**raising** (2.5***)		
				scrambling (1.8**)
	her ik dü			
			SG (0.93***)	

Again, the "explained variance" is low with 10.8% (Nagelkerkes R-square: 0.108; Cox & Snell R-square: 0.081). In spite of this, five of the nine variables are selected to significantly improve the model. Age and competence in SG work in the same way as in Table 7-45. The second predictor chosen is the subject of the conditional clause. It is again deictic *der* ('he') which furthers the appearance of *dann*. In Table 7-46, the probability rises even more strongly with 2.1. Furthermore, both the informants' raising- and scrambling-friendliness further resumptive elements. A Dutch-type informant with a raising value of +0.7 and a scrambling value of +0.6 has a 4.5 (2.5 x 1.8) times higher probability of producing *dann* and its variants than a German I-type informant with a raising value of -0.3 and a scrambling value of -0.4. As raising- and scrambling-friendly Dutch-type informants produce dependent clauses predominantly with the VR-variant, the close connection between this non-V2-cluster variant and resumptive elements is once again confirmed.

7.3.4.2 Integrated and disintegrated conditional sentence compounds

The second pairwise analysis deals with integrated and disintegrated conditional clauses. We will start once again with dependent clauses with two verbal elements and definite ObjNPs (no ObjPPs present). Our central hypothesis for this comparison is that tokens with the V2-VPR-variant should occur more frequently in disintegrated conditional clauses than in integrated ones. The following eight factors enter the analysis as independent variables:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Verb cluster in the complement clause (4 variants; contrasting variant *NR-variants*): NR-variants; VR-variant; non-V2-VPR-variant; V2-VPR-variant

Subject of the conditional clause (4 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*

Subject of the matrix clause (5 variants; contrasting variant *her*): *her*; *ik*; *der*; *daut*; *keiner*

Metrical variables

Age
Competence in MLG
Competence in the majority language (English, Spanish, or Portuguese)
Competence in SG

Again, the type of finite verb in the conditional clause was not included since it did not show any influence on the results. With regard to the subject of the matrix clause, all tokens with *dü* ('you' singular) had to be excluded. This subject pronoun does not appear in a single token with a disintegrated conditional clause, a fact which led to a huge margin of error. Aside from this, five tokens of disintegration had to be excluded because the first element in the matrix clause was not the subject, but an object pronoun (cf. (7-41d)). As we only code the subject of the matrix and the conditional clause, the inclusion of these tokens would have skewed the results. Between the metrical variables, not a single correlation reaching an r-value of 0.4 exists. The analysis comprises 649 tokens (no ObjPPs present), among them 97 disintegrated conditional clauses (84 from the two North American colonies).

Table 7-47: Binary logistic regression analysis (method: stepwise forward conditioned) for integrated and disintegrated conditional sentence compounds with two verbal elements in the dependent clause

subject matrix clause	**verb cluster**	**competence in SG**	**age**
Wald: 78.1***	Wald: 32.1***	Wald: 9.3**	Wald: 9**
daut (44.5***) keiner (32.9***) der (24***)			
	V2-VPR-variant (9.5***)		
ik (6***)	VR-variant (3.8***)		**age** (1.03**)
her	**NR-variants** non-V2-VPR-variant		
		SG (0.87**)	

The "explained variance" is much higher than in Section 7.3.4.1. It reaches 43.3% (Nagelkerkes R-square: 0.433; Cox & Snell R-square: 0.247). Four variables are selected as significant predictors for the type of conditional sentence compound. Age and competence in SG show comparable, but slightly stronger effects than in the case of resumptive elements. A four-point rise in competence in SG causes a decrease of the probability of disintegrated conditional clauses by a factor of 1.75 ($(1{:}0.87)^4$); a ten-year-rise in age increases the probability of disintegrated conditional clauses by 1.34 (1.03^{10}).

With regard to the verb cluster variant in the conditional clause, the V2-VPR-variant does indeed exert a considerable influence on the shape of the matrix clause. If the protasis is a V2-clause, the probability of it being disintegrated increases 9.5 times in comparison to the NR-variants. Although the VR-variant induces a higher probability of disintegration too, the dimension of this effect is much smaller; it only reaches a factor of 3.8. As expected, the non-V2-VPR-variant does not show any increase in regard to disintegrated conditional clauses. In absolute terms, 35.2% of the 71 tokens with the V2-VPR-variant are cases of disintegrated conditional clauses. This share drops to 23.7% of 135 tokens in the case of the VR-variant, 18.8% of 32 tokens in the case of the non-V2-VPR-variant, and 8.3% of 411 tokens in the case of the NR-variants. If we calculate the model only for the North American colonies and the one in Bolivia, the colonies, which show by far the highest shares of disintegrated conditional clauses, only the V2-VPR-variant exhibits a significant increase of 4.9** in the probability of disintegrated conditional clauses. The VR-variant now only displays a statistical tendency with an increasing factor of just $2^{(*)}$. We can, therefore, conclude that like in complement clauses, V2 in conditional clauses is a sign of syntactic disintegration.

The strongest effect on the shape of the matrix clause comes from the subject of the matrix clause. This feature was not selected in resumptive sentence compounds. For these compounds, the subject of the conditional clause exhibited some influence. This different behavior shows once again that separate analyses of these two types of matrix clauses are necessary. It also proves that – like in the case of complement sentence compounds – the disintegration of conditional clauses depends on features of both the dependent and the matrix clause. The reader may remember that one consequence of a conditional clause in the pre-prefield is the speakers' increased liberty to fill the prefield of the matrix clause according to their pragmatic intentions (cf. GÜNTHNER 1999: 221 and KÖNIG & VAN DER AUWERA 1988: 127).

In the MLG translations, it seems that this liberty is connected to the deixis of the subject pronoun and especially to its morphological complexity, i.e. its phonological weight. The neutral subject pronoun *daut* ('this'), which occurs, for example, in (7-41e) and (7-53a), increases the probability of disintegration by a huge factor of 44.5 in comparison to the contrastive variant *her* ('he') (cf. (7-41c) and (7-51b)), *keiner* ('nobody') in sentence <17> does so by a factor of 32.9 (cf. (7-52)), and deictic *der* ('he') by 24 (cf. (7-51d) and (7-54)). With a factor of 6, the increase with *ik* ('I') turns out to be markedly smaller. With the exception of *keiner*, all these elements are deictic; with the exception of *ik*, all of them are morphologically complex. *Her*, which infrequently occurs together with disintegrated conditional clauses, is neither deictic nor morphologically complex underlining the importance of these two characteristics. In absolute numbers, *her* in the matrix clause combines with disintegration in only 3.1% of 295 tokens, while *daut* does so in 60% of 30 tokens (*der*: 38.8% of 49 tokens; *keiner*: 31.8% of 107 tokens; *ik*: 10.1% of 168 tokens). In order to further illustrate the effect of subject pronouns in the matrix clause, four translations of stimulus sentence <11> will be discussed:

stimulus <11> Spanish: **Si él firma ese contrato, va a perder mucho dinero**
English: **If he signs this contract, he will lose a lot of money**

(7-51) a. *wann hei wird die- [0.5] diesen contrat unterschriewen wird her mucho Geld verlieren* (Mex-6; m/16/MLG)
if he ~~will~~ ~~thi-~~ […] this contract sign will he.NON-ANADEICTIC much money lose

b. *wann her diesen contract signen dät [0.4] hei: verspielt en doll Geld* (USA-61; m/30/E>MLG-64%)
if he this contract sign ~~does~~ […] he.NON-ANADEICTIC gambles-away a great money

c. *wann der dies:en contract unterschriewen dät wird der en doll Geld verspielen* (Mex-34; m/53/MLG)
if he this contract sign ~~does~~ will he.ANADEICTIC a great money gamble-away

d. *wann dei: [1.1] dit Papier wird unterschriewen der wird en doll Geld verlieren* (USA-37; f/43/MLG)
if he […] this paper ~~will~~ sign he.ANADEICTIC will a great money lose

Tokens (7-51c+d) feature anadeictic *der* ('he') instead of non-anadeictic *her* or *hei* ('he') and tokens (7-51b+d) show syntactic disintegration. The two disintegrated tokens are evidence for the informants' possibility to interpret the proposition of the matrix clause not just as a mere consequence of the proposition of the conditional clause. What they do in these tokens is to assert the fact of losing money as the central proposition of their utterance. This does not mean that the informants do not link the fact that the subject loses money to his signing a certain contract, but they allot more communicative importance to the consequence than to the cause. With the results of Table 7-47, it is possible to connect the possibility of independently asserting the proposition of the matrix clause with the listener's rhematically re-orientation by means of anadeictic *der* (cf. ZIFONUN et al. 1997: 555), an element, which AUER (2007: 101) calls a rhematic personal pronoun. We have already mentioned KÖNIG and VAN DER AUWERA (1988: 126), who connect syntactic disintegration with assertive emphasis (in concessive sentence compounds). The preference for *der* in this context is very fitting. LARREW (2005: 159) says that anadeictic pronouns are used in clauses which function as comments to other clauses and a comment is obviously an asserted proposition. In Section 4.6.1, we also mentioned LENERZ (1993: 130), for whom *ihm* cannot autonomously refer to individuals in the discourse due to the lacking {d-}-segment. A matrix clause containing an asserted proposition obviously constitutes an autonomous context. The mismatch between this autonomy and *her*/*hei* may be the reason for the fact that a token like (7-51b) is very rare indeed.

In any case, the separate assertion of the proposition of the matrix clause seems to require anadeixis and phonological weight. In sentence <11>, only nine translations feature *der* in the matrix clause (no resumptive sentence compounds included). Five of these subject pronouns follow disintegrated conditional clauses (55.6%). Token (7-51b), however, is the only token of 92 tokens with *hei*, in which this non-anadeictic subject pronoun appears after a disintegrated conditional clause (1.1%; χ^2 (1, n=101) = 43.5; p=0*** / Phi: 0.66 / 1 cell (25%) with less than 5 expected tokens / Fisher's Exact: p=0***). Interestingly, the marked nature of (7-51b) is stressed by a short pause between the two clauses and a somewhat prolonged pronunciation of the subject pronoun. In SG, stressed *er* (‘he’) can gain a deictic quality comparable to *der*. This may also be the case here. The impact of the matrix clause subjects *daut*, *keiner*, and *der* can also be shown by cases of self-repair:

stimulus <17> English: **If he really killed the man, nobody can help him**

(7-52) *if der ap ierns den Mensch todgemeak haf kann- keiner kann den helpen* (USA-78; m/20/E>MLG-71%)
if he in earnest the <u>person</u> killed has can- nobody can him.ACC help

stimulus <15> Spanish: **Si tiene que vender la casa ahora, se va a poner muy triste**
English: If he has to sell the house now, he will be very sorry

(7-53) a. *wann hei daut Hüs nü vondaag soll verköpen [0.4] w- [0.8] daut wird ihm ganz trürig meaken* (Mex-20; f/34/MLG)
if he the house now ~~today~~ <u>shall</u> sell […] w- […] this will him very sad <u>make</u>

b. *wann der mut sin Hüs verköpen dann- nü [0.6] der- dann wird der- daut wird sehr trürig bliewen* (Mex-91; f/61/MLG)
if he must <u>his</u> house sell ~~then~~ now [0.6] ~~he~~ ~~then~~ ~~will~~ ~~he~~ <u>this</u> will very sad <u>stay</u>

stimulus <14> English: **If he opens the door, he will be very surprised**

(7-54) *if der dät die Tür upmeaken wird der sehr- [0.6] he- [0.3] der wird sick verfieren* (USA-65; m/22/E>MLG-57%)
if he ~~does~~ the door open-make will he.ANADEICTIC very […] he.NON-ANADEICTIC […] he.ANADEICTIC will himself frighten

The reader may remember that six tokens with matrix clauses started with the sequence *dann keiner* (‘then nobody’; cf. (7-45)). These tokens were not included in the analyses of Section 7.3. The reason for this was that they do not qualify as instances of self-repair since their production did not show an intonational correlate for such an interpretation (the features mentioned in Footnote 285 in this chapter do not qualify). Due to this, their classification as either a case of disintegration or a case of resumption is problematic. This is different in the tokens presented in (7-52) through (7-54). Three of the four tokens were included in the calculations of Table 7-47, since the intonation contour clearly signals a repair. Only token (7-53b) was excluded since too many vacillations occur. The informant stars the matrix clause with *der*, changes to a resumptive element *dann* only to restart with *daut*.

In (7-52), the informant commences the matrix clause with the finite verb *kann* (‘can’; 3rd person singular). The moment he reaches this element, he seems to feel grammatical unease preferring to restart the matrix clause with the indefinite pronoun *keiner* (‘nobody’). Interestingly, only a clear intonational break signals the restart; there is no pause between *kann* and *keiner*. Token (7-53a) is similar to (7-52) in that the informant has already started pronouncing the finite verb of the matrix clause. One may say that the feeling of unease occurs earlier in this case since this informant already begins her repair after the first segment of *wird* (‘will’; 3rd person singular). In her case, this segment is preceded and followed by pauses representing a process of mental recalculation.

Especially interesting is token (7-54), in which the informant has already pronounced three words of the matrix clause when he senses a problem. The problem may be connected both to the deictic, morphological complex matrix subject *der* and to the fact that the conditional clause is a rather rare V2-clause, a V2-clause with the raising-unfriendly finite verb *dune* (‘do’) (cf. Section 5.1.3). Both these characteristics increase the probability of a disintegrated conditional clause. The informant, therefore, restarts the matrix clause with the subject pronoun. He first does not only change the linearization of the matrix clause, but also choses *he* instead of *der*. This excessive repair may be caused by the high degree of perceived non-well-formedness of the first attempt. The first repair thus leads to a second problem since the non-anadeictic personal pronoun *he* does not fit the disintegrated conditional clause. Eventually, the second repair solves this problem. The informant now does not repair the sequence anymore, but the shape of the subject pronoun.

The strong influence of matrix clause subjects like *daut*, *keiner*, and *der* can also be seen in the fact that there are no cases where an informant repairs the disintegration of a conditional clause by restarting the matrix clause with the finite verb or with a resumptive pronoun. Aside from this, there is more evidence showing the affinity of deictic and morphologically complex pronouns to disintegration. We have already mentioned that five tokens of disintegration had to be excluded from the analysis of Table 7-47 due to the fact that they started with an object pronoun. Four of these five tokens commence with the anadeictic object pronoun *dem* (‘him’; cf. (7-55a)), only one starts with non-anadeictic *ihm* (‘him’; cf. (7-41d), here repeated as (7-55b)).

stimulus <15> English: **If he has to sell the house now, he will be very sorry**

(7-55) a. *if der nü- daut Hüs nü*[295] *mut verköpen dem wird daut sehr schod sein*
(USA-78; m/20/E>MLG-71%)
if he ~~now~~ the house now must sell him.ANADEICTIC will this very unfortunate be

b. *wann hei daut Hüs nü betohlen soll [0.3] ihm würd daut trürig meaken*
(Mex-40; f/33/SG>MLG-86%)
if he the house now <u>pay</u> <u>shall</u> […] him.NON-ANADEICTIC would <u>it</u> Ø sad <u>make</u>

In spite of all these indications for the important role of deictic and/or morphological complex subject pronouns, other explanations are possible, at least for *der* and *keiner*. For completeness sake, we will offer these alternative explanations, first for *der*, then for *keiner*. With regard to *der*, we have to ask whether the informants really use this form in order to assert a particular proposition or whether its use just constitutes a personal preference for certain morphological forms. In this case, the fact that *der* appears frequently in disintegrated sentence compounds could be a simultaneous, but unrelated coincidence. Table 7-48 shows that these possibilities should not be dismissed prematurely. After calculating each informant’s share of anadeictic *der* in all tokens with either *her* or *der* in the matrix clauses of conditional sentence compounds, a comparison with the preference for *her* or *der* in four other contexts was carried out. Table 7-48 shows the results for the 291 informants for which this share could be calculated in four to eight conditional sentence compounds. The four contexts

[295] Although this is not the topic of the present section, the self-repair after *nü* (‘now’) in (7-55a) is a nice example for the fact that the Mennonite informants also ponder the sequence of adverb and ObjNP.

for which we will check a possible parallel behavior are subject pronouns in the dependent clause of conditional and complement sentence compounds, subject pronouns in the matrix clause of complement sentence compounds, and object pronouns in the matrix clause of sentence <17> *If he really killed the man, nobody can help **him***. The four blocks of Table 7-48 represent the four contexts, the line *der* the informants' average share of *der* in the matrix clauses of conditional sentence compounds. Naturally, this means that the shares of some/most informants in the first three blocks appear several times.

Table 7-48: Share of anadeictic *der* in matrix clauses of conditional sentence compounds separated by the informants' use of *her*/*ihm* or *der*/*dem* in four contexts

	conditional clauses		**matrix clauses of complement compounds**		**complement clause**		**sentence <17> matrix clause**	
	her	*der*	*her*	*der*	*her*	*der*	*ihm*	*dem*
n (tokens)	2148	408	271	18	1205	257	154	36
der	7.1%	42.1%	10.4%	46.9%	8.2%	34.1%	7.4%	23.5%
	F (1,2554) = 1353.1 p=0***		F (1,287) = 57 p=0***		F (1,1460) = 357.6 p=0***		F (1,188) = 21.7 p=0***	
her	92.9%	57.9%	89.6%	53.1%	91.8%	65.9%	92.6%	76.5%

Informants who use *her* and *ihm* in the four contexts have average shares of *der* in the matrix clauses of conditional sentence compounds ranging from 7.1% to 10.4%. The informants who use *der* and *dem* instead show much higher shares between 23.5% and 46.9%. These highly significant differences obviously do not mean that informants use either one or the other form across-the-board, but they definitely prove that informants have clear preferences for one of the two forms regardless of concrete contexts. The preference for anadeictic *der* or non-anadeictic *her* may then further or hamper the informants' choice of disintegrated conditional clauses. In the case of *der*, its phonological weight and its anadeictic power furthers its localization in the prefield of the matrix clause. One can find even more precise information with regard to anadeictic pronouns. Token (7-52) from sentence <17>, one of the examples for self-repair in the direction of disintegration, contains an anadeictic object pronoun in the midfield. The combination of such pronouns and disintegration is no coincidence. The following tokens (7-56a-d) give examples for comparable constellations:

stimulus <18> English: **If he stole the book, I won't trust him anymore**

(7-56) a. *wann her daut Bük gestohlen haft wer ik ihm nich mehr trüen* (USA-36; m/28/E>MLG-71%)
If he the book stolen has will I him.NON-ANADEICTIC not anymore trust

b. *wann her daut Bük haft gestohlen ik wer ihm nich mehr vertrüen* (USA-41; f/42/MLG+E)
if he the book has stolen I will him.NON-ANADEICTIC not anymore trust

c. *wann [0.5] der daut Bük gestohlen haft da wer ik den nich mehr trüen* (USA-42; f/47/MLG+E)
if […] he the book stolen has ~~then~~ will I him.ANADEICTIC not anymore trust

d. *wann der daut Bük gestohlen haf ik trü den nich mehr* (USA-34; m/33/S>MLG-Ø)
if he the book stolen has I trust him.ANADEICTIC not anymore

The translations in (7-56a+b) feature non-anadeictic *ihm* (‘him’) in an integrated and a disintegrated sentence compound. Both subject pronouns in the conditional clauses are non-deictic as well, i.e. *her*, not *der* as in (7-56c+d). In these latter tokens, the matrix clause contains fitting anadeictic *den* (‘him’ in the accusative) in a resumptive and a distintegrated sentence compound. The distribution of these object pronouns is presented in Table 7-49, which is based on stimulus sentences <17> and <18>:

Table 7-49: Distribution of different types of object pronouns in sentences <17> and <18> separated by three modes of the matrix clause

	integrated complement compound	**resumptive complement compound**	**disintegrated complement compound**
n (tokens)	178	237	38
ihmlihn	149	183	22
	83.7%	77.2%	57.9%
χ^2 (2, n=453) = 12.5; p=0.002** / Cramer’s V: 0.17 / 0 cells with less than 5 expected tokens			
demlden	29	54	16
	16.3%	22.8%	42.1%

Table 7-49 shows that the affinity of anadeictic pronouns for distintegration also covers object pronouns in the midfield of the matrix clause. This means that neither their syntactic function nor their precise position are decisive in terms of the type of matrix clause in which they occur. However, even with all information from Tables 7-47 through 7-49, it is still hard to say whether anadeictic pronouns lead to more disintegration, or whether disintegration leads to more anadeictic pronouns, or whether these phenomena are independent from each other. In any case, the fact that there are integrated sentence compounds with anadeictic pronouns in the matrix clause and non-anadeictic pronouns in disintegrated sentence compounds makes it clear that the informants do have some liberty with regard to these two phenomena.

The results of Table 7-49 also shed further light on the role of the subject pronoun *ik* (‘I’). This pronoun causes a weak increase of the probability of disintegration (cf. Table 7-47). As most tokens with *ik* come from sentence <18>, it is worthwhile checking whether this effect may actually be caused by anadeictic object pronouns rather than by the subject pronoun itself. In the 94 tokens with *ik* and *ihm* as in (7-56a+b), only five tokens, i.e. 5.3%, show disintegration. This share rises to 25% (5 out of 20 tokens) for the combination of *ik* and *den* as in (7-56c+d) (χ^2 (1, n=114) = 8; p=0.005** / Phi: 0.27 / 1 cell (25%) with less than 5 expected tokens / Fisher’s Exact: p=0.014*). We can judge from this that the influence of *ik* either does not exist or is artificially increased by the simultaneous presence of anadeictic object pronouns. Unfortunately, only sentences <17> and <18> present object pronouns. Therefore, we will not include this variable in the regression analyses.

After having offered possible alternative explanations for the anadeictic pronoun *der*, we now come to *keiner* (‘nobody’). First of all, unlike the case of *ik* and (non-)anadeictic object pronouns, the influence of *keiner* on disintegration in sentence <17> does not depend on deictic and non-deictic object pronouns. However, in addition to the morphological complexity of *keiner*, the informants' emotional involvement may play a certain role in that sentence. GÜNTHNER (1999: 231–232) mentions this factor:

> Sie [grammatical resources of two relatively independent propositions; G.K.] erlauben es nicht nur, Hauptsatzphänomene in die Apodosis zu integrieren, sondern auch den beiden Teilsätzen eine stärkere prosodische Eigenständigkeit zu verleihen und den Bereich der Rahmungshinweise für die Folgeäußerung auszubauen. Folglich erstaunt es auch nicht, dass diese Konstruktionen speziell in Kontexten eingesetzt werden, in denen Emphase bzw. affektive Aufladungen kontextualisiert werden.[296]

The term *affectively charged proposition* (*affektive Aufladung*) matches – without any doubt – sentence <17> *If he really killed the man, nobody can help him*, by far the most dramatic stimulus sentence.[297] The emotional involvement and the consequent desire to assert the two propositions of sentence <17> independently may also have led to the high probability of disintegration in Table 7-47.

Table 7-50 enlarges the data base by opening the analysis for tokens with conditional clauses with one, three, and four verbal elements and for tokens with indefinite ObjNPs/PPs. This enlargement implies that the raising and scrambling indexes have to be used instead of the type of verb cluster. As *dü* ('you' singular) now shows some variation, tokens with this matrix clause subject can be included without endangering the validity of the results. Furthermore, one new categorical variable is included, the number of verbal elements in the conditional clause. The intuition behind this addition is twofold: On the one hand, one could assume that production and parsing of a dependent clause in the prefield becomes more difficult the more complex, i.e. the heavier, this clause turns out to be.[298] The other reason is that KÖNIG and VAN DER AUWERA (1988: 111–112) claim that the (subjunctive) mood of conditional clauses is one of five factors which allow the separate assertability of conditional and matrix clause. As all fifteen tokens with four verbal elements and 194 out of 218 tokens with three verbal elements (89%) are found in the translations of stimulus sentences <19> *If he really had wanted to write this letter, he would have found the time* and <20> *If he could have repaired the car, he would have done it*, the vast majority of the tokens with more than two verbal elements are indeed counterfactuals appearing in the subjunctive mood. The following variables enter the analysis:

---

[296] Translation by G.K.: They [grammatical resources of two relatively independent propositions; G.K.] do not only allow main clause phenomena in the apodosis, but also impart a stronger prosodic independence to the two clauses of the sentence compound. Furthermore, they expand the area of contextualization cues for the subsequent utterance. Due to this, it is not surprising that these constructions are particularly frequent in contexts in which emphasis or affectively charged propositions are contextualized.

[297] The interviewer himself felt the dramatic content of this sentence rather vividly. Four of the interviews in Mexico were carried out in the prison of Ciudad Cuauhtémoc, where some Mennonites were jailed because of drug-related crimes. One of these informants was a convicted murderer. Sitting alone in a prison cell with this person and reading aloud the sentence *Si realmente mató al hombre, nadie lo puede ayudar* ('If he really killed the man, nobody can help him') constituted the biggest fieldwork challenge imaginable.

[298] We again measure complexity by means of the number of verbal elements. In spite of the fact that more verbs are supposed to imply more complexity, we do not enter this variable as a metrical variable, since there are only four possible levels (1 to 4 verbal element(s)).

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Subject of the conditional clause (4 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*

Subject of the matrix clause (6 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*; *daut*; *keiner*

Number of verbal elements in the conditional clause (4 variants; contrasting variant *1 verbal element*): 1 verbal element; 2 verbal elements; 3 verbal elements; 4 verbal elements

Metrical variables

Age

Competence in MLG

Competence in the majority language (English, Spanish, or Portuguese)

Competence in SG

Raising index

Scrambling index

The analysis comprises 1,183 translations. 140 tokens feature disintegrated conditional clauses (130 from North America). There is one correlation between the metrical variables surpassing an r-value of 0.4. This correlation again concerns the competence in SG and the raising index. This time, the value is somewhat lower though; it is -0.494 (co-variation of 24.4%). The analysis was again not adjusted for this correlation. As in Table 7-41, the problem of disintegrated conditional clauses with regard to the formation of the raising and the scrambling index exists again. This was no problem in Table 7-47, since the indexes did not enter that model, but here, slight skewing is possible. The huge impact of the raising index in Table 7-50, however, cannot possibly result exclusively from this skewing.

Table 7-50: Binary logistic regression analysis (method: stepwise forward conditioned) for integrated and disintegrated conditional sentence compounds

subject matrix clause	raising index	number of verbal elements	age	sex	competence in SG
Wald: 133.8***	Wald: 44.4***	Wald: 26.3***	Wald: 18.4***	Wald: 13.9***	Wald: 8.4**
daut (58.9***)					
keiner (33.8***) der (27.2***)	**raising** (23.3***)	4 verbs (23.6***)			
ik (2.8**)		3 verbs (6.5***)	**age** (1.04***)		
her dü		**1 verb** 2 verbs		**men**	
				women (0.39***)	**SG** (0.88*)

The model selects six of the ten independent variables. Together, they “explain” 51.3% of the variance with regard to the shape of the matrix clause (Nagelkerkes R-square: 0.513; Cox & Snell R-square: 0.265). The three variables *subject of the matrix clause*, *age*, and *competence in SG* were already selected in Table 7-47 and exhibit comparable behavior. The subject of the matrix clause maintains its position as the most powerful predictor variable. One slight deviation is that the newly included deictic personal pronoun *dü* ('you' singular) does not behave differently from *her* ('he') and that *ik* ('I') now shows an even more modest probability increase for disintegrated conditional clauses (2.8 instead of 6 in Table 7-47). With the information presented after Table 7-49, it becomes even more improbable that *ik* really causes disintegration. Additionally, the increase in probability for disintegration rises for the other subjects, namely *daut*, *keiner*, and *der* (from 24 to 44.5 in Table 7-47 to 27.2 to 58.9 here). This, too, suggests that morphological complexity of the subject pronoun is more important than mere deixis.[299]

The variable *sex* is selected for the first time in Chapter 7. The probability of women using disintegration is 2.6 times smaller than for men (1:0.39). As the age distribution and the relationship with SG show that disintegration is not a prestige-driven innovation in MLG, this selection is sociolinguistically inconspicuous. We would not expect prestige-sensitive women to use SG-unrelated forms lacking in prestige. Nevertheless, sex is only the fifth most important predictor variable and it appears for the first time in the analyses of Chapter 7. We should, therefore, not overestimate this result.

The last two variables selected are not only more powerful than sex, they are also easier to explain. Raising again appears as an important factor. Although its selection does not astonish us, its huge influence may come as a surprise. With regard to resumptive elements, a 1-point-increase in the raising index increased the probability of *dann* ('then') by a factor of 2.5 (cf. Table 7-46); here, the same increase leads to a probability increase of disintegration of 23.3. This result mirrors the high concentration of disintegrated conditional clauses in the raising-friendly colonies of North America and Bolivia. The fact that scrambling is not selected again serves as evidence for the hypothesis that it is not scrambling, but superficial V2 which is decisive for the informants' syntactic behavior. With regard to clause linkage, scrambling-friendly informants will refrain from scrambling under suitable circumstances (cf. Summarizing Boxes 7-2 and 7-3 and Section 8.2.3).

Finally, our hunch with regard to the number of verbal elements in the conditional clause turned out to be correct. The more verbal elements there are the more probable the disintegration of the conditional clause is. We have already mentioned that the concentration of clusters with three and four verbal elements in the translations of the counterfactual stimulus sentences <19> and <20> may be taken as supporting evidence for the assumption that subjunctive mood is the reason for this selection. KÖNIG and VAN DER AUWERA (1988: 114) write:

[299] One could also argue in context- or gesture-related terms as VELDRE (2003: 124) does: "Die Demonstrativa sind hier – im Gegensatz zu den erst- und zweitpersonigen Personalpronomina – tendenziell an Zeiggesten oder an die Sichtbarkeit des Referenten für Sprecher und Adressat gebunden (vgl. *regarde celle-là*; *dammi questo*)." [Translation by G.K.: In contrast to the personal pronouns of the 1st and 2nd person, the demonstratives are rather bound to pointing gestures or to the referent's visibility for both speaker and addressee (cf. *regarde celle-là*; *dammi questo*).]

> A subjunctive consequent is separately assertable, not because there is no truth conditional dependence on the antecedent, but because such dependence is conveyed by the subjunctive mood itself and does not, therefore, have to be conveyed by the word order.

Although subjunctive mood co-occurs with disintegrated word order in MLG, KÖNIG and VAN DER AUWERA's reasoning seems to describe at least parts of the MLG data. The values of Table 7-50 indicate, however, that complexity is a better explanation than subjunctive mood. As the following tokens show, both synthetic clusters with three (cf. the conditional clauses in (7-57a+b)) and analytic clusters with four verbal elements (cf. the conditional clauses in (7-57c+d)) represent the subjunctive mood:

stimulus <19> Spanish: **Si él realmente hubiera querido escribir esta carta, habría encontrado tiempo**
English: **If he really had wanted to write this letter, he would have found the time**

(7-57) a. *wann her wirklich hat wollt diesen Brief schriewen würd her ook han Tied gefungen* (Mex-50; f/22/MLG)
if he really had wanted this letter write would he ~~PARTICLE~~ have time found

b. *wann her wirklich hat wollt diesen Brief schriewen hei würd han Tied gefungen* (Mex-41; m/37/MLG)
if he really had wanted this letter write he would have time found

c. *wann der wirklich würd han wollt den Brief schriewen dann hat her ook Tied datu gefungen* (Mex-103; m/62/MLG)
if he really would have wanted the letter write ~~then~~ has he ~~PARTICLE~~ time ~~this to~~ found

d. *wann hei würd han wollt diese Kart schriewen hei würd Tied gehot han* (Mex-76; m/24/MLG+S)
if he Ø would have wanted this letter write he would time had have

If the subjunctive mood were the decisive point, we would not expect a difference in the increase of probability of disintegrated conditional clauses depending on the actual number of verbal elements. Table 7-50, however, shows that clusters with three verbal elements in the conditional clause lead to an increased probability of disintegration of 6.5 in comparison to conditional clauses with one verbal element, while this increase is dramatically higher with clusters with four verbal elements (23.6). Interestingly, the impact of the number of verbal elements in sentences <19> and <20> is so strong that the informants are not even forced to opt for the anadeictic subject pronoun *der* in order to produce disintegrated conditional clauses. Tokens (7-57b+d) constitute eloquent proof of this. The fact that sentences <19> and <20> show the lowest share of the anadeictic subject pronoun *der* among the seven clauses with *he* in the English matrix clause (5% as opposed to 12.6% in the other 5 stimulus sentences with *he*), but the highest share of disintegrated conditional clauses (8.4% as opposed to 4.4%) shows that at least some uses of *der* are not the consequence of the informants' general preference for a particular morphological form, but are intimitely connected to the production of disintegrated conditional clauses. As for the data in Table 7-50, sentences <19> and <20> show *her* in the matrix clause in 48.6% of the 35 translations with disintegrated conditional clauses, while *der* appears in 34.3%. The remaining six tokens show subjects such as *ik* ('I') (2 tokens) or *daut* ('that') (3 tokens). These numbers are completely different for the other five relevant sentences. Here, *her* appears in just 20.8% of the 48 disintegrated sentence compounds, and *der* in 39.6%. Eighteen of the remaining nineteen tokens feature *daut* (‘that’) (37.5%), another {d-}-marked subject pronoun strongly increasing the probability for disintegration.

In the analyses of *daut*-deletion in complement sentence compounds in Section 7.1 (cf. Table 7-11), we did not include the number of verbal elements as an independent variable. If we do, no comparable results are found, i.e. a higher number of verbal elements in the complement clause does not lead to more clauses without complementizers. One may be tempted to explain this difference as a consequence of the different linearization patterns. As complement clauses in the MLG data set are postposed, one could claim that unlike in the case of preposed conditional clauses, preceding matrix clauses cannot be affected by the complexity of following dependent clauses. However, in spite of the fact that we have claimed that complementizer deletion and disintegration of conditional clauses can be compared with regard to their syntactic and pragmatic effects, one has to be careful with an explanation focusing on linearity. The structural mechanisms at work in unintroduced V2-complement clauses and disintegrated conditional clauses are so different that they are sufficient to explain the selection of the number of verbal elements in one, but not in the other clause type. First, *daut*-deletion affects an element of the dependent clause, while disintegration of conditional clauses affects both the conditional and the matrix clause. Second, we have already mentioned the assumption that the prefield is more integrated in the clausal structure than the postfield (cf. Section 6.1.1 and the discussion after examples (7-40a-c)). It, therefore, makes sense that the matrix clause reacts more sensitively to complexity in the prefield. After all, speakers of many languages, among them SG and English, prefer to put long and complex phrases at the end of the sentence compound.

In order to wrap up this section, one final phenomenon should be mentioned. In tokens (7-57a+c), the informants added the connective particle *ook* to the matrix clause, an element which does not appear in the stimulus version of any conditional sentence compound and which is hard to translate into English. Adding *indeed* to the matrix clause or putting additional stress on *would* may be possible equivalents. Be that as it may, two points are interesting with regard to the substantial occurrence of *ook* in 100 matrix clauses of MLG conditional sentence compounds. First, *ook* does not occur a single time in the translations of stimulus sentences <11> *If he signs this contract, he will lose a lot of money*, <14> *If he opens the door, he will be very surprised*, <15> *If he has to sell the house now, he will be very sorry*, and <16> *If he can solve this problem, he is very smart*. In these sentence compounds, one does find a clear temporal sequence between the proposition of the protasis, describing a punctual event, especially in sentences <11> and <14>, and the proposition of the apodosis, describing a consequential financial or psychological state. The lack of a temporal overlap means that the only connection between the two clauses is the default connection of most conditional sentence compounds, i.e. condition/cause and effect. A temporal or more specific conceptual overlap allowing for the appearance of connective devices in these sentence compounds does not exist. ZIFONUN et al. (1997: 1638) define connective particles in the following way:

> Die Hervorhebung durch das Konnektiv zeigt an, daß ein bestimmter (Teil-)Aspekt zu der Verknüpfung der beiden kommunikativen Minimaleinheiten Anlaß gibt. […] Der für die spezifische Relationierung verantwortliche Aspekt wird […] aus der vorangehenden KM [minimal communicative unit; G.K.] aufgenommen […].[300]

In sentences <19> *If he really had wanted to write this letter, he would have found the time* and <20> *If he could have repaired the car, he would have done it*, 73 of the 100 tokens with *ook* occur. In these sentence compounds, the necessary linking aspect allowing for the connective particle *ook* is the fact that the propositions do not only follow the default characteristic of conditional sentence compounds (condition/cause and effect), but show a specific temporal and conceptual overlap. Opening a door as in sentence <14> does not necessarily lead to a surprise, i.e. not the opening causes the surprise, but the things or persons that become visible after opening. Having time as in sentence <19>, however, is a necessary and causal precondition for writing a letter. THURMAIR (1989: 155–156) says that the SG cognate *auch* implies a causal connection between the previous utterance and the utterance containing the particle. The same is true for sentence <20>. Someone did not repair a car, because he did not know how to do this or did not have the time to do it. The two propositions are clearly related both temporally and causally.

One additional point with regard to counterfactual sentence compounds needs to be mentioned. In non-counterfactual sentence compounds such as <11> *If he signs this contract, he will lose a lot of money*, non-negated conditional and matrix clauses mean that something will happen if something else happens. Obviously, this sentence compound automatically implies its negated version. Something will not happen because something else does not happen. In non-negated counterfactual sentence compounds, negation is not just an option, but is always present. Non-negated counterfactual sentence compounds refer to an event which definitely did not happen. With regard to time, negation is also important. Not knowing something, not having time, or not wanting something as in sentence <19> do not describe punctual events. Therefore contrary to sentence <11>, there is no clear temporal sequence between the two propositions. It does, therefore, not come as a surprise that the four stimulus sentences which do not show a single occurrence of *ook* do not show any sign of negation, while five of the six clauses showing translations with *ook* are either negated conceptually or phonetically (cf. sentence <13> *If he quits his job, I wo**n't** help his family anymore*). The exception is sentence <12> *If he does his homework, he can have some ice-cream*, which does not show negation, but occurs four times with *ook*.

The last point we want to make with regard to *ook* is that none of the 100 tokens with this connective particle appears in disintegrated sentence compounds. Remember, sentences <19>

[300] Translation by G.K.: The emphasis by means of the connective element indicates that a particular (partial) aspect causes the relationship of the two communicative minimal units. […] The aspect responsible for the desire to stress this relationship […] is taken from the preceding minimal communicative unit […].

and <20>, which are most amenable to *ook*, also show above-average shares of disintegrated sentence compounds. If *ook* was compatible with disintegration, these sentences would offer the perfect setting. Nevertheless, the 73 translations with *ook* in these sentences only appear in integrated (14.3% of 237 tokens; cf. (7-57a)) and resumptive sentence compounds (13.1% of 297 tokens; cf. (7-57c)). There is not a single token with *ook* in the 49 disintegrated translations of sentences <19> and <20> (χ^2 (2, n=583) = 7.8; p=0.02* / Cramer's V: 0.12 / 0 cells with less than 5 expected tokens). The fact that connective particles cannot occur in the matrix clause of disintegrated conditional clauses truly makes disintegration the correct label for (7-57b+d).

7.4 Speaker-oriented analysis of disintegration and correlative elements

With regard to clause linkage, Sections 7.1 through 7.3 have shed quite some light on the interplay of informant-bound variables such as age, language competence, and general syntactic preferences, and clause-bound parameters such as the verb, the mode, and the subject of the matrix clause. In this respect, one must not forget that the subjects of the matrix and the dependent clause in conditional sentence compounds were not controlled for in the formation of the raising and the scrambling index. Aside from this, the mode and verb of the matrix clause in complement sentence compounds were not entirely controlled for (cf. point (e) in Section 4.1). This means that the indexes are slightly more skewed than described at the end of Section 4.1. Obviously, had we controlled for all these factors, we would never have obtained the necessary number of tokens in order to form these indexes in the first place. We nevertheless are absolutely confident that the informants' syntactic behavior has been described correctly within a tolerable margin of error. If this were not the case, the huge amount of phenomena satisfactorily explained by means of the two indexes would constitute a rather improbable stroke of luck.

Sections 7.1 through 7.3 have shown that the type of verb cluster in dependent clauses with two verbal elements and the informants' raising and scrambling behavior in all tokens are good predictors for the two overarching topics of Chapter 7, the weakening of clause linkage by means of clausal disintegration (complementizer deletion and disintegrated conditional clauses) and the strengthening of clause linkage by means of correlative elements in the matrix clause (correlates and resumptive elements). What we have not yet shown is that it is not only the same type of verb cluster or the same raising and scrambling behavior which is responsible for the parallels found, but that it is actually the same informants who exhibit a comparable behavior. The hypothesis that we are actually dealing with two overarching topics and not with four isolated syntactic phenomena would be further supported, if we were able to show this. However, before focusing on the informants, we will briefly summarize the results found in Sections 7.1 through 7.3. Table 7-51 presents the findings with regard to the type of verb cluster. In this table, we have brought together the information with regard to this factor, abstracting away from the other factors selected in three binary logistic regression analyses.

Table 7-51: Different types of verb clusters in dependent clauses in four phenomena analyzed in complement and conditional sentence compounds (cf. Tables 7-31, 7-45, and 7-47; cl.=clauses)

WEAKENING CLAUSE LINKAGE (+V2-clauses)		**STRENGTHENING CLAUSE LINKAGE** (-V2-clauses)	
complement cl. *daut*-deletion	**conditional clauses** disintegration	**complement clauses** correlates	**conditional clauses** resumptive elements
V2-clause	V2-VPR-variant (9.5***) non-V2-VR-variant (3.8***)	non-V2-VPR-variant (3.2*) non-V2-VR-variant (2.9**)	non-V2-VR-variants (1.8***)
	NR-variants non-V2-VPR-variant	**NR-variants** V2-VPR-variant V2-clause (*daut*-deletion)	**NR-variants** V2-VPR-variant non-V2-VPR-variant

The first column in Table 7-51 differs from the other three columns in that *daut*-deletion obviously does not show any variation with regard to the position of verbal elements. Unintroduced dependent clauses are structural V2-clauses, i.e. their finite verb invariably occupies the head position of CP. The V2-characteristic is decisive though since it is arguably the most important indication of weakened clause linkage. In this respect, *daut*-deletion can be compared to disintegration of conditional clauses with the V2-VPR-variant. Conditional clauses with this variant cause a huge increase in the probability of disintegration in comparison to clauses with the contrastive NR-variants (bold print). With regard to the Wald-value, the type of verb cluster is the second-strongest out of four selected predictor variables together explaining 43.3% of the extant variation (cf. Table 7-47). The only problem in this analysis is that the VR-variant also shows a probability increase albeit a much smaller one (unexpected results in Table 7-51 are shaded). This last point must be qualified though since we have shown in the discussion of Table 7-47 that the impact of the VR-variant is downgraded to a mere statistical tendency when we focus on the North American and the Bolivian colonies, the colonies with substantial shares of disintegrated conditional clauses.

While the weakening of clause linkage is thus indicated by a higher probability of dependent V2-clauses, the strengthening of clause linkage is signaled by a higher probability of dependent non-V2-clauses. This picture is perfectly developed with regard to correlates in complement sentence compounds (3rd column of Table 7-51). Both raised non-V2-cluster variants (VR-variant, non-V2-VPR-variant), but neither the V2-VPR-variant nor clauses with complementizer deletion, increase the probability of the correlate *daut* in comparison to the NR-variants. The type of verb cluster is selected as third-strongest out of five predictor variables with an "explained variance" of 42.2% (cf. Table 7-31). The scenario for resumptive elements is comparable although the picture is not as clear-cut as in the case of correlates. First, the "explained variation" is much lower with 10.6% (the type of verb cluster shows the third-highest Wald-value out of four selected predictor variables; cf. Table 7-45); second, the non-V2-VPR-variant unexpectedly does not cause a significant increase in resumptive elements. However, the two frequent raised cluster variants, the VR-variant and the V2-VPR-variant, behave identically in resumptive elements and in correlates.

Table 7-52 summarizes the results with regard to the informants' general syntactic behavior, i.e. the impact of the raising and the scrambling index. In all these analyses, more tokens could be included than in the analyses of Table 7-51, since neither the number of verbal elements nor their precise linearization are taken into account. The reasoning behind this procedure is that Chapter 5 has shown that there exists a strong interrelationship in the linearization preferences of each informant type regardless of the actual number of verbal elements. This means that the differences in the verbal sequences are largely represented by the raising and the scrambling index.

Table 7-52: The informants' raising and scrambling behavior with regard to four phenomena analyzed in complement and conditional sentence compounds (cf. Tables 7-11, 7-39, 7-46, and 7-50)

WEAKENING CLAUSE LINKAGE		**STRENGTHENING CLAUSE LINKAGE**	
complement clauses *daut*-deletion	**conditional clauses** disintegration	**complement clauses** correlates	**conditional clauses** resumptive elements
raising (5.2***)	**raising** (23.3***)	**raising** (2.2**)	**raising** (2.5***) **scrambling** (1.8**)

All four phenomena are influenced by the informants' raising behavior. For complement sentence compounds, we could show that this fact crucially enlarges the variation pool of raising-friendly informants (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3). With regard to complementizer deletion (1st column), raising is the third-strongest of four predictor variables, together explaining 47.6% of the extant variation (cf. Table 7-11). The scrambling index is not selected. However, the scrambling index is selected (third-strongest predictor value of four; 43.6% of "explained variation"; cf. Table 7-13) when one only investigates the North American tokens. Scrambling-unfriendly informants in North America have a higher probability for complementizer deletion than scrambling-friendly informants. This may initially look like a problem, since we have said that scrambling-friendly informants apply scrambling flexibly according to the necessities of clause linkage in introduced dependent clauses (cf. Summarizing Boxes 7-2 and 7-3). Moreover, it was claimed that scrambling-friendly informants would encounter a perfect world in tokens with complementizer deletion, since complementizer deletion would allow them to scramble and still produce V2-clauses (cf. Summarizing Box 6-1). At second glance, however, things turn out to be less problematic since, on the one hand, the Wald-value for scrambling in North America is only 5.8* as compared to 101.6*** and 47.4*** for the verb and the mode of the matrix clause. On the other hand, the fact that it is predominantly North American scrambling-unfriendly informants that indulge in the use of both the V2-VPR-variant (their typical cluster variant) and structural V2-clauses by means of complementizer deletion supports another central hypothesis of our analysis, namely the perceptional similarity of superficial and structural V2 (cf. In-Depth Analysis 7.1.4.3). In the case of disintegrated conditional clauses, things are clearer. The impact of raising is huge; raising is the second-strongest of six predictor variables, together explaining 51.3% of the variance (cf. Table 7-50). Scrambling is not selected. This coincides with our expectations since the unscrambled V2-VPR-variant is the only way to signal syntactic disintegration in introduced conditional clauses. Thus if scrambling-friendly informants want to produce a V2-clause, they have to refrain from scrambling.

With regard to resumptive elements (4th column of Table 7-52), both raising and scrambling are selected. Raising is the third-strongest (Wald-value of 30.8***) of five predictor variables explaining 10.8% of the extant variance (cf. Table 7-46); scrambling is the least-strong predictor variable selected (Wald-value of 11.6**). One may explain the selection of scrambling in this case by the fact that – unlike in the case of disintegration of conditional clauses – the appearance of correlative elements matches a non-V2-variant like the VR-variant well. Scrambling-friendly informants can, therefore, follow their syntactic inclination. Table 7-52, however, also shows that scrambling is not selected in the case of correlates for which the same argument holds. Here only raising is selected as fifth out of six selected predictor variables covering 31.4% of the extant variation (cf. Table 7-39).

In any case, Table 7-52 shows that raising is important in all four analyses, while scrambling is only selected once in the analyses of all tokens and in this one case its contribution is minimal both with regard to its rank and with regard to the “explained variance”. We thus conclude that the necessity to indicate the strength of clause linkage is more important to raising- and scrambling-friendly Dutch-type informants than their desire to scramble. This explains the minor role scrambling plays in Table 7-52 and the major role the V2-characteristic plays in Table 7-51.

Having summarized the results of Sections 7.1 through 7.3, we can now focus on individual informants. In order to do this, we will check (i) whether the informants who produce complementizer deletion in complement sentence compounds also produce disintegrated conditional clauses and (ii) whether the informants who use resumptive elements in conditional sentence compounds also use correlates in complement sentence compounds. This approach is slightly different from the application of the raising and the scrambling index. The hypothesis behind this application is that informants that exhibit comparable values for raising and scrambling also show a comparable behavior in other syntactic contexts. Now, we go one step further by comparing the behavior of actual speakers and not just the behavior of speakers with comparable syntactic preferences. The direction of the comparisons in (i) and (ii) is defined by the frequency of the phenomena in question. This means that the new independent variables are the informants’ behavior with regard to complementizer deletion (more frequent than disintegrated conditional clauses) and the informants’ behavior with regard to resumptive elements (more frequent than correlates). We will not be able to use any metrical variables in the following analyses since the new independent variables correlate with many of them. Age, competence in SG, raising, and scrambling were selected in one or both analyses (cf. Tables 7-11 and 7-46). We are thus stricter than in the case of complementizer deletion in Table 7-39. There is, however, a crucial advantage to this stricter procedure, namely the substantially higher number of analyzable tokens. This number is higher since we can now use tokens for which we do not possess the informants' language competence levels or their raising or scrambling values.

The first regression analysis deals with syntactic disintegration. The dependent variable is the disintegration of conditional clauses. In order to add the informants' behavior with regard to complementizer deletion as an independent variable, the informants were grouped into five groups ranging from 0% of complementizer deletion (group label ++*daut*) to 59.4% of complementizer deletion (group label --*daut*). The precise average for each group can be found in the listing of variables. The differences between these figures are so big that possible skewing effects due to the predominance of certain linguistic constellations (e.g., the verb and the mode of the matrix clause) in certain groups is negligible. These possible skewing effects were also the reason for forming groups instead of using each informant's precise share of complementizer deletion as a metrical variable. The following five categorical variables enter the analysis:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Subject of the conditional clause (4 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*

Subject of the matrix clause (6 variants; contrasting variant *her*): *her*; *ik*; *dü*; *der*; *daut*; *keiner*

Number of verbal elements in the conditional clause (4 variants; contrasting variant *1 verbal element*): 1 verbal element; 2 verbal elements; 3 verbal elements; 4 verbal elements

Complementizer deletion (5 variants; contrasting variant ++*daut*): ++*daut* (0%); +*daut* (11.7%); ±*daut* (22.9%); -*daut* (36.2%); --*daut* (59.4%)

The model comprises 1,446 tokens and selects four of the five variables. Together, they "explain" 39.5% of the variation between integrated and disintegrated conditional clauses (Nagelkerkes R-square: 0.395; Cox & Snell R-square: 0.211).

Table 7-53: Binary logistic regression analysis (method: stepwise forward conditioned) for integrated and disintegrated conditional sentence compounds including the informants' behavior with regard to complementizer deletion as independent variable →

subject matrix clause	complementizer deletion	number of verbal elements	sex
Wald: 167.1***	Wald: 46.1***	Wald: 36.9***	Wald: 9.2***
daut (33.4***)			
der (20***) keiner (18.6***)		4 verbs (21.9***)	
ik (2.6**)	--daut (6.3***) +daut (4.2***) ±daut (2.9***) -daut (2.1*)	3 verbs (7***) 2 verbs (2.3*)	

subject matrix clause	complementizer deletion	number of verbal elements	sex
her dü	**++daut**	**1 verb**	**men**
			women (0.55**)

Three of the four variables were already selected in Table 7-50. With regard to sex and the subject of the matrix clause, there is almost no difference. Only the subject pronouns *der* ('he') and *keiner* ('nobody') swap places. With regard to the number of verbal elements in conditional clauses, there is an additional difference between clauses with one and two verbs. As two verbal elements slightly increase the probability of disintegration by a factor of 2.3 in comparison to one verbal element, we have another hint that it is really complexity and not subjunctive mood which causes the selection of this factor. This result does not change when we take out the 59 tokens with finite *dune* ('do') plus an infinitive. As Section 5.1.3.1 revealed that *dune* can mark conditionality and as this conditionality can be equated to the counterfactuality of sentences <19> and <20>, the stability of the model with the reduced data set is important since it shows that complexity and not subjunctive mood is the decisive factor.

The crucial point in Table 7-53, however, is the selection of the groups formed by the informants' behavior in regard to complementizer deletion. By and large, this second-strongest factor confirms our expectations. All groups applying complementizer deletion increase the probability for disintegrated conditional clauses in comparison to the informants who never delete a complementizer. Furthermore, the group which shows the strongest tendency towards complementizer deletion also shows the highest probability increase for disintegration in conditional sentence compounds. This factor is 6.3. The other three groups exhibit factors between 2.1 and 4.2. They do, however, appear in reverse order. This is indeed unexpected, but it does not affect the general tendency of Table 7-53. We can thus say that informants who (do not) delete complementizers also (do not) produce disintegrated conditional clauses. Moreover, we can say that the informants who delete complementizers most frequently also disintegrate conditional clauses most frequently.

The second analysis is concerned with correlative elements. The dependent variable is the use of *daut* as a correlate, the new independent variable is the use of resumptive pronoun. For this variable, the informants are grouped into six groups with an average use of *dann* and its variants ranging from 0.5% (group label ---*dann*) to 99.5% (group label +++*dann*). The precise averages for the groups can again be found in the listing of variables. The differences between these figures are once more so big that possible skewing effects due to the predominance of certain linguistic constellations (e.g. the subject of the conditional clause) in certain groups is negligible. As the use of resumptive elements is a more frequent phenomenon than complementizer deletion, we can create six instead of five groups. Five categorical variables enter the analysis:

Categorical variables

Sex (2 variants; contrasting variant *men*): men; women

Mode of the matrix clause (4 variants; contrasting variant *negated question*): negated question; non-negated question; negated declarative; non-negated declarative

Verb of the matrix clause (6 variants; contrasting variant *weiten*): *weiten* (‘know’); *gleuwen* (‘believe’; in sentence <2> also *meinen*); *sehen* (‘see’); $sehen_{Modal}$ (‘can see’); *sagen* (‘say’); *sicher sene* (‘be sure’)

Complementizer deletion (2 variants; contrasting variant *+daut*): *+daut*; *-daut*

Use of *dann* (6 variants; contrasting variant *---dann*): *---dann* (0.5%); *--dann* (17.3%); *-dann* (42.8%); *+dann* (69.7%); *++dann* (87.1%); *+++dann* (99.5%)

The model comprises 2,511 tokens. Three of the five variables are selected as they significantly improve the “explained variation” of 26.5% (Nagelkerkes R-square: 0.265; Cox & Snell R-square: 0.164).

Table 7-54: Binary logistic regression analysis (method: stepwise forward conditioned) for the absence or presence of correlates in matrix clauses of nine complement sentence compounds (without sentence <1>; without the verbal construction *daop stone bliewe* (‘insist’)) including the informants’ behavior with regard to resumptive elements as independent variable

verb of matrix clause	**mode of matrix clause**	**use of *dann***
Wald: 98.2***	Wald: 40.5***	Wald: 40.4***
	+negated -question (2.1***)	+++dann (4.4***) +dann (3.9***) -dann (3.2***) ++dann (2.9***) --dann (2.6***)
weiten $\text{sehen}_{\text{Modal}}$	**+negated** **+question** -negated +question	**---dann**
sehen (0.59*) gleuwen (0.23***)	-negated -question (0.57*)	
sagen (0.04**) sicher sene (0.03***)		

With regard to the role of the verb and the mode of the matrix clause, there is no change whatsoever to Table 7-39. The Wald-value of the variable which describes the preference for *dann* is virtually identical to the one of the mode of the matrix clause. This factor follows our expectations almost completely. The informants who use resumptive elements almost across-the-board exhibit the highest increase in the probability of *daut* as a correlate in comparison to the informants who hardly ever use resumptive pronouns. The factor is 4.4. All other groups that use resumptive pronouns also show probability increases which range from 2.6 to 3.9. Only the group *++dann* is not ranked exactly as expected. With this result, it is clear that (non-)users of resumptive elements in conditional sentence compounds are largely identical to the (non-)users of correlates in complement sentence compounds.

With the results from Tables 7-53 and 7-54, the central assumption of Chapter 7 is largely confirmed. This assumption is summarized in the following box:

Summarizing Box 7-5: Clause linkage in MLG

The informants who favor tokens with resumptive elements also favor tokens with correlates and the informants who favor tokens with complementizer deletion also favor tokens with disintegrated conditional clauses. With this, the four syntactic phenomena dealt with in this chapter can be grouped into two overarching topics, i.e. weakening of clause linkage (syntactic disintegration by means of complementizer deletion and disintegrated conditional sentence compounds) and strengthening of clause linkage (syntactic integration by means of correlates and resumptive elements).

8. Some Theoretical Considerations

With regard to clause linkage (syntactic (dis)integration), two crucial facts emerged in Chapters 6 and 7. First, speakers of MLG resort to syntactic mechanisms widely documented for European varieties of German, most prominently correlative elements, complementizer deletion, and disintegrated conditional clauses. This comparable behavior constitutes an important indication for the validity of the MLG data set and this validity supports the second, less familiar fact. Some speakers of MLG have mechanisms at their disposal which are not available to speakers of SG; they use, for example, complementizer deletion in novel contexts and disintegrated conditional clauses for novel functions. Even more important than these expansions is the fact that different types of verb clusters exist in MLG, but not in SG. As verb clusters play a central role in this research project, it is crucial that we succeeded in showing that verb projection raising and scrambling – in our view the two mechanisms responsible for the different types of verb clusters in MLG – are indeed central syntactic mechanisms. They explain many seemingly unrelated syntactic phenomena.

In spite of these findings, the reader may still feel a certain lack of a more fundamental discussion of theoretical issues. First and foremost, we have not yet shown conclusively that the labeling of raising- or scrambling-friendly and raising- or scrambling-unfriendly informants is more than a taxonomy with some explanatory power. Section 8.2, therefore, contains analyses which will tease out some more traits of MLG grammar(s) intimately related to the informants' raising and scrambling behavior. First hints to the existence of different MLG grammars could be found in Section 5.1.3.3 and in In-Depth Analysis 7.2.4.2. Contrary to this, Section 8.1 contains no new empirical analyses. It is dedicated to a theoretical discussion about the correlative elements analyzed in Sections 7.2 and 7.3. In this discussion, we will try to overcome another possible objection to the analyses carried out so far. Impressive as we deem the findings from these analyses, we have not yet related them to established theoretical frameworks, at least not in an entirely coherent way. One may well ask, for example, whether these findings can teach us anything about the explanatory power of such frameworks. Section 8.1 will, therefore, apply a usage-based model to the results of Sections 7.2 and 7.3 and compare the predictions of this model with general assumptions of system-based approaches.

8.1 Correlative elements in MLG: Structure dependency or syntactic projection

With regard to correlates in complement sentence compounds, one can ask the following questions: (i) Does the presence of a correlate cause the rise of non-V2-cluster variants in the dependent clause progressively (a possible case of syntactic projection) or (ii) does the speaker's preferred cluster variant, which itself can be seen as an expression of the degree of syntactic integration, regressively further or hamper the appearance of a correlate? A third question is whether we are dealing with the co-occurrence of an element and a sequential fact not dependent on linearization, but on a high degree of structural dependency?

The fact that we have dealt with two types of sentence compounds in Chapter 7, those with a postposed complement clause (Sections 7.1 and 7.2) and those with a preposed conditional clause (Section 7.3) complicates matters further. Despite their different position (preposed vs. postposed), despite their different nature (adverbial vs. complement clause), despite their different syntactic preferences (VR-variant in conditional clauses vs. V2-VPR-variant in complement clauses), and despite their different correlative elements (anaphoric elements like *dann* ('then') with some semantics of their own vs. katadeictic *daut* ('that') with no semantics whatsoever), we have detected striking syntactic parallelisms (cf. Table 7-51). These parallelisms are a first indication for the assumption that structure, not the linear order of matrix clause and dependent clause, is fundamental. In order to support this assumption, we will compare our basically system-based approach with a usage-based approach, more particularly with incremental or online syntax.

For usage-based linguists, grammar emerges from speech. We do not negate a connection between grammar systems and spoken language, but we deem it necessary to put the role of actual speech, i.e. of linguistic input, in its place. LIGHTFOOT (1999: 149) writes:

> Learners do not try to match the input; rather, they seek certain abstract structures derived from the input, looking only at structurally simple domains, and they act on this without regard to the final results. That is, a child seeks cues and may or may not find them, regardless of what the emerging grammar can generate; the output of the grammar is entirely a by-product of the cues that the child finds, and the success of the grammar is in no way based on the set of sentences that it generates, unlike in input-matching models.

Obviously, within a system-based framework one has to decide whether the output differences in the MLG translations are to be located in grammar proper or in a less central module. We will not be able to answer this question, but the amount of variation found especially in the North American colonies and the highly interrelated nature of different variable phenomena suggests the existence of different grammars. In a system-based approach, one could then surmise that the amount of variation in each of the colonies leads to the generation of individually different abstract structures which then form the cues for the growth of different grammars. Unfortunately, we do not have any data on language acquisition of MLG, so we cannot say anything more enlightening about this topic. We can, however, say a lot about language production.

In language production, one can also compare system- and usage-based approaches. A central issue here is how the conspicuous co-occurrence of different correlative elements and different serialization patterns found in the co-indexed dependent clauses can be explained. Are they based on different parameter settings in the grammar or do they occur online, as AUER (2005) suggests when analyzing the possibility of syntactic projections? In the following pages, we will first deal with general issues related to the idea of syntactic projections and then apply this concept to MLG correlative elements. AUER (2005: 32–33) puts the idea of syntactic projections in the wider context of the relationship of grammar and interaction:

> The counterproposal [to an analytical separation of grammatical and interactional structures; G.K.] put forward in this paper is based on the assumption that grammatical structure and interactional structure are much more intimately intertwined. In order to argue for this assumption, it is necessary to search for the underlying principles that are relevant in both domains. In this paper, I have argued that projection is such a principle.

Projection is defined as follows by AUER (2005: 8):

> By projection I mean the fact that an individual action or part of it foreshadows another. In order to understand what is projected, interactants need some kind of knowledge about how actions (or action components) are typically (i.e., qua types) sequenced, i.e., how they follow each other in time.

AUER's assumption sounds convincing in cases of verb-first conditional clauses, for which he (2005: 30–31) shows how certain grammatical constructions may have arisen from certain types of dialogic interactions (cf., however, the cautious statements by HILPERT (2010: 186–187) for this argument). Importantly, if we take the parallelism between interactional and grammatical projections seriously, we also have to search interactional projections that are linked to a determiner projecting a noun or a preposition projecting a noun phrase (these two examples appear in AUER 2005: 15). To us, it is unclear what kind of interactional projection could be connected to such local relationships.

Moreover, we have to ask why both prepositions and postpositions exist in the languages of the world. If we assume that the basic types of human interaction are comparable in all speech communities, we are forced to conclude that we should find the same serializations across-the-board. AUER (2005: 8) corroborates this hypothesis when he writes that "[i]nvestigating projection as a fundamental feature of language therefore forces us to foreground its temporality." Putting temporality and thus linearization first, we would like to know why speakers of languages with postpositions carelessly dispense with the projection advantages of prepositions, which guarantee an unambiguous and immediate syntactic projection. A preposition almost always projects a noun phrase (except in the rare and for a projection approach extremely problematic case of preposition stranding), whereas a noun phrase does not unambiguously project a postposition (unless the language in question has a special postpositional case as Hindi does). To make things worse, many languages that use postposition are also verb-final. Thus, the listener (and perhaps even the speaker) does not have a clue whether a postpositional phrase may be part of the verbal valency. These are precisely the arguments AUER (2007: 98–99) employs to explain the advantage of prepositions and verbs which surface to the left of their complements. Although AUER (2000b: 44–45) talks about bigger units – he speaks about constituents that "surpass a certain size or complexity" –, the general argument is the same:

> Die Gesprochene Sprache stellt sich auf diese Bedingungen mündlicher Kommunikation ein, indem ihre Grundeinheiten kleiner sind als die der schriftlichen, und indem sie Konstruktionstypen, die eine Prozessierung *gegen* die Zeit erfordern, vermeidet. Einschlägig sind hier vor allem

> Präferenzen für sog. rechts- im Vergleich zu sog. linksverzweigenden Konstruktionen, z.B. Relativsätzen oder Adjunkten, die jedenfalls gelten, wenn die zu verarbeitenden Konstituenten eine gewisse Größe bzw. Komplexität überschreiten.[301]

German modal or auxiliary verbs in V2 can be said to project clause-final nonfinite verbs, and certain introductory elements such as *daß* ('that') project a clause-final finite verb. In spite of such early and unambiguous projections, there could hardly be a less efficient way to communicate than giving the major semantic information (the nonfinite verb in the first case) or major syntactic and semantic information (finite and nonfinite verbs in the second case) at the end of a clause. AUER's (2005: 26–27) extract (10), part of which we present here as (8-1) with the original translation and all intonational characteristics, but without the original lining, clearly shows how difficult it is to maintain a verb-final syntactic project over a long time (but cf. also extract (6) on pages 21–22, where a speaker succeeds in maintaining her project):

(8-1) […] weil nämlich jetz das gymnasium eben mit anderen klassen (-) also von was=weiß=ich von (-) von der achten klasse oder wie das is oder siebte, oder so (-) und dann warn wir zu viele klassen,

'Because now the grammar school with other forms well with I don't know from the eighth form or whatever it is or seventh or something like that and then we were too many forms.'

In (8-1), the speaker starts a causal clause with factive *weil* ('because') projecting a clause-final finite verb which he never delivers although he finds himself in quite a comfortable situation since *weil*, the subject, a modal particle, and a prepositional object of the causal clause have already been produced. The speaker nevertheless loses sight of his project due to additional information (starting with *also von* 'well with' and ending with *oder so* 'like that'). Instead of finishing the causal clause after the interruption, the speaker concludes by starting a new clause with *und dann* ('and then'). It is very probable that an English speaker would have had a better chance to finish the entire syntactic project simply because his language is SVO, a fact which grants him at least two parsing advantages: First, due to the limitations of our working memory it seems to be a good idea to prefer unambiguous head-initial syntactic projects and to finish these projects as quickly as possible, not only in matrix, but also in dependent clauses. As *weil* or *because* head CPs and thus project a finite verb, this projection is closed much faster in English than in German.[302] Second, the fact that the important information included in the verb(s) appears early in English may lead to something that MÜSSELER (1995) would perhaps call *valency occupation*. The speaker/listener produces/hears a verb and thus the whole valency frame (the syntactic projection) of this verb

[301] Translation by G.K.: Spoken language adapts to the conditions of oral communication by keeping its basic units smaller than in written language and by avoiding construction types that require processing *against* time. In this respect, preferences for so-called right- compared to so-called left-branching constructions are pertinent, for example relative clauses or adjuncts. In any case, these preferences apply if the constituents to be processed surpass a certain size or complexity.

[302] German also seems to be at a parsing disadvantage compared to Dutch. BACH et al. (1987) argue that nesting dependencies as found in SG are more difficult to parse than crossing dependencies as found in Standard Dutch.

becomes activated and stays activated for some time.[303] In (8-1), such a valency occupation may have helped to resume the interrupted syntactic project. A *verbal occupation* caused by a noun phrase seems to be a less promising project. AUER (2005: 27; cf. also AUER 2000b: 44) explains this production problem in the following way:

> Since memory for form is much shorter than memory for content, there may be psycholinguistic reasons for which speakers do not usually succeed in keeping ongoing syntactic projects alive for a very long time.

Being so, speaking a SOV-language or employing postpositions seems to be a funny idea right from the start. Complementizer deletion or verb projection raising in MLG may be the speaker's reaction to the expounded parsing problem and this is an explanation we have given in Chapter 5. Furthermore, even the marked rule of having to produce some phonetic material in (the head position of) a German CP (either a complementizer or a finite verb; cf. PITTNER (1996) for interesting data on the development of C-visibility in German) may be caused by this parsing problem. After all, this rule forces the finite verb to surface earlier in root clauses. In spite of these seemingly "sensible" reactions of speakers of German, there are still many speakers of many languages who stubbornly stick to the cognitively hard way, i.e. to SOV. A solution to this apparent riddle may come from system-based approaches. In a speech given at the University of Cologne, Germany, CHOMSKY (2011) says (43:14 minutes):

> There is an old dictum of Aristotle's that *Language is sound with a meaning* – common sense dictum – but it seems it is not quite right; that it should be inverted: *Language is meaning with sound*.

If we understand *sound* as referring to what usage-based linguists[304] would call verbal interaction, it becomes clear that one of their central claims, namely that grammar is constructed by children heavily relying on input, must be wrong as most usage-based linguists – like ARISTOTLE – put sound first. If we follow CHOMSKY in putting meaning first, sound becomes secondary. CHOMSKY (2011) continues:

> To put it more precisely: The core of the language faculty appears to be a generative process that yields structured expressions that are interpreted by the thought system – conceptual-intentional system – while externalization to the sensory-motor system is a secondary process. Linear order or some kind of order is clearly required for externalization, that's a property of the sensory-motor system […] but it doesn't seem to adder into, at all into core semantic processes – processes of thought and planning – that just seems to use hierarchy, not order.

If sound is indeed secondary, it should not surprise us that spoken language is not only at odds with the grammar of more planned written language, but also with grammaticality

[303] MÜSSELER (1995) deals with the question of how readers/listeners identify the concepts anaphoric pronouns refer to. Besides the traditional analysis of a backward search process, he introduces the idea of a cognitively less costly activation process that he calls *pronominal occupation*. In this left-to-right process, a new concept automatically activates the fitting pronominal form(s).

[304] Usage-based approaches are called (language-)non-existence approaches by CHOMSKY (2011) because these approaches claim that there is no language-specific cognitive system in the human brain thus negating the very existence of Universal Grammar (and consequently of I-language).

judgments.[305] Meaning or rather the human way of thinking is – at least in CHOMSKY's (2011) opinion – just not made for spoken language, let alone for communication (at 46:40 minutes, CHOMSKY calls communication a peripheral aspect of language). Be this as it may, the mismatch between a mental and holistic entity like meaning (very roughly the proposition of a sentence compound/clause; perhaps comparable to AUER's (2000b: 47) "idea units") and the linear order of sound may explain some curious serialization facts. We will mention three of them:

(i) If meaning is holistic, one should perhaps not even try to divide it into components.[306] If we nevertheless do so, we must adhere to the assumption that propositional components do not show an intrinsic linearization order of action-, process-, or state-describing entities on the one hand (perhaps stored as verbs in the mental lexicon) and concrete or abstract concepts on the other hand (perhaps stored as nouns and adjectives). Neither should locally, temporally, or modally relational entities (perhaps stored as adpositions) and the concrete or abstract concepts they relate to show such an order. Sound, our primary externalization system, however, is linear and due to this, we end up with either VO or OV and with either prepositions or postpositions.

Obviously, not only usage-based linguists have to explain why OV and postpositions are anything but rare in the languages of the world. System-based linguists also have to do this. For them, however, the answer is straightforward. Order just does not matter, since meaning is not ordered linearly. The fact that phonetically realized elements that either represent concepts or grammatical relations have to appear in one of two possible orders is – in their view – just a fact of life, not more, not less. Important to note is that orally produced clauses (not turns!) tend to be short. If we accept that language production is the translation of meaning into linearly ordered sound sequences and language reception is the translation of these sound sequences into meaning, we have to accept linearization of sound as a physical necessity, but we do not have to accept linearization as a fundamental design feature of language. This does not mean that linear order does not have an influence on grammar.[307] Our

[305] In this respect, one may, for example, ask whether it is really social monitoring through prescriptive norms of prestigious (written) varieties that makes us bashfully admit our grammar "mistakes" whenever we are confronted with samples of our spontaneous speech. Could it not be that in this case we simply use a different cognitive system to evaluate our production data, namely our (linguistic) competence? The fact that we normally know immediately how things should have sounded is too curious a capability as to be explained away by the normative dominance of a legitimate language variety. Our grammaticality judgments may partly be influenced by linguistic heteronomy, but they are sure to also reflect our mental linguistic capacities, capacities which are far too refined to be explained as the sole product of a child listening to spoken language (cf., e.g., complex scope differences or the intriguing binding properties in FREY's (2011: 67) examples presented as (7-6a+b)).

[306] From the listener's point of view, this may be somewhat different, since the listener does not receive all information at once. He may thus have to puzzle meaning together bit by bit. There is an important question though, namely the question of how big these bits are. Is meaning actually built morpheme by morpheme or word by word or do we assume bigger units for meaning building?

[307] Some surface-sensitive phenomena in MLG (cf., e.g., In-Depth Analyses 5.1.1 and 5.2) and the typical iconic order of conditional sentence compounds (condition-consequence) support this assumption. However, not all cases of iconicity can be classified in this way. For example, the fact that V2-complement clauses are perceived as marking independence regardless of the structural derivation by which the finite verb ends up in second

findings (e.g., with regard to parsing-friendly *verb projection raising*), the research of LIGHTFOOT (1999), and the results of many linguists working in the usage-based frame show that such an influence does exist. It would definitely be a curious fact if thousands of years of communication by means of ordered sound sequences would not have changed grammar. Admitting this, however, does not mean that we have to admit that grammar is the sole consequence of input. If it were, we would expect many more similarities between the languages of the world, not just similarities on the rather abstract level CHOMSKY refers to, but on a very concrete level, namely in parsing-friendly head-initial linearization preferences.

(ii) SEILER (2015: 245) refers to an interesting communication-hampering fact of German. He writes that "German declarative main clauses obey a verb-second constraint: There is one (and only one) constituent position (SpecCP, the German prefield position) before the finite verb which must be filled." This syntactic rule utterly disrespects certain communicational needs. SEILER (2015: 246) comments: "From the perspective of communicative function one could easily figure out contexts where topicalization of two constituents would be appropriate […]." A rather similar constellation exists with regard to scopal necessities in wh-questions with two wh-words like ***Wer** sieht **was**?* ('Who sees what?'). The more LF-adequate sequence ****Wer was** sieht?* is impossible in German.

(iii) One of CHOMSKY's favorite examples for the importance of structure dependency is auxiliary inversion in a sentence like *Can eagles that fly swim?* In his Cologne talk, he (2011: 41:42 minutes) says:

> There are two concepts of minimal distance, which are competing. One concept is minimal linear distance, how close in the linear order are two things; that would relate the sentence to *Eagles that can fly swim*. A minimal structural distance relates it to *Eagles that fly can swim*, much more complex computational operation. Reason is that *eagles that fly* is a phrase so we get a structural distance giving a different answer than linear distance. And the question then reduces to why the language learner reflexively minimizes the property of structural distance rather than adopting the computationally far simpler property of linear distance or adopting both facilitating communication.

"Adopting the computationally far simpler property of linear distance" would solve any problem with syntactic projections, which are not immediately satisfied. Such projections would simply not exist. The reality of languages such as German is very different though and therefore, CHOMSKY's (2011) explanation is to be preferred. He (42:48 minutes) says that "minimal structural distance reigns unchallenged – it's just something that the infant automatically applies always." If "minimal structural distance reigns unchallenged," the rules of verbal syntax in German seem less absurd than their superficial consequences (sometimes V2, sometimes V-final; the discontinuous so-called verbal frame, and "stranded" clause-final negation particles when the negated verb occupies V2[308]). Infants exposed to German and

position (cf. In-Depth Analysis 7.1.4.3) is a different story, since it is not linear order, but the iconicity of the second position, a paradigmatic, not a syntagmatic concept, which is decisive.

[308] Take, for example, a completely normal sentence like *Die Frau **gibt** dem Mann das Auto morgen früh **nicht*** (gloss: the woman gives.VERB the man the car tomorrow morning not.NEGATION; 'Tomorrow morning, the woman will not give the car to the man').

adult native speakers of German just "know" that the verbs in the verbal frame belong together structurally, regardless of how distant they are superficially. The reason for this is that they calculate structural distance and not linear distance. Obviously producing or listening to German sentences is not always easy, even adult speakers sometimes experience problems in keeping track of the verbs (cf. (8-1) and AUER 2000b: 44). This, however, has to do with our precarious externalization system (e.g., its limited working memory), which may still not be perfectly adopted to the mutations that supposedly revolutionized our thought system roughly 100,000 years ago and eventually led to language. Granted, this is bad news, but it does not come as a surprise. Our spinal column and our knees are still not perfectly adapted to the not so new fashion of walking on two instead of on four limbs.

AUER (2007: 122) is of a different opinion. He sees the connection of sound and meaning and of meaning and sound as mutually adaptive:

> […] bis zum Beweis des Gegenteils erscheint es plausibel, dass unser Denken so funktioniert, dass es mit der fundamentalen Tatsache, dass Sprache ihren Ort in der Interaktion hat, optimal zurecht kommt; wie es auch umgekehrt plausibel ist, dass Interaktionsabläufe so strukturiert werden, dass die Interaktionsteilnehmer sie mit ihrer mitgebrachten kognitiven Ausstattung bewältigen können.[309]

On the one hand, AUER supposes that thinking functions in a way that can optimally handle the fundamental fact of interaction being the location of language. On the other hand, the structure of interaction is supposed to reflect the cognitive capabilities of interactants. What does this discussion mean for clause linkage in MLG? If we adopt a strictly linear argumentation, an incremental syntax, as AUER calls it, we have to analyze MLG sentences in his (2007: 97 and 121) way:

> Inkrementelle Syntax beschreibt die fortlaufenden Projektionen über den weiteren Verlauf der emergenten syntaktischen Struktur, die es den Hörern erlauben, den entstehenden Redebeitrag ohne Verzögerung zu prozessieren.[310]

> Ausgangspunkt war die spezifische Zeitstruktur der gesprochenen Sprache. Sie erfordert die permanente Bearbeitung von Projektionen syntaktischer Art.[311]

These quotes and the analyses in AUER (2000b; especially the graphic representation of example (2) on page 51) make it clear that incremental syntax is a permanent word-by-word process. Furthermore, it is a process that does not only affect the listener, but also the speaker. AUER (2000b: 48) writes:

---

[309] Translation by G.K.: […] unless proven otherwise, it seems plausible to assume that our thinking functions in a way that can optimally handle one fundamental fact of language, namely its location in interaction. Inversely, it is likewise plausible that processes of interactions are structured in a way that the interactants can master them with their cognitive endowment.

[310] Translation by G.K.: Incremental syntax describes the continuous projections about the further course of the emerging syntactic structure. These projections allow the listeners to process the developing speech turn without delay.

[311] Translation by G.K.: The starting point was the specific temporal structure of spoken language which requires the permanent processing of syntactic projections.

> Aus der Perspektive des Sprechers gelten prinzipiell ähnliche Bedingungen. Nach Abschluss einer syntaktischen Gestalt […] muss er in einer Phase kognitiver Belastung neue syntaktische Projektionen aufbauen, die dann im weiteren Verlauf mehr oder weniger automatisch erfüllt werden.[312]

We do not know exactly what *automatisch* ('automatically') is supposed to mean, but let us nevertheless apply this process to the MLG data focusing first on the interplay of correlates and verb clusters in complement sentence compounds. The translation in (8-2) repeats (7-14b):

stimulus <3> English: **Don't you see that I am turning on the light?**

(8-2) *kos dü daut nich sehen daut ik daut Lich du anmeaken* (USA-70; f/30/E>MLG-86%)
can you ~~that~~-CORRELATE not see that-COMPLEMENTIZER I the light ~~do~~-VERB1 on-make-VERB2

We obviously must not forget that these tokens are translations, i.e. before starting these rather small syntactic projects the informant already knows what she is supposed to produce (with regard to content, not with regard to form!). This need not be very different from actual conversation though, since at least with small projects it stands to reason that speakers know from the very beginning what they are going to say. As we cannot detect a major difference in handling small projects in translation and in free conversation, we can apply the idea of incremental syntax to the MLG data set. Informant USA-70 starts out with the finite modal verb *kos* ('can'). With regard to word order, this element either projects a question or – somewhat less probable – an unintroduced conditional clause. With regard to its selectional qualities, it projects a subject pronoun in the second person singular (*dü* 'you-singular'), an immediately satisfied projection, and a nonfinite verb, in our case *sehen* ('see') at the end of the matrix clause. The correlate *daut* ('that') is not projected by *kos* or *dü*, but projects a transitive verb in the matrix clause and a complement clause if the speaker knows the whole project. For a listener, *daut* is more problematic if we follow a word-by-word process. After all, in a real dialogue *daut* may also refer back to an entity/a clause already mentioned or it may be a definite article projecting a singular neuter noun. The negation particle *nich* ('not') has not been projected either, but again it projects, as we will see shortly.

The important parts for our discussion are the projections that are not satisfied within the matrix clause. In the analyses of Sections 7.1 and 7.2, only the correlate and the complementizer were dependent variables. Our focus now is linear order and with this new focus, all characteristics of the complement clause necessarily constitute dependent variables. The characteristics of the matrix clause, which precedes the complement clause, constitute the independent variables. Therefore, the results illustrated in Figure 7-4 are not easily applicable to the question of linear order. We will nevertheless apply them cautiously, interpreting co-variance as causal influence. Provided that the position of elements can project as well, five

[312] Translation by G.K.: From the point of view of the speaker, one has to reckon with similar conditions. Having finished one syntactic gestalt […], he must build – in a phase of cognitive strain – new syntactic projections which will then be more or less automatically performed in the further course of interaction.

characteristics of the matrix clause in (8-2) open syntactic projects with regard to the following dependent clause.

The five characteristics are (i) the position of *kos*, which indicates a question and thus increases the chance of complementizer deletion, especially if the interrogative matrix clause is negated (cf. Table 7-11); (ii) and (iii) the semantic content and the pragmatic implications of *kos* and *sehen* further complementizer deletion (cf. Table 7-11); (iv) the negation particle *nich*, strongly reduces the chance of complementizer deletion (cf. Table 7-11); and finally (v) the correlate *daut* inhibits complementizer deletion and furthers raised non-V2-variants like the VR-variant (cf. Tables 7-30 and 7-39). Judging from the restrictions of our working memory, it is hard to imagine a speaker calculating all this information and their interdependencies (*nich* in a question; *kos* and *sehen* acting together in pragmatically intricate ways) online word-by-word in the extremely short time of uttering *kos dü daut nich sehen* ('can't you see'). That they perform some sort of calculation is obvious; at least this is the message contained in In-Depth Analysis 7.2.4.2 and it is also exactly what CHOMSKY (2011) means when he speaks about "processes of thought and planning." This calculation, however, must have taken place before externalization. For the listener, complexity is also an important aspect. Aside from this, the question of Footnote 306 (this chapter) still applies. How big are the units the listener uses for meaning building? Are we talking about morphemes, words, or constituents? Finally, one wonders whether the linearity of the physical signal means that the listener slavishly processes this signal in an entirely linear way.

Due to this problematic production and perception scenario, we consider a generative production model more realistic. Such a model includes processes of calculating interdependencies of linguistic elements and of evaluating the well-formedness of the output of merger (or of the levels which used to be called deep and surface structure).[313] These processes are necessarily carried out before spell-out. Obviously, we do not know either what "calculates" or "evaluates" means precisely and obviously, we do not negate the importance of the automatisms and prefabricated sequences mentioned by AGUADO (2002: 28–29):

> Auch im Hinblick auf die Ebene der Sprach**verarbeitung** ist zu sagen, dass sich die hohe Geschwindigkeit, mit der ein gesunder […] Sprecher normalerweise spricht, sich [sic!] nicht erklären ließe, wenn nicht ein erheblicher Anteil des Produktionsprozesses automatisiert wäre bzw. auf Automatismen beruhen würde. Eine mögliche Erklärung für die flüssige und mühelose Produktion von komplexen Äußerungen muttersprachlicher oder nichtmuttersprachlicher Sprecher ist demnach die Annahme, dass die Sprecher auf ein im Langzeitgedächtnis gespeichertes Repertoire vorfabrizierter Sequenzen zugreifen, die sie ganzheitlich abrufen und verwenden.[314]

Accepting the existence of automatisms and prefabricated sequences, however, does not challenge the assumption of processes of calculation and evaluation since automatisms and

[313] Here, we have something in mind like CHOMSKY and LASNIK's (1977: 426) proposal: "Filters and rules of obligatory control impose well-formedness conditions on surface structures, as do properties of logical form."

[314] Translation by G.K.: With regard to language **processing**, one would not be able to explain the high speed with which a healthy […] speaker normally speaks unless one assumes that a considerable share of the production process is automized or based on automatisms. A possible explanation for the fluent and effortless production of complex utterances by native or non-native speakers is the assumption that the speaker accesses a repertoire of prefabricated sequences that is stored in long-term memory and that they retrieve and use holistically.

prefabricated sequences may well be the long-term result of calculation and evaluation. Variable rules, a much-researched field in quantitative sociolinguistics, may also be a possible path to better understand the interdependencies and co-occurrences of linguistic phenomena, but their localization with regard to grammar and their connection to actual mental processes is not really understood. In any case, one general caveat has to be added. For longer syntactic and communicational projects, one would have to re-think some of the assumptions made. Actual online processing can be expected in these cases. Moreover, repairs demonstrate that some of the calculations and evaluations carried out by the speaker's mind are wrong, i.e. some ungrammatical sentences unexpectedly do not crash before spell-out. Let us now look at conditional sentence compounds featuring a resumptive element as in (8-3). This token has already been presented as (5-34g):

stimulus <15> Portuguese: **Se ele tiver que vender a casa agora, ele vai ficar muito triste**
English: If he has to sell the house now, he will be very sorry

(8-3) *wann hei nu daut Hüs mut verköpe dann wird hei sehr trürig sene*
(Bra-53; m/33/P>MLG-57%)
if he now the house must-VERB1 sell-VERB2 ~~then~~.RESUMPTIVE will he very sad be

The low competence level in MLG of Bra-53 need not worry us since the characteristics of his translation are quite common. We will again start applying a word-by-word analysis in the spirit of incremental syntax. MLG *wann* in (8-3) is highly ambiguous; it can be an interrogative adverb ('when') in a direct or an indirect question, but it can also be the introducing element of a conditional or temporal clause ('if' or 'when') (cf. for such processing problems AUER 2000b: 47–48). In any case, the listener will probably expect a finite verb after *wann* and, therefore, also a subject (only certain marked question types combine *wann* exclusively with nonfinite verbal elements). Whether *wann* projects an independent question or a dependent clause, is something the listener knows as soon as *hei* ('he') emerges. As this subject pronoun surfaces as the second constituent, the projection of a dependent clause and a following matrix clause is fixed. The following adverb *nu* ('now') and especially the direct object *daut Hüs* ('the house') are not yet projected. Non-iterative *nu* might project matrix verbs with a compatible meaning, but if it does, this is a semantic, not a syntactic projection. This adverb, however, makes it clear that the preposed dependent clause is a conditional one, since MLG punctual events are not introduced by *wann*, but by *aus*, just like in the case of SG *als*. *Daut Hüs* may project one of the few MLG postpositions, but it is more reasonable to assume the projection of a transitive verb with no fixed meaning. The uncertainty of meaning is mostly due to the merger of old dative and accusative forms in many MLG varieties (cf. the second part of Excursus 4.6.1). Aside from this, the projected verb can be finite or non-finite. The finiteness projection of *wann* and *hei* is satisfied only after the ObjNP. The closure comes with *mut*. With this modal verb, the listener knows that the transitive verb will appear as an infinitive. This projection is instantly closed by means of *verköpe* ('sell').

The decisive question with regard to the listener is whether he now expects a matrix clause that starts with a resumptive element. With regard to the speaker, one has to ask whether he starts planning this matrix clause only now or whether calculations have been carried out wholesale before spell-out. In Section 7.3, we have seen that non-anadeictic *hei* ('he') as in (8-3) does not further a resumptive element in conditional sentence compounds; on the other hand, such elements co-occur frequently with the VR-variant (cf. Table 7-45). With regard to this second point, there are several problems for incremental syntax. There is – at least on the surface – a slight touch of circularity. In the case of the correlate *daut* (preceding the relevant dependent clause), we reckoned that *daut* may project the VR-variant. Now we may assume that the VR-variant in the protasis may project the resumptive element *dann* in the apodosis (following this clause). In addition to the question whether positional characteristics can actually project something – and if so, if these projections are comparable to those of phonetically realized elements –, it is again linear order we have to talk about. In our view, the shape of a short sentence compound is entirely calculated before spell-out. This means that the attributive relationship between the correlative element and the dependent clause comes wholesale; it does not emerge while speaking. Therefore, we do not doubt that one has to abstract from the actual order of the correlative element and the related dependent clause just like in the case of VO and OV or of prepositions and postpositions.

The crucial point is that the correlative element turns the dependent clause into a syntactically more integrated clause regardless of its position. In the case of *daut*, this means that the complement clause is not just (indirectly) governed by the main verb, but also by the correlate (which itself is governed by the main verb). In the case of *dann*, it means that the conditional clause is not just located in the strongly integrated structural position of Spec/CP, but it is contained in a complex phrase in Spec/CP whose "head" is the resumptive element. Obviously, the VR-variant in (8-2) and (8-3) and its frequent co-occurrence with *daut* or *dann* may become more and more obligatory for MLG speakers and obviously, this may help the listener to connect these elements and to parse their intimate relationship faster. In any case, the comparable nature of these dependencies regardless of the sequence of "head" (correlative element) and "complement" (dependent clause) leads us to extend CHOMSKY's (2011) conviction. Not only "minimal structural distance reigns unchallenged," but structure itself.

At this point, the reader is sure to remember the many repairs we have commented on. Some of them, for example those concerning the translations in (3-33b), (5-25c), (5-88d), (5-90c), and (7-55a), are related to grammatical phenomena unconnected to syntactic projections. Others, however, namely (5-38f), (5-77c), and (7-52) through (7-54), deal with the sequence of verbal elements in dependent clauses or with the shape of matrix clauses. Are these repairs not conclusive evidence for the speakers' syntactic projections, for the fact that they calculate different serialization patterns online? Have we – with regard to (7-53a) – not talked about "mental re-calculations"? Well, we have and they may be, but they do not have to be. These repairs could just as well constitute a PF-interface problem, i.e. they may be connected to language externalization. From this perspective, the repairs in (5-38f), (5-77c), and (7-52) through (7-54) would just align sound, i.e. language externalization, with the mental calculations and evaluations that occurred prior to spell-out.

As (7-52) through (7-54) concern the matrix clause, we are reminded of the fact that we still have to talk about disintegrated conditional clauses and the question of whether these marked structures can be explained satisfactorily by means of syntactic projections. Our discussion nevertheless starts with the locative resumptive element *da* (‘there’), which can functionally and positionally be compared to conditional *dann* (‘then’) in MLG and SG. AUER (2000b: 48) analyzes a sentence compound with a rather elaborate initial place localization. This sentence deals with another Anabaptist group, the Amish. We will maintain all intonational characteristics, but remove the underline and the italics of the original. Instead, we will mark the decisive clause after the place localization with italics and add a translation:

(8-4) In der (–) gegend von toRONto da (.) bissl wEstlich davon,=also in WAterloo=(w)o (–) .h auch ne (–) beKANNte universiTÄT isch (–) *da: (1.0) .h leben ja noch ne ganze REIhe dieser (–) Amish people*

‘In the Toronto area, there somewhat to the west of it, I mean in Waterloo, where there is also a famous university, there are still quite some of these Amish people living.’

AUER (2000b: 51) explains the second *da*, which is localized in between two pauses, in the following way: “As soon as *da* surfaces, the structure uttered up to this point *turns* into a prolepsis, *da* itself turns into a constituent of the prefield.”[315] This means that the listener is supposed to localize a structure of almost twenty lexical units in the pre-prefield (a prolepsis) only after he has encountered locative *da* followed by a finite verb. Despite the fact that a positioning in the pre-prefield is open to debate – like with *dann*, an analysis as an attribute clause modifying *da* is in principle possible (both being localized in the prefield) –, this explanation is problematic with regard to the burden it puts on short term memory. Furthermore, it is contrary to the very idea of syntactic projections which work from left to right. In any case, elements in the pre-prefield are normally not prosodically integrated and frequently separated from the prefield by a pause (cf., e.g., GÜNTHNER 1999: 215 and 223). Both characteristics can be found in AUER’s example (several sentence foci before *da* and a short pause before and a rather long one after *da*) and these facts support an early positioning in the pre-prefield. If intonation is capable of projection, the listener in this example would know that she is listening to a rather loosely integrated syntactic subproject and could, therefore, project a main clause starting with an element other than the finite verb from the very beginning. This non-verbal element is the connection to MLG translations with disintegrated conditional clauses, an example of which is (8-5), a repetition of (7-50c):

[315] Translation by G.K.; the original reads: *Sobald dieses* da *vorliegt,* wird *die vorher geäußerte Struktur zur Prolepse,* da *selbst aber wird Vorfeldkonstituente*.

stimulus <16> English: **If he can solve this problem, he is very smart**

(8-5) *wann hei kann dies trouble lösen hei is: [0.5] well smart [that's what I]* (USA-79; m/68/MLG)
if he can-VERB1 this trouble solve-VERB2 he-SUBJECT PRONOUN is […] ~~well~~ Ø smart ~~that's what I~~
'If he can solve this trouble, he is very smart – well that is the way I…'

Up to the first subject pronoun *hei* ('he'), there is no difference between (8-3) and (8-5), which has already been presented as (7-50c). The finiteness projection of *wann*, however, is satisfied earlier in (8-5). *Kann* ('can') itself projects an infinitive. *Dies trouble* ('this trouble') has not yet been projected when it appears, but most probably projects a transitive verb, something like *see* or *solve*. The question now is whether the V2-conditional clause as a whole projects a main clause starting with the subject pronoun *hei* or whether the listener (perhaps even the speaker) would (re-)localize the conditional clause in the pre-prefield only midway through the entire utterance. In our opinion, neither of the two explanations makes sense. With regard to the second, we just think it improbable that a pragmatically important position such as the pre-prefield is filled half-way through the utterance. After all, speakers could not simply go back in order to change the intonational pattern of the conditional clause (cf. AUER's (2000b: 45–46) argument for the irreversibility of spoken language); they would be forced to repair the whole utterance. With regard to the first explanation, crucial counterevidence comes from preposed conditional clauses with one verbal element.

In the regression analysis of Table 7-50, the number of verbal elements was selected as an important predictor for disintegration. Conditional clauses with three and four verbal elements dramatically increased the probability of disintegration in comparison to clauses with one verbal element, while clauses with two verbal elements behaved just like clauses with one verbal element. Granted, Table 7-53 showed a weak impact for conditional clauses with two verbal elements (a factor of 2.3 vs. 7 and 21.9 for clauses with 3 and 4 verbal elements, respectively), but this model did not include any metrical variables, three of which were selected in Table 7-50. The comparable behavior of conditional clauses with one and two verbal elements is a huge problem for the idea of syntactic projections since only eleven out of 598 tokens of conditional clauses with one verbal element do not generate this element clause-finally (cf. Table 5-33). In spite of this almost complete lack of variation, we find the same distributional patterns of the shape of the matrix clause as with conditional clauses with two verbal elements, both with regard to disintegrated and resumptive sentence compounds. In the case of two verbal elements, however, much variation of the position of the verbal elements exists. In these conditional clauses, one may, therefore, argue with syntactic projections since conditional clauses with the V2-VPR-variant co-occur frequently with matrix clauses starting with subject pronouns (cf. Table 7-47). However, due to the lack of positional variation in clauses with one verbal element, syntactic projections cannot function in this case and we thus have to find another explanation for the variation in matrix clauses. This turns syntactic projection into a hypothesis that is only applicable to certain contexts. Quite unlike this, a model working with mental calculations and evaluations applying before spell-out does not have a problem with such differences. In the case of conditional clauses with two verbal elements, the speaker can express syntactic disintegration by means of disintegrated V2-conditional clauses and the integrating power of resumptive elements by means of non-V2-conditional clauses. In conditional clauses with one verbal element, he does not have this liberty because there are strong grammatical restrictions concerning non-verb-final dependent clauses. These restrictions, however, simply form part of the calculation and evaluation process. The shape of the matrix clause is – in this case – calculated independently.

8.2 Some traits of MLG grammar(s)

In Section 8.1, the theory of syntactic projections was evaluated in order to see whether it can satisfactorily explain the MLG data. In our view, this attempt failed. Mental systems of calculation and evaluation seem to cope better with the complexity of correlative constructions in MLG. Section 8.2 will now return to some topics of the previous chapters by carrying out empirically more refined analyses. By doing this, we will be able to isolate different grammatical traits from different MLG grammars. The empirical refinement consists in the analytical integration of the informants' competence in SG. In addition to verb projection raising and scrambling, competence in SG proved to be a central explanatory factor in Chapter 7. The advantage of using this factor as a grouping criterion is twofold. On the one hand, this grouping will bring to light how strong the influence of SG is on the MLG of informants that have reached a certain competence in this standard variety. For these informants, SG does not only constitute a sociolinguistically important roofing variety; it is also the target of lexical and structural convergence (cf. KAUFMANN 2003b and KAUFMANN 2011). On the other hand, by analyzing speakers of MLG that do not possess much knowledge in SG and are thus free from SG (prescriptive) norms, we will be able to illustrate the novel and intriguing grammatical paths on which they tread.

Section 8.2.1 will deal with the influence of SG in a general way. Its central goal is to show that the informants' subjective evaluation with regard to their competence is reliable. In Section 8.2.2, several topics related to the grammatical category of definiteness will be discussed. These topics are prolepsis, a kind of left-dislocation in complement and relative clauses, and the informants' choice of relative markers. Both phenomena are intimately related to the informants' competence in SG, a clear sign for roofing effects leading to different grammars. Section 8.2.3 will bring together the topics of In-Depth Analysis 7.2.4.2 (*Indicating the strength of clause linkage by linguistic means*) and Excursus 7.2.2.1 (*Converging tendencies in MLG complement and relative clauses*). Three points are important here. First, the competence in SG again plays a crucial role. Second, the intriguing interplay of different parts of the MLG grammatical system can be shown one last time. Third, different MLG grammars emerge from this analysis.

8.2.1 General characterization of the influence of Standard German on MLG

For 272 of the 313 informants, the subjective evaluation of their competence in MLG, SG, the majority language of each colony, and one additional language (English outside the USA, Spanish in the USA) is available (cf. Tables 2-2 through 2-5). In order not to confound genuine grammatical rules with possible consequences of language attrition, the 23 informants with a MLG competence level of less than ten points – the level which in the questionnaire was labeled as good – are excluded from all following analyses. This applies to eight US-American informants dominant in English, seven Brazilian informants dominant in Portuguese, three Mexican and one Paraguayan (Menno) informant dominant in Spanish, and four informants from Fernheim (Paraguay) dominant in SG. Despite this reduction, we can still analyze the syntactic behavior of 249 informants (79.6% of the 313 informants). 181 (72.7%) of these are dominant in MLG, 33 are co-dominant in MLG and one other language (13.3%),[316] and 35 (14.1%) are dominant in another language, while still maintaining a high level of competence in MLG. Thirteen of these informants are dominant in SG (12 in Paraguay, 1 in Mexico), 22 in one of the majority languages (13 in English (8 from the USA, 3 from Mexico, and 2 from Menno), 4 in Spanish (3 in Mexico, 1 in Menno), and 5 in Portuguese (all in Brazil)).

According to their competence in SG, the informants will be grouped into five categories. Informants whose evaluation for SG equals four or less points will be labeled *--SG*, informants with more than four, but not more than six points *-SG*, and informants between six and nine points *±SG*. Informants with index values between nine and less than twelve points are grouped as *+SG*, while informants with values between twelve and fourteen points belong to the category *++SG*. Before defining the sociolinguistic characteristics of the five groups, it is necessary to make sure that the grouping itself is valid. This will be done by focusing on a linguistic level which has not been analyzed so far, the vocabulary of MLG. THOMASON and KAUFMAN (1988: 50) claim that in a situation of language contact that does not imply language shift, vocabulary is the first level affected. Examples (8-6a-c) illustrate this by offering different MLG equivalents for English *like*.

stimulus <31> Spanish: **No me gustan las personas que hacen mucho ruido**
English: **I don't like people who make a lot of noise**

(8-6) a. *ik gleich nich die Persone die: viel: Krach meake* (Men-36; f/18/MLG)
I.NOM like not the persons.ACC who much noise make

b. *mi gefalle die Mensche nich waut da viel: Gelüt meake* (Men-19; f/53/MLG)
me.DAT like the people.NOM not that 'there' much loudness make

c. *ik mag Mensche nich waut [0.3] sehr lüt sind* (Men-39; f/36/MLG)
I.NOM like people.ACC not that […] very loud <u>are</u>

[316] Twelve of these 33 informants are co-dominant in MLG and SG (9 in Paraguay, 3 in Mexico), 21 in MLG and one of the majority languages (9 times Spanish (7 in Mexico, 1 in Bolivia, 1 in Paraguay), 7 times English (4 in the USA, 2 in Mexico, 1 in Menno) and 5 times Portuguese (all in Brazil)).

Tokens (8-6b+c) feature *gefallen* and *mögen*, two words for English *like*, which are also possible in SG. *Gefallen* in (8-6b) functions like Spanish *gustar* (*me gustan las personas*), i.e. there is an increase in agentivity. The lower ranking stimulus appears in the nominative case, while the higher ranking experiencer appears in the dative case. *Mögen* in (8-6c) works more like modern English *like* (*I like the people*) or Portuguese *gostar* (*eu gosto das pessoas*), i.e. the experiencer is nominative, whereas the stimulus is "accusative" (or prepositional). *Gleichen* in (8-6a) shares its theta-role-distribution with *mögen*, but is impossible in the relevant reading in modern SG. In older varieties of German, however, *gleichen* could be used in this way. The online-version of the GRIMMSCHE WÖRTERBUCH claims that this meaning was not lost until the end of the Middle High German period .[317]

Interestingly, *gleichen* meaning *please* (and not 'to resemble') is found in various German varieties in the United States. MERTENS (1994: 316) mentions it for a different variety of Low German and HUFFINES (1993: 256) for Pennsylvania German. In spite of this, the concentration in US-American varieties of German does not necessarily mean that we are dealing with an English influence. Seven Brazilian Mennonites also use *gleichen* although their forefathers never touched English-speaking soil. In THIESSEN's (2003) dictionary, we encounter – in a different spelling convention – both *jleijche* (*gleichen*; 'to resemble') and *jefaule* (*gefallen*; 'to please') for English *like*. Table 8-1 illustrates the share of *gleichen* and *mögen*/*gefallen* in 246 usable translations of stimulus sentence <31>:

Table 8-1: The shares of *gleichen* and *mögen*/*gefallen* in sentence <31> separated by the informants' SG competence

	--SG	-SG	±SG	+SG	++SG	Total
n (tokens)	42	47	54	58	45	246
gleichen	37 88.1%	36 76.6%	33 61.1%	38 65.5%	16 35.6%	160 65%
χ^2 (4, n=246) = 30.2; p=0*** / Cramer's V: 0.35 / 0 cells with less than 5 expected tokens competence in SG: F (1,244) = 29.2, p=0*** (***gleichen***: 7.5 – *mögen/gefallen*: 9.7)						
mögen / gefallen	5 11.9%	11 23.4%	21 38.9%	20 34.5%	29 64.4%	86 35%

The almost perfect rise of the share of *mögen*/*gefallen* from the group least competent in SG (*--SG*: 11.9%) to the group most competent (*++SG*: 64.4%) does not change if we remove the tokens from the United States and Fernheim, where no variation exists at all. In the United States, only *gleichen* occurs (32 tokens), while the informants from Fernheim do not produce

[317] The reader finds the following description in the GRIMMSCHE WÖRTERBUCH (http://dwb.uni-trier.de/de; accessed on 08.03.2015): "*[...] davon deutlich getrennt ist das ē-verb mit der bedeutung* '*gefallen*' *in got.* leikan, galeikan, *ahd.* lîchên, galîchên, *as.* lîkôn, *afries.* līkia, *ags.* lîcian, gelîcian, *anord.* lîka. *während mhd. intrans.* gelîchen *die bedeutung* '*gefallen*' *bis zum ausgang der periode festhält, zeigt es seit dem frühmhd. auch die verwandte (ebenfalls für afries.* līkia *bezeugte) bedeutung 'gleich sein, ähnlich sein, gleichen' [...]*." [Translation by G.K.: [...] clearly separated from this is the ē-verb meaning 'to please' in Gothic *leikan*, *galeikan*, Old High German *lîchên*, *galîchên*, Old Saxon *lîkôn*, Old Frisian *līkia*, Anglo-Saxon *lîcian*, *gelîcian*, Old Norse *lîka*. While Middle High German intransitive *gelîchen* maintains the meaning 'to please' till the end of the period, it is also used in the related (for Old Frisian *līkia* likewise attested) meaning 'to be similar, to be alike, to resemble' since Early Middle High German.]

a single token with this form (35 tokens). As these colonies constitute the extreme poles with regard to SG (cf. Table 2-2), the use of *mögen*/*gefallen* must be assumed to result from a high competence level in this variety. The difference in the index values is also highly significant. Informants who use *gleichen* show an average of 7.5 points for SG, while this average is 9.7 points for the users of *mögen*/*gefallen*.

Translations for English *man* or *men*, exemplified by tokens (8-7a-d), constitute another interesting case. This lexical element appears in five stimulus sentences. As two MLG relic forms exist, the relevant distribution has to be analyzed somewhat differently. The decisive point here is not the question of who borrows more SG words, but of who clings more strongly to MLG relic forms.

stimulus <32> Portuguese: **As estorias que ele está contando para os homens são muito tristes**
Spanish: **Las historias que les está contando a los hombres son muy tristes**
English: The stories that he is telling the men are very sad

(8-7) a. *die Geschichte waut hei de Männer vertahlt die sind sehr trürig* (Bra-21; m/24/MLG)
the stories that he the men tells ~~they~~ are very sad

b. *die Geschichte waut hei: de Mensche vertahlt sind sehr trürig* (Bra-28; f/58/MLG)
the stories that he the people tells are very sad

c. *die Geschichten waut hei die Ohmtjes vertehlen dät sind sehr trürig:* (Mex-9; f/16/E>MLG-86%)
the stories that he the men tell ~~does~~ are very sad

d. *die Geschichte waut hei de Onkels vertahlt die sin sehr trürig* (Bra-57; f/36/MLG)
the stories that he the men tells ~~they~~ are very sad

THIESSEN (2003) is quite right in offering *Maun* and *Mensch* (‘man’ and ‘human being’) as possible translations for *man*. Both forms appear frequently as in (8-7a+b). The more interesting forms are the translations in (8-7c+d). THIESSEN (2003) does not mention them. *Ohmtjes* in (8-7c) is the short form of the Old High German word *Oheim* (‘uncle (brother of the mother)’; cf. Footnote 31 in Chapter 3) with the diminutive suffix {-tje}. In spite of its original meaning, some Mennonite informants use it for English *man*. Besides *Ohmtje*, the appearance of its SG equivalent *Onkel* in (8-6d) is instructive.

Table 8-2: The shares of *Mann*/*Mensch* and the relic forms *Ohmtje* and *Onkel* in sentences <17>, <32>, <34>, <38>, and <40> separated by the informants’ SG competence

	--SG	-SG	±SG	+SG	++SG	Total
n (tokens)	195	225	261	281	215	1177
Mann / Mensch	173 88.7%	205 91.1%	243 93.1%	262 93.2%	212 98.6%	1095 93%
χ^2 (8, n=1177) = 23.6; p=0.003** / Cramer’s V: 0.1 / 5 cells (33.3%) with less than 5 expected tokens competence in SG: F (2,1174) = 8.4, p=0*** (***Mann/Mensch***: 8.4 – *Ohmtje*: 7.1 – *Onkel*: 6)						
Ohmtje	16 8.2%	16 7.1%	14 5.4%	19 6.8%	2 0.9%	67 5.7%
Onkel	6 3.1%	4 1.8%	4 1.5%	0 0%	1 0.5%	15 1.3%

Only 7% of all tokens feature either *Ohmtje* or *Onkel*. Despite this small share, the distribution is comparable to the one found in Table 8-1. The most SG-friendly informants use these relic forms in only 1.4% of the cases, while the least SG-friendly informants do so in 11.3%. This latter group thus manifests a higher resistance to a complete takeover of *Mann*/*Mensch*. Looking at the competence values, one realizes that the fifteen tokens of *Onkel* are produced by informants who achieve just six points for SG compared to 8.4 points among the informants who use *Mann* or *Mensch* (*Ohmtje* shows an intermediate level of 7.1 points). This is a highly interesting fact since *Onkel* is actually a SG word, i.e. the speakers who use it may try to give their MLG a more SG touch. In spite of this, they still show strong MLG influence since *Onkel* is not compatible with SG, at least not in the meaning of *man*. Thirteen of these fifteen informants come from the Brazilian colony, which does not show a single case of *Ohmtje*. It therefore seems that *Onkel* is a kind of hypercorrection in a colony, which used to have strong contact to SG, but lost it during the time of the *Estado Novo* (cf. Section 2.1).

We could offer many more lexical examples with the same distributional patterns.[318] This fact indicates that the grouping applied passes the vocabulary test, so to speak the most basic test for a situation of language contact. Due to this, we feel comfortable in claiming that there is at least a situation of casual language contact between MLG and SG for all MLG informants. THOMASON and KAUFMAN (1988: 50) define *casual contact* as showing "little bilingualism among borrowing-language speakers." According to them, this type of contact only affects "(nonbasic) vocabulary". Before showing that *intensive contact* between MLG and SG also exists for some Mennonites, Table 8-3 presents the sociolinguistic characteristics of the five SG-related groups:

Table 8-3: Sociolinguistic characteristics of the informants separated by their SG competence (Engl=English; Span=Spanish; Port=Portuguese) →

	--SG	**-SG**	**±SG**	**+SG**	**++SG**	**Total**
n (informants)	42	48	54	60	45	249
North America	85%	71.1%	50%	52.5%	20%	54.8%
Brazil	15%	20%	21.2%	5.1%	13.3%	14.5%
Paraguay	0%	8.9%	28.8%	42.4%	66.7%	30.7%
χ^2 (8, n=241) = 66.1; p=0.004** / Cramer's V: 0.37 / 0 cells with less than 5 expected tokens competence in SG: F (2,238) = 47, p=0*** (**Paraguay**: 10.9 – Brazil: 7.6 – North America: 7.1)						
women	31%	29.2%	50%	60%	53.3%	45.8%
χ^2 (4, n=249) = 15.4; p=0.004** / Cramer's V: 0.25 / 0 cells with less than 5 expected tokens competence in SG: F (1,247) = 11.2, p=0.001** (**women**: 9 – men: 7.6)						
age	35.1	34.9	35.7	32.3	36.5	34.5
ns						
SG	3.3	5.9	8.3	10.1	12.9	8.2
selection criterion						
MLG	12.6	12.8	13.1	13.5	12.8	13
F (4,244) = 4.2, p=0.003**						
Engl/Span/Port	9.7	9.9	7.9	7.2	7.6	8.4
F (4,244) = 9.8, p=0***						

[318] Two of them are MLG *wegen(s)* and more SG *wiel(s)* for *because* (cf. also the use of relative pronouns in Table 8-5) and the translation of the indefinite negative determiner in *no money*. With regard to the latter one, SG-competent informants use expected *kein,* while the other informants prefer *nich* not distinguishing between the negation of NPs and of verbs (cf. Footnote 150 in Chapter 5).

	--SG	-SG	±SG	+SG	++SG	Total
raising index	+0.275	+0.117	+0.055	-0.033	-0.215	+0.031
F (4,233) = 18.8, p=0***						
scrambling index	+0.013	-0.001	+0.028	-0.025	+0.018	+0.005
ns						

With regard to the informants' origin, all colony groups are found in (almost) all categories. Unsurprisingly, the two Paraguayan colonies cluster strongly in the categories *+(+)SG* (not a single informant in *--SG*), while the two North American colonies cluster in the categories *-(-)SG*. The Brazilian informants have an intermediate status spreading more or less evenly over the groups. Due to the reduced number of Bolivian informants, they are not considered in this part of Table 8-3. Women show a higher competence in SG than men. On average, they evaluate their competence with nine points, while men only reach 7.6 points. This result coincides with our observations in the field and is probably connected to the global prestige of SG. For the majority languages, exactly the opposite is true (9 points for men, 7.6 for women; not shown in Table 8-3). On the one hand, this is the result of the fact that Mennonite men have more interethnic contacts than women. On the other hand, it shows that contrary to English (cf. Table 2-3 and KAUFMANN (1997: 181–184) for the situation of English in Mexico), Spanish and Portuguese are much more attractive assimilation targets for Mennonite men than for women (cf. the discussion for Brazil and Fernheim in KAUFMANN 2004: 267–270). In contrast to sex, age does not differ between the five groups, at least not in this colony-independent analysis (but cf. Tables 2-3 through 2-5 for age-related competence differences). With regard to MLG, there is a small maximum difference of 0.9 points (13.5-12.6 points). Albeit highly significant, this difference is too small to explain the grammatical differences caused by this grouping. The groups slightly weaker in MLG show more competence in the majority language and vice versa. For the majority language, the maximum difference is more expressive; it is 2.7 points (9.9-7.2 points). The raising index is strongly related to the competence in SG (maximum difference of 0.49 points, i.e. 43.4% of the maximum difference of 1.13). The distribution of the scrambling index is independent from the competence in SG. This difference in raising and scrambling has already been discussed with respect to the results of Table 4-18.

8.2.2 Aspects of definiteness in MLG

Atrás do arranha-céu tem o céu, tem o céu
e depois tem outro céu sem estrelas
Em cima do guarda-chuva tem a chuva, tem a chuva
que tem gotas tão lindas que até dá vontade de comê-las

Maracatu Atômico by Jorge Mautner

Having confirmed the validity of the SG grouping, we can now approach the central topic of this section, the question of which particular grammatical traits Mennonite informants exhibit, especially those with a low competence in SG. Let us begin with prolepsis in relative and complement sentence compounds. If this structural phenomenon is connected to language contact with SG, it has to be located in the frame of intensive language contact. Typical for intensive language contact is – according to Thomason and Kaufman (1988: 50) – “moderate to heavy structural borrowing (especially phonology and syntax)” caused by “much bilingualism among borrowing-language speakers over a long period of time.” It is important to realize that in the case of prolepsis, SG-competent Mennonites do not borrow a SG structure, but reject a non-SG structure. This rejection, however, is only possible because of the presence of SG (cf. Thomason and Kaufman (1988: 58) for comparable conserving effects in situations of language shift). Two examples of prolepsis in relative sentence compounds have already been given in (8-7a+d). In these tokens, the informants repeat the basic grammatical information of a complex SubjNP (NP plus relative clause) by means of a deictic demonstrative pronoun. Examples for complement sentence compounds starting with proper names are even more intriguing with regard to definiteness. Tokens (8-8a-d) show four translations for stimulus sentence <2>:

stimulus <2> Portuguese: **O João não acha que tu conheces bem os teus amigos**
English: John doesn’t think that you know your friends well

(8-8) a. *Jo- [0.3] Joao meint du kennst nich gut dine Frend* (Bra-40; f/32/MLG)
~~Jo-~~ […] John believes Ø Ø you know ~~not~~ well your friends

b. *der Hans meint du kenns dine Frend nich sehr* (Bra-63; m/46/MLG+P)
~~the~~.ARTICLE John believes Ø Ø you know your friends ~~not~~ much

c. *Hans dei m- [0.8] meint dü kennst nich gut dine Frend* (Bra-37; m/34/P>MLG-Ø)
John ~~he~~.RESUMPTIVE PRONOUN b- […] believes Ø Ø you know ~~not~~ well your friends

d. *de João de:r gleuft du kenns nich gut dine Fre- dine Frend* (Bra-56; m/20/P>MLG-75%)
~~the~~.ARTICLE John ~~he~~.RESUMPTIVE PRONOUN believes Ø Ø you know ~~not~~ well ~~your frie-~~ your friends

As the informant’s precise competence in MLG in (8-8c) is not known, this token does not form part of the analysis. There are, however, comparable tokens in other colonies entering the analysis. All tokens show negation in the dependent clause, which in all cases is a V2-complement clause without a complementizer. Token (8-8d), which has already been presented as (1-7), is the most interesting translation. All other tokens are variations of this theme, lacking either the definite article as in (8-8c) or the resumptive pronoun as in (8-8b) or both as in (8-8a). In (8-8d), the proper name is enframed by two markers of definiteness, the definite article (surely a consequence of Portuguese influence) and the resumptive pronoun. Due to the fact that proper names are definite *per se*, such a behavior may seem like a huge waste of pronunciation energy. As wasting energy is not typical for spoken languages, a linguistic reason for this multiple marking must exist. Writing about different types of coding definiteness, Leiss (2000: 10) offers an important hint:

> Es gibt zwei Möglichkeiten der Markierung von grammatischen Inhalten: einmal durch die konsequente Zuordnung eines Inhalts zu einer Form. Hierbei handelt es sich um eine übergeneralisie-

> rende Markierung von Inhalten. Definitheit wird also auch in einer ‘definiten Umwelt’ gekennzeichnet. Zum anderen gibt es die kombinatorische Markierung durch die Zusammenarbeit von ikonischer Grammatik und sichtbarer Grammatik. Dabei werden Markierungen äußerst sparsam eingesetzt, d.h. nur in Kontexten, in denen ein Verstoß gegen die natürlichen grammatischen Erwartungen vorliegt.[319]

Quite a lot of MLG informants seem to have opted for the first solution, i.e. they do not rely on a mixture of visible and iconical grammatical features, but mark definiteness across-the-board, even in an already definite environment such as proper names. As multiple marking has already turned out to be typical for MLG (cf. In-Depth Analysis 7.1.3.3), the multiple marking of definiteness can count as one more example for this. Such a marking is not economical for the speaker, but it definitely reduces the processing costs for the listener. Before giving further explanations for the function of these resumptive pronouns, we will take a look at their distribution, both for complement and relative sentence compounds:

Table 8-4: Prolepsis in relative (sentences <32>, <36>, <38>, <39>) and complement sentence compounds (sentences <2>, <5>, <7>, <9>) separated by the informants’ SG competence

	--SG	**-SG**	**±SG**	**+SG**	**++SG**	**Total**
relative clause compounds						
n (tokens)	150	178	204	225	175	932
-prolepsis	62 41.3%	98 55.1%	139 68.1%	156 69.3%	148 84.6%	603 64.7%
χ^2 (4, n=932) = 76.5; p=0*** / Cramer’s V: 0.29 / 0 cells with less than 5 expected tokens competence in SG: F (1,930) = 83, p=0*** (**-prolepsis**: 9 – +prolepsis: 7.1)						
+prolepsis	88 58.7%	80 44.9%	65 31.9%	69 30.7%	27 15.4%	329 35.3%
complement clause compounds						
n	164	191	210	227	178	970
-prolepsis	152 92.7%	168 88%	199 94.8%	218 96%	173 97.2%	910 93.8%
χ^2 (4, n=970) = 17.4; p=0.002** / Cramer’s V: 0.13 / 0 cells with less than 5 expected tokens competence in SG: F (1,968) = 1.3, p=0.001** (**-prolepsis**: 8.3 – +prolepsis: 6.9)						
+prolepsis	12 7.3%	23 12%	11 5.2%	9 4%	5 2.8%	60 6.2%

The share of prolepsis, i.e. of the presence of a resumptive pronoun, in relative sentence compounds with non-final relative clauses increases steadily when the competence level in SG decreases. For the group *--SG,* prolepsis already constitutes the majority solution. The same happens – though on a much lower level – in complement sentence compounds. With the exception of the two least SG-competent groups, the distribution is also steady. Comparing the more fine-grained index values, informants that produce prolepsis in relative/complement sentence compounds are 1.9/1.4 points less competent in SG than informants that do not use this device.

[319] Translation by G.K.: There are two possibilities to mark grammatical content: On the one hand, there is the consistent mapping of content and form. In this case, we are dealing with an overgeneralized marking of contents. Definiteness is marked even when it occurs in a ‘definite environment’. On the other hand, there is the combinatory marking by means of the cooperation between iconical grammar and visible grammar. In this case, markers are used sparsely, i.e. only in contexts, in which the natural grammatical expectations are violated.

Why do non-SG-competent Mennonites make use of resumptive pronouns, i.e. produce sentence compounds characterized by prolepsis? One obvious function in relative sentence compounds could be the marking of the clause boundary of the relative clause (cf. LEHMANN 1984: 159–160). Aside from this, ZIFONUN et al. (1997: 518–520) describe the use of resumptive pronouns as a means of stressing the theme of a sentence by placing it into the pre-prefield. This explanation matches situations of free speech well, but it is again questionable whether it constitutes a valid explanation for context-free translations. Another possible explanation could be connected to the fact that resumptive pronouns are a strategy with which to lower the listener's parsing cost by "reminding" him of the SubjNP's grammatical information. Such considerations would make sense when listeners are faced with long, complex sentences. Our stimulus sentences, however, are neither long nor complex. Granted, one reason for the higher share of prolepsis in the four relative sentence compounds may be that the distance between the SubjNP and the resumptive pronoun is bigger than in the case of the four complement sentence compounds, where the two elements surface adjacently.

In any case, when trying to explain the different shares of prolepsis in relative and complement sentence compounds, one must not forget LEISS' (2000: 10) observation of the multiple marking of definiteness. Despite the lack of a definite-marking {d-}-segment in proper names, there is hardly a more definite entity imaginable. LEISS (2000: 164) defines proper names and *unika* as the most restricted entities. Many MLG speakers may, therefore, feel a reduced necessity to mark definiteness once more with proper names. Thus both the intervening relative clause and the lack of ingrained definiteness in common nouns may cause the more frequent use of resumptive elements in the relative sentence compounds. Unfortunately, we cannot compare the MLG data with translations from stimulus sentences featuring indefinite SubjNPs, something like "Some people think that Elisabeth must have seen the truck" or "Students that do all their homework will get good grades." If definiteness were the decisive point, we would expect less cases of prolepsis after indefinite SubjNPs.

Quite interestingly, Hawaiian Creole English seems to function the other way round both with regard to definiteness and with regard to stressing the clausal theme. Structurally, however, BICKERTON's (1981: 34 and 35) examples (69) and (75), repeated here as (8-9) and (8-10), are quite similar to our cases (glosses added by G.K.; original translations):

(8-9) *sam gaiz samtaimz dei kam*
some guys sometimes they.PRONOUN-COPY come
'Sometimes some guys come'

(8-10) *sam filipinoz wok ova hia dei wen kapl yiaz in filipin ailaenz*
some filipinos work over here they.PRONOUN-COPY went couple years in Philippine islands
'Some Filipinos who worked over here went to the Philippines for a couple of years'

BICKERTON (1981: 34 and 35) explains the functions of these pronoun-copies in the following way:

> The function of pronoun-copying in HCE [Hawaiian Creole English; G.K.] is clearly linked with that of the movement rules discussed above. All deal with constituents selected for special focus; movement rules move those constituents to the left, but subject NPs are already leftmost constituents and can thus only be “symbolically” moved by inserting something between them and the rest of the sentence.
>
> The interaction of those two rules [pronoun-copying of indefinite subjects and relative clause formation; G.K.] comes about when full NPs of indefinite reference and other NPs which must be copied occur as head nouns of relative clauses and subjects of those clauses. In non-relative sentences […], the copy either immediately follows the NP […], or, if an adverb is present […], immediately precedes the verb. In relative-clause sentences, however, the copy must follow the entire relative clause[.]

The position of the Hawaiian Creole pronoun-copy *dei* in simple main clauses as in (8-9) and relative sentence compounds as in (8-10) is virtually identical to the position of MLG resumptive pronouns in complement and relative sentence compounds. The function, however, seems to be quite different. Hawaiian Creole speakers must copy an indefinite subject when it is first mentioned, i.e. this strategy marks the focus (perhaps rhema) expressed by an indefinite NP and not the topic (perhaps theme) expressed by a definite NP. Be this as it may, the use of resumptive pronouns is another shared characteristic of complement and relative sentence compounds in MLG (cf. Excursus 7.2.2.1). As for relative sentence compounds, there is another phenomenon connected to {d-}-marked words. In Excursus 7.2.2.1, we mentioned the fact that many speakers of MLG do not use the default relative marker *waut* (‘that’), but prefer (complex) relative markers either starting with a {d}-segment or containing one element with such a segment. For the reader’s convenience, tokens (8-6a-c) are repeated as (8-11a-c):

stimulus <31> Spanish: **No me gustan las personas que hacen mucho ruido**
English: **I don’t like people who make a lot of noise**

(8-11) a. *ik gleich nich die Persone die: viel: Krach meake* (Men-36; f/18/MLG)
I like not the.DEFINITE persons who.DEFINITE much noise make

b. *mi gefalle die Mensche nich waut da viel: Gelüt meake* (Men-19; f/53/MLG)
me like the.DEFINITE people not that ‘there’.DEFINITE much loudness make

c. *ik mag Mensche nich waut [0.3] sehr lüt sind* (Men-39; f/36/MLG)
I like people not that […] much loud <u>are</u>

In (8-11c), the default relative marker *waut* appears. Token (8-11a) illustrates the use of a relative pronoun, clearly a borrowing from SG, and in (8-11b) *waut da* occurs, a complex relative marker which surfaces exclusively in subject function. Combinations of relative markers with *da* are also mentioned by WEIß (2013: 782) and FLEISCHER (2004: 224), who attests it as a rare form in a North Saxon dialect in Germany. Due to the fact that *waut da* functions exclusively as a subject, only the translations of the following five stimulus sentences can be analyzed:

(8-12) **stimulus <31>** I don’t like people who make a lot of noise

(8-13) **stimulus <34>** This is the man who is always staring at my house

(8-14) **stimulus <36>** The doctor who wants to see my foot is very worried

(8-15) **stimulus <38>** The man who caused the accident has disappeared

(8-16) **stimulus <40>** Who is the guy who could have saved my brother's life?

Table 8-5 presents the distribution of the major relative markers in the five relative clauses of (8-12) through (8-16).

Table 8-5: Relative markers in five relative sentence compounds separated by the informants' SG competence

	--SG	**-SG**	**±SG**	**+SG**	**++SG**	**Total**
n (tokens)	194	223	257	272	215	1161
waut	158 81.4%	191 85.7%	199 77.4%	204 75%	169 78.6%	921 79.3%
χ^2 (8, n=1161) = 60.7; p=0*** / Cramer's V: 0.16 / 0 cells with less than 5 expected tokens competence in SG: F (2,1158) = 28, p=0*** (***der/die/daut***: 10.2 – *waut*: 8.2 – *waut da*: 7.2)						
der/die/daut	1 0.5%	9 4%	30 11.7%	33 12.1%	37 17.2%	110 9.5%
waut da	35 18%	23 10.3%	28 10.9%	35 12.9%	9 4.2%	130 11.2%

The use of relative pronouns depends heavily on the informants' knowledge of SG. Those who use this listener-friendly device have, on average, a competence level two points higher than those who use the default marker *waut* (10.2 vs. 8.2 points). The use of *waut da* is concentrated among informants with an even lower level of competence in SG, precisely 7.2 points. Table 8-6 shows the distribution for the five stimulus sentences:

Table 8-6: Relative markers in five relative sentence compounds separated by the stimulus sentences

sentence	**<31>**	**<34>**	**<36>**	**<38>**	**<40>**
n (tokens)	234	240	237	231	219
waut	145 62%	202 84.2%	217 91.6%	204 88.3%	153 69.9%
χ^2 (8, n=1161) = 109.3; p=0*** / Cramer's V: 0.22 / 0 cells with less than 5 expected tokens					
der/die/daut	29 12.4%	15 6.3%	13 5.5%	18 7.8%	35 16%
waut da	60 25.6%	23 9.6%	7 3%	9 3.9%	31 14.2%

The use of the two relative markers bearing the definite {d-}-segment depends heavily on the stimulus sentence. While sentence <31> with a negated matrix clause shows these markers in 38% of the cases and sentence <40> with an interrogative matrix clause in 30.2%, sentence <36> only features them in 8.5%. Our first hunch in Excursus 7.2.2.1 was that a negated (or interrogative) matrix clause may make the dependent clause more transparent for matrix clause features just as in the case of the infiltration of *nich* ('not) in complement clauses (cf. In-Depth Analysis 7.1.3.3). In the relative sentence compounds presented, the infiltration would not affect an entire word like *nich*, but just the definiteness feature of the head NP. However, a closer look at the stimulus sentences reveals a serious problem for this hypothesis.

All sentences feature human head NPs. One difference between them is that only sentence <31> features an indefinite head NP without an article, at least in the English and the Portuguese stimulus versions. Only three informants in the English-based translations translate English *people* with a definite article. Three informants produce semi-definite *sone* ('such'; cf. Footnote 147 in Chapter 5). An indefinite head NP without article appears in 44 cases. In spite of the indefiniteness of most head NPs, the English-based translations show the two {d-}-marked relative markers in 34% of the translations of sentence <31> (17 of 50 tokens), i.e. much more frequently than in the translations of the other four sentences (total average of 10.1%; 19 of 189 tokens). If we were dealing with the infiltration of definiteness, this would indeed be a surprising result, especially if one follows GREWENDORF and POLETTO (2015: 398), who claim that "in Bavarian, *da* is ungrammatical when the head noun of the relative clause is an indefinite element." In the Portuguese version, which also uses an indefinite head NP without an article for sentence <31> (*Eu não gosto* ***de*** *pessoas que fazem muito barulho*), nineteen informants use an indefinite head NP without article, eight produce head NPs with definite articles, and six head NPs with *sone*. This would be the ideal setting for checking a possible infiltration of definiteness features, but only three Brazilian informants used relative pronouns and these tokens are evenly distributed between the three types of head NPs.

The native speaker checking the Spanish version insisted on a head NP with a definite article in sentence <31> (*No me gustan* ***las*** *personas que hacen mucho ruido*). In spite of this, five informants translated an indefinite head NP without article and nine used semi-definite *sone*. Again, this is not a very even distribution, but in any case, there is no difference whatsoever with regard to the two {d-}-marked relative markers analyzed in Table 8-6. Summarizing these results, we have to state that 69 of the 234 translations of sentence <31> use indefinite head NPs without articles, while there is not a single comparable head NP in any of the other sentences. Due to the fact that sentence <31> nevertheless hosts the highest number of {d-}-marked relative markers, the assumption that definiteness of the head NP infiltrates the dependent relative clause seems to be an improbable assumption,[320] especially if one realizes that the negation of the matrix clause of sentence <31> does not play a comparable role to negation in complement sentence compounds. In complement sentence compounds, the negation of the matrix clause has an integrating effect since it qualifies the proposition of the complement clause as presupposed. A non-negated matrix clause in sentence <31> that states that the speaker likes people who make a lot of noise would not change anything with regard to the information status of the proposition of the relative clause.

[320] Our explanation thus does not follow LEHMANN's (1984: 166) discussion of the definite morphology of relative markers. For LEHMANN, one explanation for this definiteness is an anaphoric relationship with the head noun. In this case the relative marker is supposed to represent the head noun.

However, returning to the discussion about the distinction between old (presupposed) and new (asserted) information of complement clauses in Section 7.1, a second hypothesis emerges. Sentence <31> only makes sense in a conversation in which loud behavior has been a central topic. Therefore, this sentence could not constitute an opening turn in a conversation unless speaker and listener are, for example, standing by an open window while loud people are passing by. The new information in sentence <31> is not the loud behavior of people, but the fact that the speaker does not like people displaying such behavior. One could, therefore, call the proposition of the relative clause D-linked; *waut da* and {d-}-marked relative pronouns would then be markers of D-linkedness. GREWENDORF (2002: 78 – Footnote 28; cf. also WELKE 1993: 24–25) describes D-linkedness in the following way:

> Ein Element ist "diskursgebunden" ('D-linked'), wenn es sich auf eine Menge von Entitäten bezieht, die entweder in den Diskurs eingeführt worden ist oder für Sprecher und Hörer offensichtlich ist. Wenn z.B. die möglichen Antworten auf eine w-Frage einem spezifischen, in den Diskurs eingeführten oder anderweitig für Sprecher und Hörer offenkundigen Individuenbereich zu entnehmen sind, spricht man davon, dass das entsprechende w-Element "diskursgebunden" ist […].[321]

This line of argumentation is comparable to the semantic interpretation of *da* in Cimbrian relative markers as given by GREWENDORF and POLETTO (2015: 413):

> The element *da* [in declarative and interrogative clauses; G.K.] is a deictic element referring back to the context used as a Ground for the postverbal subject. One might hypothesize that exactly the same is true in relative clauses; they need a Ground against which the head noun is identified and, therefore, *da* is obligatory because the identification mechanism only works if there is a context in which the head noun is identified.

Aside from D-linkedness, sentence <31> is obviously an evaluation and evaluations are only possible if the entity or proposition evaluated is physically present or at least present in the minds of speaker and listener. A further possible characteristic of definiteness which may lead to more {d-}-marked introducing elements is the fact that sentence <31> states a general (durative) characteristic of people.

Sentences <34>, <36>, and <38>, which exhibit far lower shares of {d-}-marked introducing elements (8.5%, 11.7%, and 15.9%, respectively), also presuppose a certain familiarity with the fact that the speaker has problems with his feet, that there has been an accident, and that there is a man staring at the speaker's house. Aside from the fact that these relative clauses are no prototypical restrictive relative clauses anymore (cf. the discussion following Table 2-9), there are further decisive differences to sentence <31>. Sentence <36>, the sentence with the lowest share of {d-}-marked relative markers, for example, is the only sentence in which the relative clause refers to an action which will only take place in the future. This means that even though the problem with the feet and perhaps even the doctor's wish to see them is old information, the action has not yet taken place. The uncertainty

[321] Translation by G.K.: An element is D-linked if it refers to a set of entities which either has been introduced into discourse or is obvious for speaker and listener. If, for example, the possible answers to a wh-question are taken from a specific set of individuals which has been introduced into discourse or is evident to speaker and listener, one considers the respective wh-element as D-linked […].

implied in any future event could be seen as reducing definiteness. Aside from this, all three sentences, but especially sentences <36> and <38>, describe less durative actions. Finally, the three sentences all qualify as a first turn in a conversation; they are not necessarily D-linked. One could, for example, imagine that speaker and listener have discussed the foot problem, the accident, or the staring man and then meet again a couple of hours later. In the meantime, the speaker may have gotten new information or is able to identify the staring man in the very moment he meets the listener. In all these cases, he may start the conversation with one of these sentences using the relative clause as a means of reminding the listener of the topic of the first conversation, which need not be currently present in the listener's mind. CHAFE (1994) would probably call the referential information contained in sentences <34>, <36>, and <38> semi-active and would locate it in the listener's peripheral consciousness. The information in sentence <31>, however, is active and localized in the listener's focal consciousness.

Using the relative pronoun or *waut da* in sentence <34>, <36>, and <38> – clearly the marked option – can be compared with what AUER (1981) calls a marker of indexicality. AUER analyzes the non-anaphoric use of the demonstrative determiner *dies-* ('this'), i.e. a use in which *dies-* does not refer to something verbally mentioned before. He (1981: 309) writes:

> Durch die Divergenz zwischen Kontextverweiskraft und tatsächlichem sprachlichen [sic!] Kontext erhält die demonstrative Artikelform ihre indexikalitätsmarkierende Kraft. Indem er ein dies- verwendet, spielt der Sprecher auf ein möglicherweise vorhandenes, aber nicht tatsächlich erwähntes gemeinsames Vorwissen an und gibt ihm dadurch kontextuelle Relevanz […].[322]

If AUER's (1981) assumption is correct and if the situational setting visualized for sentences <34>, <36>, and <38> is plausible, the relative markers with a {d-}-segment may be used to remind the listener of the shared knowledge created in the first conversation. This knowledge need not have been verbalized in the current conversation. There is, therefore, not just a quantitative, but also a qualitative difference between the relative markers in sentence <31> and in the other three sentences. The infrequent use in these sentences is not only statically indexical. It actively points to shared non-verbalized previous knowledge. In sentence <31>, {d-}-marked relative markers do not have this pointing quality. After all, the sentence only makes sense if the proposition of the relative clause is currently being discussed. These markers are, therefore, only statically indexical.

Sentence <40>, whose head noun is morphologically definite due to the article in *the guy*, but semantically indefinite due to the interrogative pronoun *who*, nevertheless displays the second-highest share of {d-}-markers (30.2%). This sentence thus seems to work more or less like sentence <31>. It is not impossible, but highly improbable that someone would start a conversation by saying *Who is the guy who could have saved my brother's life?* This sentence

[322] Translation by G.K.: Because of the divergence between contextual indicational power and actual linguistic context, the demonstrative form of the determiner gains its power as marker of indexicality. By using dies- ('this'), the speaker refers to a shared previous knowledge that has not actually been mentioned, but may exist. Thus he turns this shared knowledge contextually relevant.

is much more felicitous if the brother's death is the topic of conversation. Aside from this, the counterfactuality of the relative clause makes is blatantly clear that this death constitutes old information of a rather durative nature. Unlike the events described in the other four sentences, it is also a piece of information of the utmost importance, which the listener could not possibly have forgotten.

Although the propositions of the relative clauses of the five sentences cannot be nicely distinguished as either old or new information, we can distinguish different degrees of their information status. On the one hand, we have information that must have been mentioned in the same conversation, i.e. it must be present in the listener's mind, and that must be of high generality (*being loud*) or importance (*being dead*). On the other hand, we have information not necessarily mentioned in the same conversation and of less generality and importance. Our conclusion then is that the more active, D-linked propositions are linguistically marked more frequently by the definite segment {d-}. In this respect, the question arises of what the connection between an active, D-linked proposition and definiteness may be. It is again LEISS (2000: 14 and 169–170), who gives important hints in regard to this question:

> Aspekt und Artikel sind Realisierungen ein und derselben grammatischen Funktion. Diese Funktion wird im einen [sic!] Fall vom Nomen, im anderen Fall vom Verb realisiert, wobei die unmittelbare syntaktische Umgebung von den Definitheits- bzw. Aspektualisierungseffekten profitiert. Man könnte diese Funktion wortartenneutral als die grammatische Kategorie der Totalität/Nichttotalität bezeichnen.[323]

> Wenn das Verbalpräfix *gi-* immer dann erscheint, wenn der als notwendig erachtete Artikel fehlt, so ist das ein starker Hinweis darauf, daß *gi-* und definiter Artikel funktionsgleich und damit als grammatische Synonyme betrachtet werden können.[324]

On page 168, LEISS (2000) adds that both the perfective verbal aspect and countability of nominal entities (the unmarked context for definite, anaphoric articles) share – from an outside perspective – their contourability. It is due to this shared conceptual feature that the prefix {gi-}, the prototypical marker of verbal perfectivity in older varieties of German (formally related to modern SG {ge-}, the prefix used for past participles), and the definite article can fulfill the same grammatical function. If the category *totality*/*non-totality* can be expressed by means of such apparently different grammatical features as verbal aspects and nominal definiteness, a comparable explanation for relative markers in MLG may be given. We could, for example, assume that an active, D-linked proposition is known to the speaker and to the listener in its *totality* thus being functionally comparable to categories exhibiting contourability and formally compatible to markers of definiteness like relative pronouns and *waut da*. Contrary to this, non-active or semi-active propositions and especially asserted

---

[323] Translation by G.K.: Aspect and article are realizations of one and the same grammatical function. In one case, this function is being realized by the noun; in the other case, by the verb. The immediate syntactic environment benefits from the definiteness and aspectualizing effects of these realizations. If one does not want to refer to specific parts of speech, one may label this function as the grammatical category of totality/non-totality.

[324] Translation by G.K.: If the verbal prefix *gi-* always appears when the seemingly necessary article does not appear, this is a strong indication that *gi-* and the definite article fulfil the same function and can thus be considered grammatical synonyms.

propositions breach the boundaries of such knowledge inhibiting the appearance of these elements.

Aside from the semantic implications of the {d-}-marked relative markers, one would obviously like to know why the complex marker *waut da* is restricted to functioning as the subject. In order to answer this question, one has to focus on the semantic and syntactic characteristics of *da*. Definite articles accompany a referential entity. Relative pronouns like SG *der*/*die*/*das*, which most linguists localize in the Spec/CP-position, a position for phrases, also relate to an aforementioned referential entity. This is not the case with a relative particle like *waut*, which occupies the head position of CP, a position, which bars phrases. If *waut* in *waut da* occupies the same position – and nothing speaks against this assumption –, the *da* in *waut da* must be localized in a structurally lower position than *waut*, most probably within IP. The fact that *waut da* exclusively occurs in the subject function[325] and the fact that *da* is a cognate of the English subject expletive *there* strongly suggests that it is a phonetically realized subject entity in Spec/IP. This conclusion is in line with the general idea of BAYER and SUCHSLAND (1997) with regard to *da* in German (cf., however, GREWENDORF & POLETTO 2015 for a different analysis). If the Spec/IP-analysis for *da* is correct, MLG *waut da* would not only be comparable to relative pronouns in that it, too, marks an active, D-linked proposition, but also in that it relates to a referential entity. The unique relative marker *die waut da* in (8-17) gives additional support for the assumption that *da* is to be localized in Spec/IP, since both Spec/CP and the head position of CP are occupied by *die* and *waut*, respectively (cf. WEIß (2013: 781 – example (21e)) and GREWENDORF & POLETTO (2015: 397 – example (5)) for comparable relative markers in Bavarian):

stimulus <31> Spanish: **No me gustan las personas que hacen mucho ruido**
English: I don't like people who make a lot of noise

(8-17) *ik [0.3] [äh] gleich die Personen nich die waut da viel [0.4] lüten- Lütheiten meaken* (Mex-43; m/31/MLG)
I […] [eh] like the persons not who that 'there' much […] ~~loud~~ loudness make

Wrapping up this discussion, we can conclude that informants with a low competence level in SG and informants with a high competence level in SG use their respective variation pool in order to mark active, D-linked propositions of relative clauses. The difference is that the former use *waut da*, while the latter use relative pronouns. There are two more issues that

[325] FLEISCHER (2004: 227 – Table 2) marks comparable *was da* and *der da* in the object function with a '?'. He (2004: 219) nevertheless writes that the combination of relative pronouns and *da* in object function is possible in the Upper Saxon dialect of Leipzig, but that "in the direct and indirect object, plain *der, die, das* would rather be used […]". GREWENDORF and POLETTO (2011: 315 – Footnote 8) also claim that the relative marker *bo da* exists in object function in Cimbrian. An analysis of works by THEODOR FONTANE, GOTTFRIED KELLER, JOHANN CHRISTOPH GOTTSCHED, and LUDWIG GANGHOFER in the collection DEUTSCHE LITERATUR VON LUTHER BIS TUCHOLSKY (2007) shows that *der da* as masculine subject relative marker is used frequently. The dative/accusative forms *dem da*/*den da* functioning as (in)direct object, however, do not appear even once. This exclusive use in subject function is identical to the use of MLG *waut da*. Unlike *waut* in *waut da*, *der* in *der da* is a relative pronoun located in Spec/CP. This need not mean, however, that the second element *da* occupies the head position of CP. Like *da* in *waut da*, it rather occupies Spec/IP again functioning as a phonetically realized subject entity.

separate these groups. First, informants with a low competence in SG produce many more tokens with *waut da* in sentence <31> than in sentence <40> (25.6% vs. 12.4%; cf. Table 8-6). Such a difference does not exist with regard to the relative pronouns used by SG-competent Mennonites. The reason for this differential marking may either be a higher sensitivity to the information status on the side of the non-SG-competent Mennonites – a difference not detectable to us or to SG-competent informants – or an effect, which may after all be related to the shape of the matrix clause. In spite of what we have said about the difference of negation in matrix clauses of complement and relative sentence compounds, there may be a certain priming effect. We will see in Section 8.2.3 that it is precisely the non-SG-competent informants who show a somewhat comparable change in introductory elements of complement clauses introducing the relative particle *waut*. As this is a clear sign of convergence of complement and relative clauses and as negation will play an important role in this process, the negation particle in relative sentence compounds may have borrowed some integrating power from the negation particle in complement sentence compounds.

If so, one could, after all, explain the higher share of *waut da* in sentence <31> as the result of the infiltration of the frequent definiteness of the head phrase *die Mensche* ('the people'). Most tokens of sentence <31> feature a definite article in the head phrase. This infiltration would be furthered by the integrating negation particle *nich* in the matrix clause. Granted, all translations of sentence <40> feature a definite article, too, so one may have expected a similar effect there, but there are two decisive differences: (i) The integration effect of questions is not as strong as that of negation (cf. Table 7-11). (ii) As already mentioned, the definite article in *the guy* is not semantically definite since the matrix clause is *Who is the guy […]?*, i.e. *the guy* is indefinite in spite of its formal appearance. These differences could then explain the higher frequency of definite *waut da* in sentence <31>. That this effect does not exist with regard to relative pronouns is probably the consequence of the fact that the informants who use relative pronouns are SG-competent. In general, these informants do not seem to exhibit a positive attitude towards grammatical innovations. They may, therefore, avoid converging tendencies of complement and relative clauses. This avoidance can be seen here with regard to the role of the negation particle *nich* (no difference between sentences <31> and <40>). In Section 8.2.3, we will encounter another phenomenon which demonstrates the anti-innovative attitude of highly SG-competent informants. They do not once insert the relative particle *waut* as complementizer.

The second point in which informants with a low and with a high competence level in SG behave differently is prolepsis. Informants with a low level of SG use resumptive pronouns in cases of prolepsis much more frequently (cf. Table 8-4), i.e. they sometimes mark definiteness three times (definite article, relative marker, and resumptive pronoun). The Bolivian token (8-18), which was already presented as (1-6), illustrates this:

stimulus <36> Spanish: **El doctor que quiere ver mi pie está muy preocupado**
English: The doctor who wants to see my foot is very worried

(8-18) *de Doktor [0.7] waut da min Fuut sehne will dei is [äh] [1.1] sehr begone* (Bol-4; m/44/MLG)
the.DEFINITE doctor […] that 'there'.DEFINITE my foot see wants ~~he~~.DEFINITE is [eh] […] very <u>experienced</u>

The effect a speaker such as Bol-4 achieves with (8-18) is twofold: By using a resumptive pronoun after the relative clause, he creates cohesion between the definite article of *de Doktor* ('the doctor') and the rest of the sentence compound. Moreover, he may follow his general drive to mark a grammatical feature several times. With regard to complement sentence compounds, we have seen that the information status of the dependent clause and different degrees of clause linkage can be marked by means of correlates, complementizers, and different verb clusters variants (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3). Here, slightly different types of definiteness are marked by the definite article, by the shape of the relative marker, and by a resumptive pronoun. European speakers of SG cannot apply the latter two marking strategies. On the one hand, they cannot opt for a relative marker without a {d-}-segment – the use of *was* ('which') is governed by rather restrictive rules and the relative pronouns *welcher*/*welche*/*welches* are virtually impossible in (spoken) modern SG. On the other hand, prolepsis is seen as superfluous at best. Elspaß (2005: 89 – Footnote 46) lists it as part of spoken grammar and Zifonun et al. (1997: 519) comment on it in the following way:

> Die Linksanbindung ist eher im Diskurs als in schriftlichen Texten zu finden; im Schriftbereich wird sie stilistisch negativ bewertet, wenn der linksangebundene Ausdruck nicht komplex ist (etwa satzförmig).[326]

Granted, there is a left-dislocated clause in (8-18), but this clause is part of the SubjNP and does, therefore, not qualify as an example of the clausal exception Zifonun et al. (1997: 519) refer to. As the SG-competent MLG informants avoid prolepsis, SG normative pressures seem to be at work. Without these pressures, the restrictive behavior of these informants would be astonishing since they are in daily contact with people who use resumptive pronouns in relative sentence compounds quite frequently (cf. Table 8-4).[327] The distaste for prolepsis thus seems to be in harmony with the fondness of SG-competent informants for relative pronouns. This harmony, however, is more apparent than real. In spite of the fact that the use of relative pronouns itself constitutes a case of lexical prestige borrowing, the results in Table 8-6 are clear evidence that there is a second, structural layer to this borrowing. In contrast to

[326] Translation by G.K.: Left dislocation can be found in discourse rather than in written texts because it is evaluated negatively in the realm of writing unless the left-dislocated expression is complex (e.g., clausal).

[327] The informants of the group *--SG*, for example, use resumptive pronouns in relative sentence compounds in 58.7% of their translations (cf. Table 8-4). For this group, one is tempted to consider an obligatory use of resumptive pronouns for the future. Cross-linguistically, this would not be too surprising a phenomenon. Lehmann (1984: 258) mentions Bambara, a Malian language, in which resumptive markers after relative clauses are obligatory. Aside from this, the frequently occurring resumptive pronouns in relative sentence compounds and up to now the infrequently occurring resumptive pronouns after proper names (cf. Table 8-4) reminds us of the West Papuan language Maybrat. This language exhibits verb-attached pronominal subject markers obligatorily and additionally to full-fledged SubjNPs in simple declarative clauses and in relative sentence compounds (cf. The World Atlas of Language Structures – Chapter 122; cf. http://wals.info/chapter/122).

borrowing SG *mögen*/*gefallen* and using it instead of MLG *gleichen* ('to please'; cf. Table 8-1), the SG-competent informants do not seem to be totally "in control" with regard to the borrowing of relative pronouns. They still follow a clearly discernable rule of MLG. This rule is the marking of the information status of the clausal proposition by means of a special relative marker; a rule unknown to SG.

One question we will not answer at this point is the relationship between the information status of the relative clause and relative markers functioning as direct objects. In these sentence compounds, SG-competent speakers can still use definite pronouns to mark active, D-linked propositions. However, a speaker who lacks this competence cannot use *waut da* anymore, since this relative marker exclusively occurs in the subject function. As marking the information status of the relative clause seems to be important to these speakers too, one may assume that they employ other means to mark active, D-linked propositions. The Summarizing Boxes 8-1 and 8-2 condense the different grammatical traits of different MLG speaker types discovered in Section 8.2.2:

Summarizing Box 8-1: Prolepsis in MLG

> With regard to the use of resumptive elements in prolepsis constructions in relative and complement sentence compounds, there is a clear difference between SG-competent (mostly raising-unfriendly) and non-SG-competent (mostly raising-friendly) informants. The latter seem to use this device in order to augment the cohesion of sentence compounds. No difference between scrambling-friendly and scrambling-unfriendly informants can be detected.

Summarizing Box 8-2: MLG relative markers in subject function

> With regard to {d-}-marked relative markers, both SG-competent (mostly raising-unfriendly) and non-SG-competent (mostly raising-friendly) informants use definite relative markers in order to mark an active, D-linked proposition of the relative clause. However, the two groups differ with regard to the actual relative marker they use. SG-competent informants use relative pronouns, borrowed from SG, while non-SG-competent informants achieve the same effect by employing the complex marker *waut da*. No difference between scrambling-friendly and scrambling-unfriendly informants can be detected.

8.2.3 Strength of clause linkage in complement sentence compounds revisited

In Section 7.1, we analyzed complementizer deletion in complement sentence compounds. Unsurprisingly, MLG complement clauses can either appear with the complementizer *daut* as in (8-19a) or without it as in (8-19b). Besides these possibilities, there are two further, rather infrequent options. Translation (8-19c) illustrates a complement clause with *waut* (51 tokens; cf. also (1-8)). This complementizer is superficially identical to the MLG default relative marker. The token in (8-19d) represents a further option, namely *baut* (9 tokens). In Excursus 7.2.2.1, we analyzed the appearance of MLG *waut* as complementizer as a consequence of converging tendencies between relative and complement clauses. Here, we are more interested in the characteristics of the informants that use this element and its phonological variant *baut*[328] and in the effect these elements have on clause linkage.

stimulus <7> Spanish: **Pedro está convencido que entendió el libro**
English: Peter is convinced that he has understood the book

(8-19) a. *[äh] Peter is überzeugt daut hei daut Bük verstonen haft* (Mex-78; f/37/MLG+SG)
[eh] Peter is convinced that he the book understood has

b. *Peter is sick sicher hei haft det Bük verstonen* (Mex-88; m/41/MLG+S)
Peter is ~~himself~~ sure Ø he has the book understood

c. *Pedro is sicher waut her daut Bük haf verstonen* (Mex-11; f/15/MLG)
Peter is sure that he the book has understood

d. *Peter is: ganz: [0.6] hei weit baut hei daut Bük haf verstonen* (Mex-76; m/24/MLG+S)
Peter ~~is entirely-~~ […] ~~he~~ knows that he the book has understood

Table 8-7 indicates the distribution of the different complementizers with regard to the informants' competence in SG:

Table 8-7: Different complementizers in complement sentence compounds separated by the informants' SG competence

	--SG	**-SG**	**±SG**	**+SG**	**++SG**	**Total**
n (tokens)	301	376	435	489	403	2004
daut	275 91.4%	375 99.7%	409 94%	482 98.6%	403 100%	1944 97%
χ^2 (4, n=2004) = 72.5; p=0*** / Cramer's V: 0.19 / 0 cells with less than 5 expected tokens competence in SG: F (1,2002) = 27.5, p=0*** (***daut***: 8.5 – *waut/baut*: 6.3)						
waut/baut	26 8.7%	1 0.3%	26 6%	7 1.4%	0 0%	60 3%

The distribution is highly significant, but not completely steady. The group *-SG* behaves quite unexpectedly since they only produce one token of the marked variants. In spite of this, there is a competence difference in SG of 2.2 points between informants using the default complementizer *daut* (8.5 points) and informants using *waut* or *baut* (6.3 points). Interestingly, the informants producing *waut* display a SG competence level of 6.8 points, while this level drops to a very low 3.8 points for the tokens with *baut*. In spite of this difference, an important similarity with regard to age exists. Informants that use *waut* are on average 27 years old, the ones that prefer *baut* are 26.7 years old. The default complementizer *daut* is produced by much older informants averaging 35 years (F (1,2002) = 18.5, p=0***). *Waut* and *baut* as complementizers can thus be qualified as innovative.

[328] Because of the formal similarities of *waut*/*baut*, they will mostly be analyzed conjointly. The voiced bilabial plosive in ***b**aut* differs only in one phonological feature from the voiced labio-dental fricative in ***w**aut*. A comparable change can be found in European varieties of German, for example in Cimbrian and in parts of the Eastern Eifel. In Cimbrian, the SG interrogative pronouns *wer* and *was* ('who' and 'what') appear as *bêr* and *baz* in Giazza (cf. SCHWEIZER 2008: 421), while the default relative marker in Lusern is *bo* (comparable to *wo* in Southern German dialects; cf. SCHWEIZER 2008: 922). In the Eastern Eifel, *wer* ('who') has turned into *ber*, *wat* ('what') into *bat*, and *wie* ('how') into *bi* (cf. GRÄNITZ & GRUNDMANN 2003: 76; thanks to SANDRA HANSEN-MORATH for this hint!).

In Section 8.2.2, no influence of the informants' scrambling behavior on the use of resumptive pronouns in prolepsis or on the appearance of particular relative markers could be detected. Contrary to this, their competence in SG and their raising behavior exerted considerable influence on these phenomena. The innovative MLG complementizers *waut* and *baut* behave differently. They turn out to be sensitive to all three factors, to competence in SG, to raising, and to scrambling. Because of this, a more refined grouping will be applied for the following analyses. Just separating the informants according to their competence in SG or according to their raising behavior is bound to skew the results, since there are five informants with a raising index larger than zero among the 46 informants in the competence group *++SG* (in the group *+SG*, this applies to 15 of 45 informants). This means that being highly competent in SG does not necessarily prevent raising-friendliness. In the group *--SG*, there are also four out of 41 informants with a raising index lower than or equal to zero (in the group *-SG*, this applies to 25 of 58 informants). Table 8-8 shows the distribution of complementizer deletion and different complementizers in four selected groups of informants. In this reduced data set, no token with *baut* is present.

Table 8-8: Different types of complement clauses separated by the informants' SG competence and their raising and scrambling behavior

	SG > 6 (±SG, +SG, ++SG) **raising ≤ 0**		**SG ≤ 9** (±SG, -SG,--SG) **raising > 0**	
	scrambling ≤ 0	**scrambling > 0**	**scrambling ≤ 0**	**scrambling > 0**
n (tokens)	280	571	338	468
-daut	13 4.6%	17 3%	58 17.2%	98 20.9%
χ^2 (6, n=1657) = 180; p=0*** / Cramer's V: 0.23 / 0 cells with less than 5 expected tokens				
+daut	267 95.4%	553 96.8%	277 82%	339 72.4%
competence in SG: F (2,1654) = 35.7, p=0*** (***+daut***: 8.5 / *+waut/baut*: 7.5 / *-daut*: 6.4) raising F (2,1654) = 61, p=0*** (***+daut***: +0.08 / *+waut/baut*: +0.247 / *-daut*: +0.259) scrambling F (2,1654) = 9.6, p=0*** (***+daut***: +0.006 / *+waut/baut*: +0.203 / *-daut*: +0.007)				
+waut	0 0%	1 0.2%	3 0.9%	31 6.6%

Looking at the SG-competent and raising-unfriendly informants on the left-hand side of Table 8-8 first, it instantly becomes clear that these Mennonites – regardless of their scrambling preferences – are not very fond of *daut*-deletion (30 tokens; 3.5% vs. 19.4% of non-SG-competent and raising-friendly informants). Much less do they use *waut* as a complementizer (just 1 instead of expected 18 tokens). The right-hand side of the table, however, reveals a striking difference between scrambling-friendly and scrambling-unfriendly informants. Both groups have a rather low competence level in SG and are raising-friendly and both of them show a comparably high share of *daut*-deletion. There is, however, a huge difference in the production of the innovative complementizer *waut*. Scrambling-friendly informants produce this variant 7.3 times more frequently than scrambling-unfriendly informants (6.6% : 0.9%).

Their 31 tokens (expected 9.9 tokens) represent 51.7% of the sixty tokens with *waut* and *baut* although they only produce 18.5% of all tokens (370 out of 2,004).

Obviously, there is no direct connection between the informants' syntactic preference for scrambling and their innovative use of *waut* as a complementizer. Rather, both these phenomena are related to a third factor, namely clause linkage. In In-Depth Analysis 7.2.4.2, raising- and scrambling-friendly Dutch-type informants turned out to mark different strengths of clause linkage by means of their highly variable use of correlates, complementizers, and different verb clusters (cf. Summarizing Boxes 7-2 and 7-3). Raising-friendly, but scrambling-unfriendly Flemish-type informants did not use these devices to the same extent. Due to the distributional similarities in Table 8-8, one may expect a comparable connection between the complementizer *waut* and clausal integration. Table 8-9, therefore, compares the tokens of raising- and scrambling-friendly informants in Table 8-8 for two modes of matrix clauses separated according to two matrix clause verbs:

Table 8-9: Different types of complement clauses separated by the verb and by the mode of the matrix clause (only raising-friendly (>0) and scrambling-friendly informants (>0) with a low competence in SG (≤9))

	weiten		**gleuwen**	
	+negated -question	**-negated -question**	**+negated -question**	**-negated -question**
n (tokens)	162	30	55	46
-daut	1 0.6%	3 10%	0 0%	34 73.9%
	χ^2 (2, n=192) = 13.1; p=0*** / Cramer's V: 0.26 / 3 cells (50%) with less than 5 expected tokens		χ^2 (2, n=101) = 61.7; p=0*** / Cramer's V: 0.78 / 2 cells (33.3%) with less than 5 expected tokens	
+daut	148 91.4%	27 90%	52 94.5%	12 26.1%
+waut	13 8%	0 0%	3 5.5%	0 0%

The message in Table 8-9 could not be more clear-cut. After the least integrating mode, non-negated, declarative matrix clauses, complementizer deletion is (extremely) frequent, while *waut* does not appear a single time, neither in the case of *weiten* ('know'), nor in the case of *gleuwen* ('believe').[329] *Waut* occurs quite frequently after negated, declarative matrix clauses though. This is exactly the mode, in which *daut*-deletion is virtually impossible. From the lack of complementizer deletion and from the fact that the complement proposition after negated matrix clauses is presupposed, we have judged that such complement clauses are strongly integrated into their matrix clause. The opposition of *daut*-deletion and the insertion of *waut* reaches impressive levels in the case of *gleuwen*. The association strength is 0.78 (for

[329] This distribution makes the change from *daut* to *waut* in Figure 7-3 even more impressive. Both matrix clauses there are non-negated and declarative, i.e. they represent the most marked context for *waut*. The Mexican informant thus has to be qualified as extremely innovative. This obviously fits her age; she is just sixteen years old.

weiten, it is 0.26). This state of affairs matches perfectly with WEIß' (2013: 777) comment for the Yiddish and Bernese German cognates *voz* and *was*:

> So ist im Berndeutschen der w-Komplementierer offenbar nur bei Neg-Raising-Konstruktionen möglich bzw. unter NPI-Prädikaten (Penner 1993) erlaubt. Eine ähnliche Restriktion gilt heute im Jiddischen, wo der Komplementierer nur von „faktiv-emotive[n] Verben" (Kühnert/Wagner 2004: 278) wie *bedauern* lizensiert wird […].[330]

Both negated matrix clauses (e.g., with negative raising verbs like *glauben*; 'believe') and factive verbs that do not allow complementizer deletion strengthen syntactic integration. Yiddish *voz*, Bernese *was*, and MLG *waut* thus coincide in these restrictions. The question we have to answer now is why *waut* is capable of indicating strong clausal integration. At first glance, it just does not seem to be the perfect candidate. With regard to relative markers, we have argued that the two {d-}-marked elements, relative pronouns and *waut da*, indicate an active, D-linked proposition that can be equated to presupposedness in complement sentence compounds. As complement clauses after negated, declarative matrix clauses are presupposed, the {d-}-marked complementizer *daut* seems to convey this information status perfectly. Why should it be replaced by a {w-}-marked element reminiscent of the indefiniteness of interrogative pronouns like *wer* ('who') or *waut* ('what')?[331]

The surprising preference for *waut* in presupposed contexts seems to be connected to two crucial characteristics of complementizers: (i) Complementizers do not have any semantics of their own. This distinguishes them, for example, from the causal subordinator *da* ('since'), which possesses some proper semantic content. BLÜHDORN (2006: 326–332) analyzes *da* as definite in comparison to *weil* ('because') precisely because of its {d-}-segment. Reflexes of this definiteness are that causal clauses introduced by *da* normally refer to known causes (old information) and are mostly preposed, while causal clauses introduced by *weil* are mostly postposed frequently referring to unknown causes (new information).

(ii) Complementizers are heads, not phrases, i.e. contrary to definite articles (heads normally accompanied by a referential NP), contrary to relative pronouns linked to a referential NP, and thus also contrary to *da* in *waut da*, they do not even have an indirect referential power. This means that with regard to marking definiteness, *daut* as a complementizer is synchronically not identical to *daut* as a definite article or *daut* as a demonstrative pronoun in spite of the historical connection between these elements (cf. Sections 7.2.1 and 7.2.2.1). The same is true for *waut* as a relative particle and *waut* as an

[330] Translation by G.K.: In Bernese German, for example, the w-complementizer is apparently only possible with negative-raising-constructions or with NPI-predicates (Penner 1993). A comparable restriction is nowadays valid for Yiddish, where the complementizer is only licensed by "factive-emotive verbs" (Kühnert/Wagner 2004: 278) like *bedauern* ('regret').

[331] It is because of this apparent contradiction that we will refrain from categorizing *daut* as a definite complementizer and *waut* as an indefinite one. Nevertheless, a comparison to certain Italian dialects (cf. MANZINI 2012) or Modern Greek (cf. ROUSSOU 2010), where complementizers can be categorized according to definiteness, may reveal interesting parallels, especially because these varieties also show converging tendencies between complement and relative clauses. Both MANZINI (2012: 302–303) and ROUSSOU (2010) stress the dependence of the complementizer on the matrix verb, a criterion which does not explain our results. Table 8-9 does not show a difference depending on the presence of either *weiten* ('know') or *gleuwen* ('believe').

interrogative pronoun. In contrast to pronominal *waut*, *waut* as a relative particle has no referential power and is the head of a relative clause in C^0, not a phrase in Spec/CP. It is thus a perfect match for the complementizer *daut* since both are referentially and semantically empty and both are heads. Quite fittingly, LEHMANN (1984: 250) considers relative particles as complementizers even if they introduce a relative clause. He writes that "[a] morpheme that only serves the function of subordination is not a relative pronoun, but a conjunction even if it introduces a relative clause."[332] These parallelisms are an important precondition for the innovative use of *waut* as a complementizer in complement clauses.

We have now provided an explanation for why the use of the complementizer *waut* instead of *daut* does not interfere with the marking of presupposedness of complement clauses. We have, however, not yet given an explanation for why *waut* is the better candidate for indicating a high level of syntactic integration. As the effect of integration is obvious from Table 8-9 and as *waut* is originally a relative marker, we have to compare this clause type with the innovative environment of *waut*, i.e. we have to compare relative and complement clauses. In Table 6-4, relative clauses turned out to be more integrated into their matrix clauses than complement clauses. Thus, the default relative marker *waut* is cognitively connected to a high level of syntactic integration for speakers of MLG, a much higher level than that of the default complementizer *daut*. As both the complementizer *daut* and the relative particle *waut* share the lack of semantics and the lack of referential power, using one of them in the function of the other does seem like a viable option, especially if it goes along with the asset of marking the information status of the dependent clause more accurately.[333] Complement clauses after negated declarative matrix clauses may thus be the gateway for relative markers as complementizers. It would indeed be interesting to investigate whether the comparable development in Latin (cf., e.g., ÖHL 2010) also started with negated declarative matrix clauses.

The last question we have to answer is why it is only raising- and scrambling-friendly Dutch-type informants that take advantage of this novel device. This answer is connected to the discussion of the strength of clause linkage in In-Depth Analysis 7.2.4.2. There, eight types of matrix clauses with regard to mode and verb were analyzed in terms of the distribution of correlates, complementizers, and verb clusters (cf. Table 7-35). The results of Tables 7-36 through 7-38 showed that a propensity for both raising and scrambling furthered the tendency for a more differentiated marking of clause linkage. For the reader's convenience, we will repeat the values allotted to each of the levels of the three variables in question. The more points a level gains the bigger its disintegrating power is supposed to be

[332] Translation by G.K.; the original reads: *Ein Morphem, das lediglich der Subordination dient, ist, auch wenn es Relativsätze einleitet, kein Relativpronomen, sondern eine Konjunktion*.

[333] The fact that some verbal constructions like *sicher sene* ('be sure') feature a nominal entity, the predicative adjective *sicher*, may further ease the transference of a relative marker into a complement clause. This is probably the reason why *waut* appears in (8-19c) although the matrix clause is not negated. This assumption is possibly related to ARSENIJEVIC's (2009: 43) light-nominal-object-analysis. In this analysis, ARSENIJEVIC deconstructs a matrix clause verb like *behaupten* ('claim') into a light verbal element and a nominal element, i.e. into *die Behauptung machen* ('make the claim').

(cf. the discussion of Tables 7-33 and 7-34 for a more detailed explanation). The absence of an integrating complementizer counts two points, while the absence of an integrating correlate counts one point. Phonetically realized correlates and complementizers count zero points. With regard to verb clusters, the V2-VPR-variant counts two points. The non-V2-VPR-variant counts one point and the VR-variant 0.5 points. The NR-variants count zero points.

In Tables 8-10 through 8-12, we will apply the same analysis to the newly formed homogenous groups of speakers, i.e. groups that coincide in their raising behavior, their scrambling behavior, and their knowledge of SG. The heightened homogeneity of these groups comes at a price though. Some of the eight contexts show too low numbers for a valid comparison. Due to this, we will not be able to analyze the tokens of raising- and scrambling-unfriendly informants with a high competence in SG. The analysis, therefore, starts with the 151 relevant tokens produced by SG-competent, raising-unfriendly, but scrambling-friendly informants (exclusively German II-type informants). In Table 8-10, the reader finds the average level of disintegration (line *disintegr.*), the shares of the marked lexical options -*complementizer* and +*correlate*, and the number of tokens with the two frequently occurring raised variants, the V2-VPR-variant and the VR-variant. Furthermore, the ratio of these variants is given (line *V2-VPR/VR*). The eight contexts are ordered with regard to the index values in Table 7-35.

Table 8-10: Strength of disintegration in eight linguistic contexts for raising-unfriendly (≤ 0) and scrambling-friendly informants (>0) with a high competence in SG (>6) (disintegr.=level of disintegration; compl.=complementizer; V2-VPR=V2-VPR-variant; VR=VR-variant)

mode	**+neg. -quest.**	**+neg. -quest.**	**-neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**	**+neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**
verb	***gleuwen***	***weiten***	***sicher sene***	***sicher sene***	***weiten***	***sehen**$_{Mod}$*	***sagen***	***gleuwen***
n (tokens)	8	38	48	41	2	1	1	12
disintegr.	0.88	0.87	1.06	1	1.5	1	1	2.33
distance	0.19							
-compl.	0	0	0	0	0	0	0	4 (33.3%)
+correlate	1 (12.5%)	10 (26.3%)	0	0	0	0	0	0
V2-VPR	0	2	0	0	0	0	0	0
V2-VPR/VR		1	<0.17					
VR	0	2	6	0	0	0	0	0

The distribution of correlates and complementizer deletion is as expected. The two most integrating contexts on the extreme left-hand side of Table 8-10 show the only occurrences of correlates. The most disintegrating context on the extreme right-hand side shows the only tokens with complementizer deletion. Three of the four more disintegrating contexts, however, show only one or two tokens, i.e. a comparison with these contexts is of little value. Concentrating on the four more integrating contexts with robust numbers of tokens, one realizes that we are really dealing with raising-unfriendly informants. There are only few tokens with raised verb clusters. A comparison of the cluster types, therefore, does not make much sense either. What we can do is to compare the average disintegration index. Here, the maximum distance between the first four contexts is just 0.19 points (line *distance*). This means that these informants do not mark subtle differences in the strength of clause linkage by means of correlates, complementizers, or verb clusters. They only do so in case of strongly disintegrating contexts. After non-negated, declarative matrix clauses with *gleuwen* ('believe'), the index value is 2.33. This means that the maximum index span of these informants is 1.46 points (2.33-0.87).

Table 8-11 gives the same information for raising-friendly and scrambling-unfriendly informants with little knowledge of SG. 65 of the 103 tokens come from Flemish-type informants (63.1%). Eighteen tokens come from comparable Dutch-type informants, sixteen from comparable German I-type, and four from comparable German II-type informants. This "mixture" is due to the slightly changed cutoff points for raising and scrambling (cf. In-Depth Analysis 7.2.4.2).

Table 8-11: Strength of disintegration in eight linguistic contexts for raising-friendly (>0) and scrambling-unfriendly informants (≤0) with a low competence in SG (≤9) (disintegr.=level of disintegration; compl.=complementizer; V2-VPR=V2-VPR-variant; VR=VR-variant)

mode	**+neg. -quest.**	**+neg. -quest.**	**-neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**	**+neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**
verb	***gleuwen***	***weiten***	***sicher sene***	***sicher sene***	***weiten***	***sehen$_{Mod}$***	***sagen***	***gleuwen***
n (tokens)	5	26	28	15	9	9	2	9
disintegr.	1	1.81	2.43	2.23	2.67	2.72	3	3.67
	1.43				1			
-compl.	0	0	2 (7.1%)	2 (13.3%)	2 (22.2%)	2 (22.2%)	0	5 (55.6%)
+correlate	0	12 (46.2%)	1 (3.6%)	0	2 (22.2%)	1(11.1%)	0	0
V2-VPR	0	13	16	5	4	4	2	2
V2-VPR/VR		3.25	8	5	>4	4	>2	>2
VR (+VPR)	0	4	2	1	0	1	0	0

The average level of (dis)integration for all tokens is much higher than in Table 8-10; it is 2.34 points instead of 1.09 points. The question now is whether these informants use the higher degree of variation functionally. Just looking at the index values, the answer is positive. The maximum index span is 2.67 points (3.67-1; 4 contexts on the left-hand side 1.43 points; 4 contexts on the right-hand side 1 point) instead of 1.46 points in Table 8-10. Looking at the single phenomena, however, the picture becomes somewhat blurred. While the increasing occurrence of complementizer deletion fits our expectation more or less (a maximum span of 55.6%), the values for correlates and the ratio between the V2-VPR- and the VR-variant do not seem to follow such a clear pattern.

The decisive results can be found in Table 8-12, which presents the data of the raising- and scrambling-friendly informants with little knowledge of SG. A total of 104 of the 136 tokens come from Dutch-type informants (76.5%). The other 32 tokens come from comparable German II-type informants.

Table 8-12: Strength of disintegration in eight linguistic contexts for raising-friendly (>0) and scrambling-friendly informants (>0) with a low competence in SG (≤9) (disintegr.=level of disintegration; compl.=complementizer; V2-VPR=V2-VPR-variant; VR=VR-variant)

mode	**+neg. -quest.**	**+neg. -quest.**	**-neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**	**+neg. +quest.**	**-neg. -quest.**	**-neg. -quest.**
verb	***gleuwen***	***weiten***	***sicher sene***	***sicher sene***	***weiten***	***sehen***$_{Mod}$	***sagen***	***gleuwen***
n (tokens)	10	31	32	30	8	14	6	5
disintegr.	0.8	1.79	1.8	2.4	2	2.57	4.33	5
	1.6				3			
-compl.	0	0	2 (6.3%)	8 (26.7%)	0	5 (35.7%)	4 (66.7%)	5 (100%)
+correlate	2 (20%)	12 (38.7%)	0	0	0	5 (35.7%)	0	0
V2-VPR	0	14	5	4	3	3	2	0
V2-VPR/VR		1.56	0.33	1	1.5	1.5	>2	
VR	0	9	15	4	2	2	0	0

In spite of the fact that the general average of disintegration is somewhat lower than in Table 8-11 – it is 2.18 compared to 2.34 –, the functional use the predominantly Dutch-type informants make of this variation is remarkable. Only the behavior of correlates is still somewhat out of harmony with the characteristics of the eight constellations. With regard to complementizer deletion, however, the span reaches the highest possible value with 100% (33.3% in Table 8-10; 55.6% in Table 8-11). In addition to the bigger span, the rise is also steadier than in Table 8-11. Especially remarkable is the behavior in the most disintegrated context (-negated; -question; *gleuwen*). In this case, the scrambling-friendly informants all delete the complementizer and neither of them inserts a correlate. As a consequence of this, the highest possible value of disintegration is reached. Granted, there are just five tokens in this context, but the behavior of these scrambling-friendly informants resembles the behavior of North American scrambling-friendly informants in causal sentence compounds to the point (cf. Section 6.3). Those informants reanalyzed causal clauses with the V2-VPR-variant into structural V2-clauses; the informants here (2 from North America (3 tokens), 2 from Brazil) achieve the same effect by complementizer deletion. In both cases, they succeed in signaling the high degree of syntactic disintegration by means of structural V2 without losing the possibility to scramble (string-vacuously).

The same is true for the ratio between the V2-VPR-variant and the VR-variant. With the exception of negated, declarative matrix clauses with *weiten* ('know'), the ratio rises firmly and steadily indicating that the unscrambled V2-VPR-variant, the marked variant for scrambling-friendly informants, is ever more dominant the more disintegrated the dependent clauses become. This means that these informants change their scrambling behavior if it serves the iconic purpose of indicating weak clause linkage.

The most impressive indication for the syntactic sensitivity of the informants of Table 8-12 comes from the most important indicator, the disintegration index. The maximum index span in Table 8-12 is not 1.46 points as in Table 8-10 or 2.67 points as in Table 8-11; it is 4.2 points. At this moment, we would like to remind the reader of three things: First, all tokens analyzed in Section 8.2 were produced by fully fluent speakers of MLG with a competence level of at least ten out of fourteen points. Second, there are at least five tokens for each of the eight contexts in Table 8-12, i.e. these results can be considered reliable. Third, the informants in Tables 8-11 and 8-12 do not only mark disintegration, but also integration. This can be seen in their behavior with regard to the most integrating context (2nd column on the left-hand side). The disintegration value in this context only differs 0.2 points in Tables 8-10 through 8-12. If we just compare the four most integrating contexts on the left-hand sides of the three tables, the comparison between the tables is valid, too, since all tables present at least five tokens for each of these contexts. Here the three maximum spans are 0.19, 1.43, and 1.6 points, respectively, again showing the biggest span for Table 8-12. For Tables 8-11 and 8-12, the comparison is also possible for the four least integrating contexts on the right-hand sides. There is just one context with less than five tokens in Table 8-11, but the result of these two tokens ranks exactly the way we expect them to rank, i.e. they show the second highest disintegration value. The difference for these four contexts is clear-cut. Table 8-11 shows a span of just one point, whereas we register a span of three points in Table 8-12.

The last confirmation for the exceptional position of raising and scrambling-friendly informants with little knowledge in SG comes from the tokens with *waut*. In the mold of the present analysis (eight types of matrix clauses; two verbal elements in the complement clause), these informants produce nine tokens with *waut* as complementizer. Unlike this, the informants of Tables 8-10 and 8-11 do not produce a single one. It is hardly surprising that five of the nine tokens, i.e. 55.6%, co-occur with the most integrated type of verb clusters, the NR-variants;[334] that eight of the nine tokens fall to the four more integrated constellations; and finally that three of the nine tokens fall to the most integrated context, to negated, declarative matrix clauses with *gleuwen* (‘believe’). This constitutes the highest share of additional tokens in the eight contexts. Due to the affinity of *waut* with strongly integrated contexts (cf. Table 8-9), we allot it -1 points (+*daut* received 0 points; -*daut* 2 points). With these additional tokens, the maximum index span of Table 8-12 rises from 4.2 to 4.36 points. This is due to the fact that the value for the most integrating context drops from 0.8 to 0.64. The behavior of these Mennonites can be compared to creole speakers about whom BICKERTON (1981: 33) writes:

> The fifth and final example of HCE [Hawaiian Creole English; G.K.] innovation which we will examine here is rather more complex than the previous examples, involving, as it does, the interaction of two rules: a rule of relativization and a rule of subject-copying. Each of these rules itself involves innovation, but I shall say little about these since it is their interaction that shows most dramatically the working of creole creativity.

The raising and scrambling-friendly Mennonites with little knowledge in SG show a comparable creativity in the marking of different degrees of clause linkage. They use three phenomena with a total of nine variants. Not all of the decisive variants (+correlate; -

[334] This high share is even more conspicuous as we are dealing with raising-friendly informants, who combine the complementizer *daut* in only 39.3% of the cases with the NR-variants.

complementizer, *waut* as complementizer; V2-VPR-variant) are innovations, but the conjoint use of them is extraordinarily innovative. Obviously, this does not mean that other Mennonites, especially the non-SG-competent, raising-friendly, but scrambling-unfriendly Flemish-type informants, are shut off from linguistic creativity. It just means that we have not yet discovered their creative sanctuaries. In their case, one may, for example, reckon with a general drive for flatter structures, which is manifested in their preference for more paratactic structures (V2-VPR-variant; complementizer deletion; subordinator deletion in causal clauses (cf. Excursus 7.1.4.3); disintegrated conditional clauses). Comparable phenomena in NPs also seem to exist.[335] In any case, the discovery and description of the marking of different degrees of clausal (dis)integration in MLG complement sentence compounds satisfies a desideratum formulated by LEISS (2000: 17):

> Es geht zunächst in erster Linie darum, darauf aufmerksam zu machen, daß die grammatischen Kategorien Aspekt und Kasus nicht isoliert voneinander betrachtet werden dürfen. Diese Einsicht läßt sich voraussichtlich generalisieren und auf weitere Kategorien übertragen. Die Kombinatorik der Kategorien würde demnach einen wesentlichen Teil des Regelsystems von Grammatik ausmachen. Unser bislang äußerst begrenztes Wissen über die Möglichkeiten komplexer Kodierung hat zur Folge, daß uns die Wahrnehmung bestimmter sprachlicher Daten in ihrer Zugehörigkeit zum grammatischen Regelsystem nicht gelingt.[336]

In view of such complex coding, the illustration of single syntactic phenomena in maps cannot do justice to the complexities of syntax. As syntax is the syntagmatic discipline par excellence, this frequently applied method can only constitute a first humble step, it cannot possibly allow us "to perceive specific linguistic data as belonging to the grammatical rule system." The Summarizing Box 8-3 condenses the findings of Section 8.2.3:

Summarizing Box 8-3: Final comments about verb projection raising and scrambling →

The drive for verb projection raising is closely connected to the informants' competence in SG. The less competence the speakers have, the more they raise. This relationship suggests that verb projection raising is the consequence of a natural development; it turns marked left-branching structures into unmarked, parsing-friendly right-branching structures thus diminishing the burden of listeners (and speakers). Verb projection raising, therefore, serves cognitive rather than syntactic goals. The fact that raising is more frequent with three than with two verbal elements (and practically inexistent with one verbal element) demonstrates this. Obviously, it is difficult to separate these two realms. There are also some clear structural dependencies, for example, the type of finite verb in the verb cluster. Two important epiphenomenological consequences of verb projection raising exist: First, the finite verb in subordinate clauses appears before the non-finite verb(s). This accidentally leads to more similarity between main and dependent clauses. Second, overgeneralization of raising in dependent clauses with one verbal element sometimes leads to the marked linearization pattern *verb-ObjNP/PP*. This could be the nucleus for a change from OV to VO in MLG.

[335] KAUFMANN (2008) analyzes the variation in the shape of the definite article in the US-American colony (cf. the first part of Excursus 4.6.1). He can show that the innovative article form *de* (instead of expected *daut* or *den*, i.e. together with neuter or masculine nouns in object position) appears particularly frequently in unscrambled cluster variants typical for Flemish-type informants. One could interpret the case- and gender-free form *de* as a sign of decreasing morphological congruence, indicating a kind of "asyndetic" NP.

[336] Translation by G.K.: The predominant task is to draw the attention to the fact that the grammatical categories aspect and case should not be analyzed separately. This insight can probably be generalized and applied to other categories as well. The combinatorics of categories would then represent an essential part of the rule system of grammar. The fact that our knowledge about the possibilities of complex coding is extremely restricted at the moment causes our incapacity to perceive specific linguistic data as belonging to the grammatical rule system.

Scrambling is not connected to the informants' competence in SG. Thus, one may conclude that it does not take part in a parsing-related development. This cognitive independence makes it an ideal candidate for a functional use, in our case, for the superficial marking of a grammatical category. After all, scrambling-friendly informants can refrain from scrambling when required by the linguistic context. One such context is the marking of syntactic disintegration. In such a case, the necessity of creating disintegrated V2-dependent clauses can override the general tendency towards scrambling, i.e. the linguistic context exerts a direct influence that is not mediated by parsing necessities as in the case of verb projection raising.

Trying to bring things into a chronological order, one could imagine that raising- and scrambling-friendly Dutch-type speakers of MLG started to refrain from scrambling for a more refined way of marking syntactic disintegration. The more they did this, the more they may have become aware of the fact that there are widely different degrees of clause linkage in complement sentence compounds (cf. Summarizing Box 4-3).[337] This may then have caused raising- and scrambling-friendly Dutch-type speakers to apply other devices to differentiate these different degrees in an even more refined way. Using correlates in order to mark strong clause linkage, i.e. much integration of the dependent clause, could have been a logical next step since the fact that the scrambled VR-variant (favored by raising- and scrambling-friendly informants) fits this matrix element well may have smoothed the way. Applying complementizer deletion in cases of weak clause linkage, i.e. disintegration of the dependent clause, may have come even more naturally to scrambling-friendly informants since it allowed them to maintain their drive for scrambling (cf. also Summarizing Box 6-1). Without a complementizer, the finite verb will end up in second position regardless of the speakers' scrambling behavior. Finally, the increased sensitivity for different degrees of clause linkage could have opened the gate for the integration-indicating relative particle *waut*. However, with this innovative complementizer, Dutch-type speakers may have opened Pandora's box of language change since their inclination to mark ever more subtle differences of clause linkage may blur another perhaps equally important functional distinction, namely that between relative and complement clauses.[338]

[337] LEISS (2000) makes it clear that speakers of languages that mark certain linguistic categories by means of visible features are more aware of these categories. She (2000: 10) argues, for example, that speakers of German – in comparison to speakers of Russian – are more aware of the nominal category *definiteness* because their language possesses an article system: "*Die Perfektivität des Verbs hat offenbar Konsequenzen für das darauffolgende Substantiv. Es läßt sich ein Definitiheitseffekt feststellen, der uns durch die Übersetzung ins Deutsche vermutlich bewußter wird als einem russischen Muttersprachler*." [Translation by G.K.: The perfectivity of the verb apparently has consequences for the following noun. There is a definiteness effect which – due to the German translation – is probably more obvious to us than it is for a native speaker of Russian.]

[338] In spite of many similarities between these clause types and in spite of many converging tendencies between them, there are also some important differences. One is the fact that complement clauses are selected by the finite verb of the matrix clause, another is that in a complement clause, but not in a relative clause, all argument positions are realized phonetically (cf. LEHMANN (1984: 153) for the same difference between relative and noun clauses).

9. Conclusions

In March 2001, I presented first results of my research on MLG verb clusters at a conference on German speech islands at the University of Kansas at Lawrence (cf. KAUFMANN 2003a). Aside from many benevolent remarks, there was one comment that stuck in my mind. During a coffee break, MARK LOUDEN took me aside and said: “This is a goldmine!” At that time, I had only carried out some eighty interviews in the United States and Brazil. It was this comment, as well as the first promising results that made me continue my endeavor of traveling back and forth, asking more and more Mennonites in North and South America to translate my 46 stimulus sentences.

I hope that the readers of this book are able to share MARK LOUDEN’s enthusiasm. In any case, they should have realized that translations from a non-related language into the variety one is interested in constitute a formidable data set for syntactic analyses. Obviously, the huge potential of the MLG data set is a mere precondition for an insightful study of the contained grammatical phenomena. HEWSON and BUBENIK (2006: 378) describe the necessary consequent steps:

> Finding patterns in the data is a relatively simple task that is a prelude to the more demanding task of finding the inter-relationship of different patterns, and ultimately the most difficult task of all: the interpretation of the significance of what has been observed.

We have discovered and analyzed many interrelationships between the syntactic patterns of MLG. The most intriguing ones are the comparable behavior of “verb clusters” in main and dependent clauses with one, two, three, and four verbal elements (cf. Chapter 5), the use of the multi-functional auxiliary *dune* (‘do’) for syntactic ends (cf. Section 5.1.3.3), the marking of different guises of definiteness by {d-}-marked words (cf. Section 8.2.2), the multiple coding of clause linkage (cf. In-Depth Analysis 7.2.4.2 and Section 8.2.3), and last but not least the pervasiveness of the syntactic movement we have labeled scrambling. This movement is responsible for the difference between the VPR-variant (-scrambling) and the VR-variant (+scrambling) (cf. Section 4.3.2), it distinguishes the sequences *adverb(ial)-ObjNP/PP* (-scrambling) and *ObjNP/PP-adverb(ial)* (+scrambling) (cf. Section 4.3.3), and at least with regard to some pronominal elements in South America, it also separates the sequences *SubjNP-ObjNP* (-scrambling) and *ObjNP-SubjNP* (+scrambling) (cf. Section 4.6). The fact that we have presented much independent evidence for the relationship between the first two phenomena (cf. Section 4.5 and Excursus 5.1.2 and 5.2) and the fact that the scrambling index, which was formed by means of these two phenomena, explains much of the variation of the third phenomenon support the assumption that we are either dealing with one and the same syntactic mechanism or with three intimately linked mechanisms. We favor the term *scrambling* for these mechanisms since all of them turned out to be sensitive to definiteness, a prototypical characteristic of scrambling (cf. Tables 3-1, 3-2, 4-9, 5-36, 5-37, and 5-39).

The interpretation of the significance of scrambling in MLG is easy and difficult at the same time. The easy part is the insight that MLG scrambling does not satisfy an inalienable syntactic necessity, not even for scrambling-friendly informants. After all, these informants can refrain from scrambling in order to produce dependent V2-clauses. Because of this, scrambling in MLG cannot serve the purpose of feature checking since feature checking in a parametrized grammar either occurs categorically before or after spell-out. Granted, one may argue with LIGHTFOOT (1999: 135) and assume an internalized diglossia in order to explain an otherwise unexplainable variation:

> […] the coexistence of two grammars may influence the writing of any individual, and certainly the scribal and editorial transmission, and it is not always possible to distinguish the two systems as cleanly as one would like. It is clear that individuals may operate with more than one grammatical system in an internalized diglossia, although the limits to this capacity are not understood.

However, such an internalized diglossia would not explain why scrambling-friendly informants refrain from scrambling not just aleatorically, but under very specific conditions. They scramble in syntactically integrated conditional and relative clauses, but not in disintegrated complement clauses (cf. Table 6-3), more particularly in complement clauses in which propositions are asserted rather than presupposed (cf. Table 8-12). This hitherto unknown function of scrambling as an indicator for syntactic (dis)integration is indeed a remarkable finding. Although the interrelationship between scrambling and clause linkage is relatively easy to detect, it is truly difficult to theoretically classify this relationship and thus to understand the nature of scrambling in MLG. Are we still dealing with a variable pragmatic rule as in the case of the information structure of clauses (definiteness) or have we already entered the realm of obligatory syntactic rules? In order to answer this question, one would have to learn even more about the marking of syntactic (dis)integration in MLG. Possible ways to achieve this would be the creation of a new translation task with stimulus sentences covering more types of sentence compounds, not just the four types analyzed here, or the application of a judgment test presenting many different sentence compounds to many MLG-speaking informants. In any case, although the MLG data set analyzed here cannot answer the question of the nature of scrambling in MLG conclusively, it can show that there is an interesting question to be answered. Aside from this unsolved issue, there are at least five desiderata for future research which follow from this project:

(a) It would be interesting to analyze the precise conditions under which relative particles turned into complementizers in a language like Latin. Did this change also start in sentence compounds with negated declarative matrix clauses (cf. Section 8.2.3)?

(b) It would be useful to analyze other Continental West Germanic varieties in order to see whether the co-occurrence patterns between verb clusters with two and verb clusters with three and four verbal elements also exist (cf. Sections 5.2 through 5.4). If so, this would suggest a comparable relationship between verb projection raising and scrambling and the resulting superficial serializations we are used to calling verb clusters.

(c) It would be valuable to examine whether the relationship between the informants' raising and scrambling behavior and the occurrence of the marked tokens dealt with in Section 5.5 (dependent clauses with one non-clause-final verbal element) may help explain the unclear direction of case assignment in Old High German (cf.

SCHALLERT 2011: 307–312) or the change of English from an OV-language to a VO-language (cf. LEHMANN 1992: 237–247). After all, these languages also exhibit clauses with the VPR-variant and the VR-variant (cf. AXEL (2007: 98) for Old High German and HAEBERLI & PINTZUK 2012 for Old English).

(d) It is necessary to explore the question whether the extremely refined syntactic coding of (dis)integration of MLG dependent clauses is just an isolated fact in the grammar of raising- and scrambling-friendly informants or whether other languages also possess such a complex coding system.

(e) It is imperative to investigate whether the strong influence that the type of dependent clause, the information status of the dependent clause, and the presence of correlative elements exert on MLG verb clusters (cf. Chapters 6 and 7) also exists in other Continental West Germanic varieties. This is particularly urgent for those varieties where there is much variation with regard to verb clusters, i.e. older varieties of Dutch and German and modern varieties of Flemish and Swiss German.

There is one more issue which we would still like to comment on. We do this although we will again not be able to offer any final solution. What still puzzles us is our ignorance about the precise ways in which structural facts of derivation and superficial facts of linearization influence the variation found. We have already touched upon this overarching topic on several occasions, especially in In-Depth Analysis 5.2 and Section 8.1. The clearest example for the influence of superficial facts of linearization is the iconical power of dependent V2-clauses regardless of whether this concerns structural V2 by means of complementizer deletion or superficial V2 by means of verb projection raising without scrambling (cf. In-Depth Analysis 7.1.4.3). In the extreme case of North American causal clauses, the superficially coinciding positions caused the structural reanalysis of the finite verb of the V2-VPR-variant, the head of a head-final IP, as the head of a head-initial CP (cf. Section 6.3).

An example for the influence of structural facts of derivation is the conspicuous difference between the behavior of clause-final two-verb-clusters in main clauses (2 non-finite verbal elements) and in dependent clauses (1 finite and 1 non-finite verbal element; cf. In-Depth Analysis 5.2). In order to explain this difference, we formulated the hypothesis that not only additional verbal elements, but also phonetically not realized traces increase the derivational complexity of verb clusters. After all, two-verb-clusters in main clauses (2 non-finite verbal elements and the trace of the finite verb) behave like three-verb-clusters in dependent clauses (1 finite and 2 non-finite verbal element(s)). Therefore, the superficial difference in the number of verbal elements and the question of finiteness cannot be decisive. What matters more are the overall structural complexity and the principle of structure preservation.

One would definitely like to know under which conditions which type of fact, derivational or superficial ones, is (more) influential. We will not be able to give a final answer to this question, but we were able to show that broadly defined syntactic necessities like the indication of syntactic (dis)integration by means of structural or superficial V2 influences the informants' choice of what we call verb clusters. This constitutes a huge step forward. HAIDER (2010: 323) states with regard to verb clusters that "[…] current accounts do not reach the level of explanatory adequacy. They fail to provide an answer for the *grammatical motive* of this construction." Although we have not reached the level of explanatory adequacy either, we have not only shown that narrowly defined verb- or complement-related grammatical motives can only be part of the story; we have also demonstrated that one may even have to re-think the very existence of this construction, at least in a variety such as MLG where much variation exists. The title of this book *The World beyond Verb Clusters* thus gains an important second meaning.

Aside from broadly-defined syntactic necessities like clause linkage, cognitive processes like parsing could be shown to play an important role in MLG (cf. Chapter 5). It is again HAIDER (1995: 245), who touches on this topic by relating grammar to processing: “What is a grammar good for? From a cognitive point of view, the grammar of a language provides suitable data structures for effective processing.” In the case of verb projection raising, we have seen that this mechanism turns the parsing-unfriendly left-branching sequence *ObjNP/PP-V2-V1* into the more effectively processable right-branching sequences *V1-ObjNP/PP-V2* and *ObjNP/PP-V1-V2*. These right-branching sequences are distinguished by scrambling. It is the interplay of these two mechanisms, of verb projection raising and scrambling, that allows for the effective coding of syntactic (dis)integration. A precondition for this marking is variation and thus, the most important finding of this study can be summarized in one sentence: Variation in grammar is a necessary condition for the functional use of language.

References

Abraham, Werner (1992). ‘Structural properties of information packaging in German and in Universal Grammar’ in: Groninger Arbeiten zur Germanistischen Linguistik 35. 37–71.

Abraham, Werner and Annette Fischer (1998). ‘Das grammatische Optimalisierungsszenario von tun als Hilfsverb’ in: Dornhauser, Karin and Ludwig M. Eichinger (eds.). Deutsche Grammatik – Thema in Variationen. Festschrift für Hans-Werner Eroms zum 60. Geburtstag. Heidelberg: Winter. 35–47.

Adli, Aria (2015). ‘What you like is not what you do: Acceptability and frequency in syntactic variation’ in: Adli, Aria, Marco García García, and Göz Kaufmann (eds.). Variation in Language: System- and Usage-based Approaches. Berlin/Boston: de Gruyter. 173–199.

Adli, Aria, Marco García García, and Göz Kaufmann (2015). ‘System and usage: (Never) mind the gap’ in: Adli, Aria, Marco García García, and Göz Kaufmann (eds.). Variation in Language: System- and Usage-based Approaches. Berlin/Boston: de Gruyter. 1–25.

Aguado, Karin (2002). ‘Formelhafte Sequenzen und ihre Funktionen für den L2-Erwerb’ in: Zeitschrift für Angewandte Linguistik 37. 27–49.

Altmann, Hans (1997). ‘Verbstellungsprobleme bei subordinierten Sätzen in der deutschen Sprache’ in: Dürscheid, Christa, Karl Heinz Ramers, and Monika Schwarz (eds.). Sprache im Fokus: Festschrift für Heinz Vater zum 65. Geburtstag. Tübingen: Niemeyer. 69–84.

Appadurai, Arjun (1990). ‘Disjuncture and difference in the global cultural economy’ in: Theory, Culture and Society 7. 295–310.

Arnold, Mark D. (1996). ‘A unified analysis of P-stranding, ECM, and that-deletion, and the subsequent loss of verb movement in English’ in: Kusumoto, Kiyomi (ed.). Proceedings of the North East Linguistic Society 26. Amherst, MA: University of Massachusetts. 1–15.

Aron, Albert William (1914). Die “progressiven” Formen im Mittelhochdeutschen und Frühneuhochdeutschen. Frankfurt/Main: Baer.

Arsenijević, Boban (2009). ‘Clausal complementation as relativization’ in: Lingua 119. 39–50.

Auer, Peter (1981). ‘Zur indexikalitätsmarkierenden Funktion der demonstrativen Artikelform in deutschen Konversationen’ in: Hindelang, Götz and Werner Zillig (eds.). Sprache: Verstehen und Handeln. Tübingen: Niemeyer. 301–310.

Auer, Peter (1998). ‘Zwischen Parataxe und Hypotaxe: ‚Abhängige Hauptsätze’ im Gesprochenen und Geschriebenen Deutsch’ in: Zeitschrift für Germanistische Linguistik 26. 284–307.

Auer, Peter (2000a). ‘Pre- and post-positioning of wenn-clauses in spoken and written German’ in: Couper-Kuhlen, Elizabeth and Bernd Kortmann (eds.). Cause, Condition, Concession, Contrast: Cognitive and Discourse Perspectives. Berlin/New York: de Gruyter. 173–204.

Auer, Peter (2000b). ‘On line-Syntax – oder: Was es bedeuten könnte, die Zeitlichkeit der mündlichen Sprache ernst zu nehmen’ in: Sprache und Literatur 85. 43–56.

Auer, Peter (2005). ‘Projection in interaction and projection in grammar’ in: Text 25/1. 7–36.

Auer, Peter (2007). ‘Syntax als Prozess’ in: Hausendorf, Heiko (ed.). Gespräch als Prozess: Linguistische Aspekte der Zeitlichkeit verbaler Interaktion. Tübingen: Narr. 95–124.

Auer, Peter and Robert W. Murray (eds.) (2015). Hermann Paul’s ‘Principles of Language History’ Revisited: Translations and Reflections. Berlin/Boston: de Gruyter.

Axel, Katrin (2007). Studies on Old High German Syntax: Left Sentence Periphery, Verb Placement and Verb-Second. Amsterdam/Philadelphia: Benjamins.

Axel-Tober, Katrin (2012). (Nicht-)Kanonische Nebensätze im Deutschen: Synchrone und diachrone Aspekte. Berlin/New York: de Gruyter.

Axel-Tober, Katrin, Anke Holler, and Helena Trompelt (manuscript in preparation). ‘Correlative Es vs. Das in German: An empirical perspective’ in: Frey Werner, André Meinunger, and Kerstin Schwabe (eds.). Inner-sentential Propositional Pro-forms: Syntactic Properties and Interpretative Effects. Amsterdam/Philadelphia: Benjamins.

Bach, Emmon, Colin Brown, and William Marslen-Wilson (1987). ‘Gekreuzte und geschachtelte Abhängigkeiten im Deutschen und Niederländischen in: Bayer, Josef (ed.). Grammatik und Kognition. Opladen: Westdeutscher Verlag. 7–23.

Barbiers, Sjef (2000). ‘The Right Periphery in SOV Languages: English and Dutch’ in: Svenonius, Peter (ed.). The Derivation of VO and OV. Amsterdam/Philadelphia: Benjamins. 181–218.

Barbiers, Sjef (2005): ‘Word order variation in three-verb clusters and the division of labour between generative linguistics and sociolinguistics’ in: Cornips, Leonie and Karen P. Corrigan (eds.). Syntax and Variation: Reconciling the Biological and the Social. Amsterdam/Philadelphia: Benjamins. 233–264.

Barbiers, Sjef (2013). ‘Where is syntactic variation?’ in: Auer, Peter, Javier Caro Reina, and Göz Kaufmann (eds.). Language Variation – European Perspective IV: Selected Papers from the Sixth International Conference on Language Variation in Europe. Freiburg. June 2011. Amsterdam/Philadelphia: Benjamins. 1–26.

Barbiers, Sjef and Hans Bennis (2010). ‘De plaats van het werkwoord in zuid en noord’ in: Caluwe, Johan de and Jacques van Keymeulen (eds.). Voor Magda. Artikelen voor Magda Devos bij haar afscheid van de Universiteit Gent. Gent: Academia Press. 25–42.

Barbiers, Sjef, Hans Bennis, Gunther de Vogelaer, Magda Devos, and Margreet van der Ham (2005). SAND – Syntactische Atlas van de Nederlandse Dialecten (Volume II). Amsterdam: Amsterdam University Press.

Bärenfänger, Olaf (2002). 'Automatisierung der mündlichen L2-Produktion: Methodische Überlegungen' in: Börner, Wolfgang and Klaus Vogel (eds.). Grammatik und Fremdsprachenerwerb: Kognitive, psycholinguistische und erwerbstheoretische Perspektiven. Tübingen: Narr. 119–140.

Bayer, Josef, Markus Bader, and Michael Meng (2001). 'Morphological underspecification meets oblique case: Syntactic and processing effects in German' in: Lingua 111. 465–514.

Bayer, Josef and Ellen Brandner (2008). 'Wie oberflächlich ist die syntaktische Variation zwischen Dialekten? – Doubly-filled COMP revisited' in: Patocka, Franz and Guido Seiler (eds.). Dialektale Morphologie, dialektale Syntax: Beiträge zum 2. Kongress der IGDD. Wien: Praesens. 9–25.

Bayer, Josef and Jaklin Kornfilt (1994). 'Against scrambling as an instance of Move-alpha' in: Corver, Norbert and Henk van Riemsdijk (eds.). Studies on Scrambling: Movement and Non-Movement Approaches to Free Word-Order Phenomena. Berlin/New York: de Gruyter, 17–60.

Bayer, Josef and Peter Suchsland (1997). 'Expletiva und leere Subjekte im Deutschen' in: Groninger Arbeiten zur germanistischen Linguistik 41. 12–38.

Bennis, Hans (1992). 'Long Head Movement: The position of particles in the verbal cluster in Dutch' in: Bok-Bennema, Reineke and Roeland van Hout (eds.). Linguistics in the Netherlands 1992. Amsterdam/Philadelphia: Benjamins. 37–47.

Bickerton, Derek (1981). Roots of Language. Ann Arbor: Karoma Publishers.

Blühdorn, Hardarik (2006). 'Zur Semantik kausaler Satzverbindungen: Integration, Fokussierung, Definitheit und modale Umgebung' in: Linguistici e Filologici Online. Rivista Telematica del Dipartimento di Linguistica dell'Università di Pisa (SLiFO) 3/2. 311–338.

Blühdorn, Hardarik (2012). Negation im Deutschen: Syntax, Informationsstruktur, Semantik. Tübingen: Narr.

Blühdorn, Hardarik (2013). 'Syntaktische Nebensatzklassen im Deutschen' in: Deutsche Sprache 13/3. 193–219.

Bobaljik, Jonathan David (2003). 'Floating Quantifiers: Handle with care' in: Cheng, Lisa and Rint Sybesma (eds.). The Second Glot International State-of-the-Article Book: The Latest in Linguistics. Berlin/New York: de Gruyter. 107–148.

Bortz, Jürgen and Christof Schuster (2010). Statistik für Human- und Sozialwissenschaftler. Berlin/Heidelberg/New York: Springer.

Bošković, Željko (2004a). 'Topicalization, focalization, lexical insertion, and scrambling' in: Linguistic Inquiry 35/4. 613–638.

Bošković, Željko (2004b). 'Object Shift and the Clause/PP Parallelism Hypothesis' in: Chand, Vineeta, Ann Kelleher, Angelo J. Rodriguez, and Benjamin Schmeiser (eds.). WCCFL 23: Proceedings of the 23rd West Coast Conference on Formal Linguistics. Somerville, MA: Cascadilla Press. 99–112.

Breindl, Eva (1989). Präpositionalobjekte und Präpositionalobjektsätze im Deutschen. Tübingen: Niemeyer.

Breindl, Eva (2009). 'Fehler mit System und Fehler im System: Topologische Varianten bei Konnektoren' in: Konopka, Marek and Bruno Strecker (eds.). Deutsche Grammatik: Regeln, Normen, Sprachgebrauch. Berlin/New York: de Gruyter. 274–306.

Breitbarth, Anne (2005). 'Auxiliary drop as subordination marking' in: Linguistics in the Netherlands 22/1. 37–47.

Broekhuis, Hans (2007). 'Object shift and subject shift' in: The Journal of Comparative Germanic Linguistics 10. 109–141.

Bucheli, Claudia and Elvira Glaser (2002). 'The Syntactic Atlas of Swiss German Dialects: Empirical and methodological problems' in: Barbiers, Sjef, Leonie Cornips, and Susanne van der Kleij (eds.). Syntactic Microvariation. Amsterdam: Meertens Institute (http://www.meertens.knaw.nl/books/synmic). 41–74.

Bühler, Karl (1934). Sprachtheorie: Die Darstellungsfunktion der Sprache. Jena: Fischer.

Bühler, Karl (1990). Theory of Language: The Representational Function of Language (translated by Donald Fraser Goodwin). Amsterdam/Philadelphia: Benjamins.

Chafe, Wallace (1994). Discourse, Consciousness, and Time: The Flow and Displacement of Conscious Experience in Speaking and Writing. Chicago/London: University of Chicago Press.

Cheshire, Jenny, Paul Kerswill, and Ann Williams (2005). 'Phonology, grammar, and discourse in dialect convergence' in: Auer, Peter, Frans Hinskens, and Paul Kerswill (eds.). Dialect Change: Convergence and Divergence in European Languages. Cambridge: Cambridge University Press. 135–167.

Chomsky, Noam (2011). Language and other cognitive systems: What is special about language (Talk given at the University of Cologne, Germany). Retrievable under https://www.youtube.com/watch?v=2v6XFkSwVys.

Chomsky, Noam and Howard Lasnik (1977). 'Filters and Control' in: Linguistic Inquiry 8/3. 425–504.

Cinque, Guglielmo (1999). Adverbs and Functional Heads: A Cross-Linguistic Perspective. New York/Oxford: Oxford University Press.

Cleese, John (2014). So, Anyway… London: Random House.

Cornips, Leonie and Willy Jongenburger (2001). 'Elicitation techniques in a Dutch syntactic dialect atlas project' in: Broekhuis, Hans and Ton van der Wouden (eds.). Linguistics in the Netherlands 18. Amsterdam/Philadelphia: Benjamins. 53–63.

Couper-Kuhlen, Elizabeth (2012). 'Some truths and untruths about final intonation in conversational questions' in: de Ruiter, Jan-Peter (ed.). Questions: Formal, Functional and Interactional Perspectives. Cambridge: Cambridge University Press. 123–145.

Cox, Christopher (2011). ‘Quantitative perspectives on syntactic variation: Investigating verbal complementation in a corpus of Mennonite Plautdietsch‘ in: Konopka, Marek, Jacqueline Kubczak, Christian Mair, František Štícha, and Ulrich H. Waßner (eds.). Grammatik und Korpora 2009: Dritte Internationale Konferenz. Tübingen: Narr. 549–555.

Dahl, Östen (1995). ‘Causality in Discourse’ in: Rickheit, Gert and Christopher Habel (eds.). Focus and Coherence in Discourse Processing. Berlin/New York: de Gruyter. 251–260.

D’Avis, Franz-Josef (1995). ‘On wh-islands in German’ in: Lutz, Uli and Jürgen Pafel (eds.). On Extraction and Extraposition in German. Amsterdam/Philadelphia: Benjamins. 89–120.

De Hoop, Helen and Wim Kosmeijer (1995). ‘Case and scrambling: D-structure versus S-structure’ in: Haider, Hubert, Susan Olsen, and Sten Vikner (eds.). Studies in Comparative Germanic Syntax. Dordrecht/Boston/London: Kluwer. 139–158.

Den Besten, Hans and Hans Broekhuis (1989). ‘Woordvolgorde in de werkwoordelijke eindreeks’ in: GLOT 12: 79–137.

Den Besten, Hans and Jerold A. Edmondson (1983). ‘The verbal complex in Continental West Germanic’ in: Abraham, Werner (ed.). On the Formal Syntax of the Westgermania: Papers from the “3rd Groningen Grammar Talks”. Amsterdam/Philadelphia: Benjamins. 154–216.

Den Besten, Hans and Gerth Webelhuth (1990). ‘Stranding’ in: Grewendorf, Günther and Wolfgang Sternefeld (eds.). Scrambling and Barriers. Amsterdam/Philadelphia: Benjamins. 77–92.

Den Dikken, Marcel, Judy B. Bernstein, Christina Tortora and Raffaella Zanuttini (2007). ‘Data and grammar: Means and individuals’ in: Theoretical Linguistics 33/3. 335–352.

De Swart, Henriëtte (2010). Expression and Interpretation of Negation: An OT Typology. Dordrecht: Springer.

Deutsche Literatur von Luther bis Tucholsky: Die Großbibliothek (2007). Berlin: Directmedia Publishers (CD).

Diessel, Holger (2012). ‘Bühler’s two-field theory of pointing and naming and the deictic origins of grammatical morphemes’ in: Davidse, Kristin, Tine Breban, Lieselotte Brems, and Tanja Mortelmans (eds.). Grammaticalization and Language Change: New Reflections. Amsterdam/Philadelphia: Benjamins. 37–50.

Diessel, Holger and Katja Hetterle (2011). ‘Causal clauses: A cross-linguistic investigation of their structure, meaning, and use’ in: Siemund, Peter (ed.). Linguistic Universals and Language Variation. Berlin/New York: de Gruyter. 23–54.

Diewald, Gabriele (2008). ‘Satzmodusrestriktionen bei der Grammatikalisierung von Modalpartikeln – mit besonderer Berücksichtigung der Entwicklung von ruhig’ in: Letnes, Ole, Eva Maagerø, and Heinz Vater (eds.). Modalität und Grammatikalisierung. Trier: Wissenschaftlicher Verlag. 131–152.

Di Meola, Claudio (2000). Die Grammatikalisierung deutscher Präpositionen. Tübingen: Stauffenburg.

Donaldson, Bruce C. (1993). A Grammar of Afrikaans. Berlin/New York: de Gruyter.

Duden (2006). Die Grammatik: Unentbehrlich für richtiges Deutsch. Mannheim: Dudenverlag.

Ebert, Robert P. (1981). 'Social and Stylistic Variation in the Order of Auxiliary and Nonfinite Verb in Dependent Clauses in Early New High German' in: Beiträge zur Geschichte der Deutschen Sprache und Literatur 103/2. 204–237.

Eisenberg, Peter (in collaboration with Nanna Fuhrhop) (2013a). Grundriss der deutschen Grammatik: Das Wort. Stuttgart/Weimar: Metzler.

Eisenberg, Peter (in collaboration with Rolf Thieroff) (2013b). Grundriss der deutschen Grammatik: Der Satz. Stuttgart/Weimar: Metzler.

Ellegård, Alvar (1953). The Auxiliary do: The Establishment and Regulation of its Use in English. Stockholm: Almqvist and Wiksell.

Elspaß, Stephan (2005). 'Standardisierung des Deutschen: Aussichten aus der neueren Sprachgeschichte ‚von unten'' in: Eichinger, Ludwig M. and Werner Kallmeyer (eds.). Standardvariation: Wie viel Variation verträgt die deutsche Sprache? Berlin/New York: de Gruyter. 63–99.

Etxepare, Ricardo (2008). 'On quotative constructions in Iberian Spanish' in: Laury, Ritva (ed.). Crosslinguistic Studies of Clause Combining: The Multifunctionality of Conjunctions. Amsterdam/Philadelphia: Benjamins. 35–77.

Evers, Arnold (1975). The Transformational Cycle in Dutch and German. Unpublished Dissertation. University of Utrecht.

Fabricius-Hansen, Cathrine (1992). 'Subordination' in: Hoffmann, Ludger (ed.). Deutsche Syntax: Ansichten und Aussichten. Berlin/New York: de Gruyter. 458–483.

Fabricius-Hansen, Cathrine (2011). 'Was wird verknüpft, mit welchen Mitteln – und wozu? Zur Mehrdimensionalität der Satzverknüpfung' in: Breindl, Eva, Gisella Ferraresi, and Anna Volodina (eds.). Satzverknüpfungen: Zur Interaktion von Form, Bedeutung und Diskursfunktion. Berlin/New York: de Gruyter. 15–40.

Ferguson, Charles A. (1959). 'Diglossia' in: Word 15. 325–340.

Fleischer, Jürg (2002). Die Syntax von Pronominaladverbien in den Dialekten des Deutschen: Eine Untersuchung zu Preposition Stranding und verwandten Phänomenen. Stuttgart: Steiner.

Fleischer, Jürg (2004). 'A typology of relative clauses in German dialects' in: Kortmann, Bernd (ed.). Dialectology meets Typology: Dialect Grammar from a Cross-Lingusitic Perspective. Berlin/New York: de Gruyter. 211–243.

Fleischer, Jürg, Alexandra N. Lenz, and Helmut Weiß (2015). 'Syntax hessischer Dialekte (SyHD)' in: Kehrein, Roland, Alfred Lameli, and Stefan Rabanus (eds.). Regionale Variation des Deutschen. Berlin/New York: de Gruyter. 261–287.

Frey, Werner (2011). 'Peripheral adverbial clauses, their licensing and the prefield in German' in: Breindl, Eva, Gisella Ferraresi, and Anna Volodina (eds.). Satzverknüpfungen: Zur Interaktion von Form, Bedeutung und Diskursfunktion. Berlin/New York: de Gruyter. 41–77.

Gärtner, Hans-Martin (2001). 'Are there V2 relative clauses in German?' in: Journal of Comparative Germanic Linguistics 3. 97–141.

Giannakidou, Anastasia (2011). '(Non)veridicality and mood choice: subjunctive, polarity, and time' in: Musan, Renate and Monika Rathert (eds.). Tense across Languages. Berlin/New York: de Gruyter. 59–90.

Goethe, Johann Wolfgang von (1964). Goethes Werke: Hamburger Ausgabe in 14 Bänden. Hamburg: Christian Wegner.

Goethe, Johann Wolfgang von (1989). Suhrkamp Edition in 12 Volumes. New York: Suhrkamp.

Gonzo, Susan and Mario Saltarelli (1983). 'Pidginization and linguistic change in emigrant languages' in: Andersen, Roger W. (ed.). Pidginization and Creolization as Language Acquisition. Rowley: Newbury House. 181–197.

Gränitz, Frauke and Luise Grundmann (eds.) (2003). Das Mittelrheinische Becken: Eine landeskundliche Bestandsaufnahme im Raum Andernach, Bendorf, Koblenz, Mayen, Mendig, Münstermaifeld und Niewied. Köln/Weimar/Wien: Böhlau.

Grewendorf, Günther (2002). Minimalistische Syntax. Tübingen/Basel: Francke.

Grewendorf, Günther (2007). 'Empirical evidence and theoretical reasoning in generative grammar' in Theoretical Linguistics 33/3. 369–380.

Grewendorf, Günther and Cecilia Poletto (2011). 'Hidden verb second: The case of Cimbrian' in: Putnam, Mike (ed.). Sudies on German-Language Islands. Amsterdam/Philadelphia: Benjamins. 301–346.

Grewendorf, Günther and Cecilia Poletto (2015). 'Relative Clauses in Cimbrian' in: Di Domenico, Elisa, Cornelia Hamann, and Simona Matteini (eds.). Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti. Amsterdam/Philadelphia: Benjamins. 393–416.

Grewendorf, Günther and Wolfgang Sternefeld (1990). 'Scrambling Theories' in: Grewendorf, Günther and Wolfgang Sternefeld (eds.). Scrambling and Barriers. Amsterdam/Philadelphia: Benjamins. 3–37.

Günthner, Susanne (1999). 'Wenn-Sätze im Vor-Vorfeld: Ihre Formen und Funktionen in der gesprochenen Sprache' in: Deutsche Sprache 27. 209–235.

Günthner, Susanne (2005). ‘Grammatikalisierungs-/Pragmatikalisierungserscheinungen im alltäglichen Sprachgebrauch: Vom Diskurs zum Standard’ in: Eichinger, Ludwig M. and Werner Kallmeyer (eds.). Standardvariation: Wie viel Variation verträgt die deutsche Sprache? Berlin/New York: de Gruyter. 41–62.

Haeberli, Eric and Susan Pintzuk (2012). ‘Revisiting Verb (Projection) Raising in Old English’ in: Jonas, Dianne, John Whitman, and Andrew Garrett (eds.). Grammatical Change: Origins, Nature, Outcomes. Oxford/New York: Oxford University Press. 219–238.

Haegeman, Liliane (1991). Introduction to Government & Binding Theory. Cambridge: Blackwell Publishers.

Haegeman, Liliane (1994). ‘Verb Raising as Verb Projection Raising: Some Empirical Problems’ in: Linguistic Inquiry 25/3. 509–522.

Haegeman, Liliane (1998). ‘Verb movement in embedded clauses in West Flemish’ in: Linguistic Inquiry 29/4. 631–656.

Haegeman, Liliane and Henk van Riemsdijk (1986). ‘Verb projection raising, scope, and the typology of rules affecting verbs’ in: Linguistic Inquiry 17/3. 417–466.

Haider, Hubert (1995). ‘Downright down to the right’ in: Lutz, Uli and Jürgen Pafel (eds.). On Extraction and Extraposition in German. Amsterdam/Philadelphia: Benjamins. 245–271.

Haider, Hubert (2003). ‘V-clustering and clause union: Causes and effects’ in: Seuren, Pieter A. M. and Gerard Kempen (eds.). Verb Construction in German and Dutch. Amsterdam/Philadelphia: Benjamins. 91–126.

Haider, Hubert (2007). ‘As a matter of facts – comments on Featherston’s sticks and carrots’ in: Theoretical Linguistics 33/3. 381–394.

Haider, Hubert (2010). The Syntax of German. Cambridge: Cambridge University Press.

Härd, John Evert (1981). Studien zur Struktur mehrgliedriger deutscher Nebensatzprädikate: Diachronie und Synchronie. Göteborg: Acta Universitatis Gothoburgensis.

Harras, Gisela, Kristel Proost, and Edeltraud Winkler (2007). Handbuch deutscher Kommunikationsverben: Teil 2: Lexikalische Strukturen. Berlin/New York: de Gruyter.

Harras, Gisela, Edeltraud Winkler, Sabine Erb, and Kristel Proost (2004). Handbuch deutscher Kommunikationsverben: Teil 1: Wörterbuch. Berlin/New York: de Gruyter.

Harris, Alice C. and Lyle Campbell (1995). Historical Syntax in Cross-Linguistic Perspective. Cambridge: Cambridge University Press.

Hatch, Evelyn and Anne Lazaraton (1991). The Research Manual: Design and Statistics for Applied Linguistics. New York: Newbury House.

Hawkins, John A. (1994). A Performance Theory of Order and Constituency. Cambridge: Cambridge University Press.

Hawkins, John A. (2004). Efficiency and Complexity in Grammars. Oxford: Oxford University Press.

Hewson, John and Vit Bubenik (2006). From Case to Adposition: The Development of Configurational Syntax in Indo-European Languages. Amsterdam/Philadelphia: Benjamins.

Hilpert, Martin (2010). 'What can synchronic gradience tell us about reanalysis?' in: Closs Traugott, Elizabeth and Graeme Trousdale (eds.). Gradience, Gradualness and Grammaticalization. Amsterdam/Philadelphia: Benjamins. 181–201.

Hinterhölzl, Roland (1999). Restructuring Infinitives and the Theory of Complementation. Unpublished Dissertation. University of Southern California.

Hooper, Joan B. and Sandra A. Thompson (1973). 'On the applicability of root transformations' in: Linguistic Inquiry 4/4. 465–497.

Hopper, Paul J. and Sandra A. Thompson (2008). 'Projectability and clause combining in interaction' in Laury, Ritva (ed.). Crosslinguistic Studies of Clause Combining: The Multifunctionality of Conjunctions. Amsterdam/Philadelphia: Benjamins. 99–123.

Hornstein, Norbert and Amy Weinberg (1981). 'Case theory and preposition stranding' in: Linguistic Inquiry 12/1. 55–91.

Huffines, Marion Lois (1993). 'Dying by convergence? Pennsylvania German and syntactic change' in: Salmons, Joseph C. (ed.). The German Language in America, 1683–1991. Madison, WI: Max Kade Institute. 250–263.

Humboldt, Wilhelm von (2002). Über die Sprache. Tübingen/Basel: Francke.

Husley, Sarah and Uli Sauerland (2006). 'Sorting out relative clauses' in: Natural Language Semantics 14. 111–137.

Iatridou, Sabine and Anthony Kroch (1992) 'The licensing of CP-recursion and its relevance to the Germanic verb-second phenomenon' in: Working Papers in Scandinavian Syntax 50. 1–24.

Ishizuka, Tomoko (2008). Restrictive and non-restrictive relative clauses in Japanese: Antisymmetric approach. Unpublished manuscript available under http://ling.auf.net/lingbuzz/000808.

Izvorski, Roumyana (1996). 'The Syntax and Semantic of Correlative Proforms' in: Kusumoto, Kiyomi (ed.). Proceedings of the North East Linguistic Society 26. Amherst, MA: University of Massachusetts. 133–147.

Kaufmann, Göz (1997). Varietätendynamik in Sprachkontaktsituationen: Attitüden und Sprachverhalten rußlanddeutscher Mennoniten in Mexiko und den USA. Frankfurt/Main: Lang.

Kaufmann, Göz (2003a). 'The Verb Cluster in Mennonite Low German' in: Mattheier, Klaus J. and William Keel (eds.). German Language Varieties Worldwide: Internal and External Perspectives. Frankfurt/Main: Lang. 177–198.

Kaufmann, Göz (2003b). ‘Des Plattdeutschen Wanderjahre oder die lexikalischen Folgen der mennonitischen Flucht nach Amerika’ in: Androutsopoulos, Jannis and Evelyn Ziegler (eds.). „Standardfragen“: Soziolinguistische, kontaktlinguistische und sprachgeschichtliche Aspekte. Festschrift für Klaus J. Mattheier zum 60. Geburtstag. Frankfurt/Main: Lang. 139–160.

Kaufmann, Göz (2004). ‘Eine Gruppe – Zwei Geschichten – Drei Sprachen: Rußlanddeutsche Mennoniten in Brasilien und Paraguay’ in: Zeitschrift für Dialektologie und Linguistik 71/3. 257–306.

Kaufmann, Göz (2005). ‘Der eigensinnige Informant: Ärgernis bei der Datenerhebung oder Chance zum analytischen Mehrwert?’ in: Lenz, Friedrich and Stefan Schierholz (eds.). Corpuslinguistik in Lexik und Grammatik. Tübingen: Stauffenburg. 61–95.

Kaufmann, Göz (2007). ‘The Verb Cluster in Mennonite Low German: A new approach to an old topic’ in: Linguistische Berichte 210. 147–207.

Kaufmann, Göz (2008). ‘Where Syntax meets Morphology: Varianten des bestimmten Artikels und die Variation satzfinaler Verbcluster im Plattdeutschen texanischer Mennoniten’ in: Patocka, Franz and Guido Seiler (eds.). Dialektale Morphologie, dialektale Syntax: Beiträge zum 2. Kongress der IGDD. Wien: Praesens. 87–119.

Kaufmann, Göz (2011). ‘Looking for order in chaos: Standard convergence and divergence in Mennonite Low German’ in: Putnam, Mike (ed.). Sudies on German-Language Islands. Amsterdam/Philadelphia: Benjamins. 187–230.

Kaufmann, Göz (2015). ‘Rare phenomema revealing basic syntactic mechanisms: the case of unexpected verb-object-sequences in Mennonite Low German’ in: Adli, Aria, Marco García García, and Göz Kaufmann (eds.). Variation in Language: System- and Usage-based Approaches. Berlin/Boston: de Gruyter. 113–146.

Kayne, Richard S. (1994). The Antisymmetry of Syntax. Cambridge, MS.: MIT Press.

Kayne, Richard S. (2000). ‘Overt versus covert movement’ in: Kayne, Richard S. (ed.). Parameters and Universals. Oxford: Oxford University Press. 223–281.

Keller, Rudi (1993). ‘Das epistemische weil. Bedeutungswandel einer Konjunktion’ in: Heringer, Hans Jürgen and Georg Stötzel (eds.). Sprachgeschichte und Sprachkritik. Festschrift für Peter von Polenz zum 65. Geburtstag. Berlin/New York: de Gruyter. 219–247.

Kempen, Gerard and Karin Harbusch (2005). ‘The Relationship between grammaticality ratings and corpus frequencies: A case study into word order variability in the midfield of German clauses’ in: Kepser, Stephan and Marga Reis (eds.). Linguistic Evidence: Empirical, Theoretical and Computational Perspectives. Berlin/New York: de Gruyter. 329–349.

Keseling, Gisbert (1970). ‘Erwägungen zu einer überregionalen Syntax der niederdeutschen Mundarten’ in: Hofmann, Dietrich and Willy Sanders (ed.). Gedenkschrift für William Foerste. Köln/Wien: Böhlau: 354–365.

King, Ruth (2005). ‘Crossing grammatical borders: Tracing the path of contact-induced linguistic change’ in: Markku Filppula, Juhani Klemola, Marjatta Palander, and Esa Penttilä (eds.). Dialects Across Borders: Selected Papers from the 11th International Conference of Methods in Dialectology. Joensuu, Finland 2002. Amsterdam/Philadelphia: Benjamins. 233–251.

Klassen, Peter P. (1991). Die Mennoniten in Paraguay: Band 2: Begegnungen mit Indianern und Paraguayern. Bolanden-Weierhof: Mennonitischer Geschichtsverein e.V.

Klassen, Peter P. (1995). Die rußlanddeutschen Mennoniten in Brasilien: Band 1: Rio Alto Krauel und Stoltz-Plateau in Santa Catarina. Bolanden-Weierhof: Mennonitischer Geschichtsverein e.V.

Klassen, Peter P. (2001). Die Mennoniten in Paraguay: Band 1: Reich Gottes und Reich dieser Welt. Bolanden-Weierhof: Mennonitischer Geschichtsverein e.V.

König, Ekkehard and Johan van der Auwera (1988). 'Clause integration in German and Dutch conditionals, concessive conditionals, and concessives' in: Haiman, John and Sandra A. Thompson (eds.). Clause Combining in Grammar and Discourse. Amsterdam/Philadelphia: Benjamins. 101–133.

König, Werner (ed.; in collaboration with Andrea Zeisberger and Edith Funk) (2003). Sprachatlas von Bayerisch-Schwaben – Band 9.2: Formengeographie II (Pronomen, Adjektive, Zahlwörter, Orts- und Richtungsadverbien, Syntax). Heidelberg: Winter.

Koopman, Hilda and Anna Szabolcsi (2000). Verbal Complexes. Cambridge, MA/London: The MIT Press.

Kroch, Anthony S. (1989). 'Function and grammar in the history of English: Periphrastic do' in: Fasold, Ralph and Deborah Schiffrin (eds.). Language Variation and Change: Current Issues in Linguistic Theory 52. Amsterdam/Philadelphia: Benjamins. 133–172.

Kroch, Anthony S. and Beatrice Santorini (1991). 'The derived constituent structure of the West Germanic verb-raising construction' in: Freidin, Robert (ed.). Principles and Parameters in Comparative Grammar. Cambridge, MA: The MIT Press. 269–338.

Labov, William (2001). Principles of Linguistic Change: Social Factors. Oxford/Malden, MS: Blackwell Publishers.

Langacker, Ronald W. (2009). Investigations in Cognitive Grammar. Berlin/New York: de Gruyter.

Langer, Nils (2000). 'Zur Verbreitung der tun-Periphrase im Frühneuhochdeutschen' in: Zeitschrift für Dialektologie und Linguistik 67/3. 287–316.

Larrew, Olha (2005). Norm, Normen, Normabweichungen: Eine historische und empirische Untersuchung zur wissenschaftlichen Bewertung morphosyntaktischer Konstruktionen im Deutschen. Hamburg: Dr. Kovač.

Lee, Ming-Wei and Julie Gibbons (2007). 'Rhythmic alternation and the optional complementiser in English: New evidence of phonological influence on grammatical encoding' in: Cognition 105/2. 446–456.

Lehmann, Christian (1984). Der Relativsatz: Typologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik. Tübingen: Narr.

Lehmann, Christian (1988). 'Towards a typology of clause linkage' in: Haiman, John and Sandra A. Thompson (eds.). Clause Combining in Grammar and Discourse. Amsterdam/Philadelphia: Benjamins. 181–225.

Lehmann, Winfred P. (1992). Historical Linguistics: An Introduction. London: Routledge.

Leiss, Elisabeth (2000). Artikel und Aspekt: Die grammatischen Muster von Definitheit. Berlin/New York: de Gruyter.

Lenerz, Jürgen (1984). Syntaktischer Wandel und Grammatiktheorie: Eine Untersuchung an Beispielen aus der Sprachgeschichte des Deutschen. Tübingen: Niemeyer.

Lenerz, Jürgen (1993). 'Zu Syntax und Semantik deutscher Personalpronomina' in: Reis, Marga (ed.). Wortstellung und Informationsstruktur. Tübingen: Niemeyer. 117–153.

LePage, Robert B. and Andrée Tabouret-Keller (1985). Acts of Identity: Creole-based Approaches to Language and Ethnicity. Cambridge: Cambridge University Press.

Lightfoot, David (1999). The Development of Language: Acquisition, Change, and Evolution. Oxford/Malden, MS: Blackwell Publishers.

Lightfoot, David (2003). 'The development of grammars' in: Cheng, Lisa and Rint Sybesma (eds.). The Second Glot International State-of-the-Article Book: The Latest in Linguistics. Berlin/New York: de Gruyter. 1–24.

Lind, Georg (2014). 'Effektstärken: Statistische, praktische und theoretische Bedeutsamkeit empirischer Studien'. Unpublished manuscript (www.uni-konstanz.de/ag-moral/pdf/Lind-2014_Effektstaerke-Vortrag.pdf)

Llinàs-Grau, Mireia and Javier Fernández-Sánchez (2011). Complementizer Deletion Structures: Against a Romance-English Unified Account. Research Report GGT-11-05, Centre de Lingüística Teòrica, Universitat Autònoma de Barcelona.

Lötscher, Andreas (1978). 'Zur Verbstellung im Zürichdeutschen und in anderen Varianten des Deutschen' in: Zeitschrift für Dialektologie und Linguistik 45/1. 1–29.

Louden, Mark L. (1992). 'German as an Object-Verb Language: A Unification of Generative and Typological Approaches' in: Rauch, Irmengard, Gerald F. Carr, and Robert L. Kyes (eds.). On Germanic Linguistics: Issues and Methods. Berlin/New York: de Gruyter. 217–231.

Louden Mark L. (1994). 'Syntactic change in multilingual speech islands' in: Berend, Nina and Klaus J. Mattheier (eds.). Sprachinselforschung: Eine Gedenkschrift für Hugo Jedig. Frankfurt/Main: Lang. 73–91.

Manzini, M. Rita (2012). 'The status of complementizers in the left periphery' in: Lobke; Aelbrecht, Liliane Haegeman, and Rachel Nye (eds.). Main Clause Phenomena: New Horizons. Amsterdam/Philadelphia: Benjamins. 297–318.

Mathussek, Andrea (in print). ‘On the problem of field worker isoglosses’ in: Côté, Marie-Hélène, Remco Knooihuizen, and John Nerbonne (eds.). The Future of Dialects: Selected Papers from Methods in Dialectology XV. Berlin: Language Science Press.

Matthiessen, Christian and Sandra A. Thompson (1988). ‘The structure of discourse and ‘subordination’’ in: Haiman, John and Sandra A. Thompson (eds.). Clause Combining in Grammar and Discourse. Amsterdam/Philadelphia: Benjamins. 275–329.

Meibauer, Jörg, Markus Steinbach, and Hans Altmann (2013). ‘Kontroversen in der Forschung zu Satztypen und Satzmodus’ in: Meibauer, Jörg, Markus Steinbach, and Hans Altmann (eds.). Satztypen des Deutschen. Berlin/New York: de Gruyter. 1–19.

Merchant, Jason (1996). ‘Object scrambling and quantifier float in German’ in: Kusumoto, Kiyomi (ed.). Proceedings of the North East Linguistic Society 26. Amherst, MA: University of Massachusetts. 179–193.

Mertens, Birgit (1994). Vom (Nieder-)Deutschen zum Englischen: Untersuchung zur sprachlichen Assimilation einer ländlichen Gemeinde im mittleren Westen Amerikas. Heidelberg: Winter.

Moritz, Karl Philipp (1999). Dichtungen und Schriften zur Erfahrungsseelenkunde (ed. by Heide Hollmer and Albert Meier). Frankfurt/Main: Deutscher Klassiker Verlag.

Müller, Gereon (1995). A-bar Syntax: A Study in Movement Types. Berlin/New York: de Gruyter.

Müsseler, Jochen (1995). ‘Focussing and the Process of Pronominal Resolution’ in: Rickheit, Gert and Christopher Habel (eds.). Focus and Coherence in Discourse Processing. Berlin/New York: de Gruyter. 53–74.

Newmeyer, Frederick J. (2003). Grammar is Grammar and Usage is Usage. Language 79/4. 682–707.

Nieuweboer, Rogier (1999). The Altai Dialect of Plautdiitsch: West-Sibirian Menonite Low German. München/Newcastle: Lincom Europa.

Öhl, Peter (2010). ‘Die Grammatikalisierung von Relativelementen zu Komplementierern am Beispiel von lateinisch quia/quod’ in: Bock, Bettina (ed.). Aspekte der Sprachwissenschaft: Linguistik-Tage Jena; 18. Jahrestagung der Gesellschaft für Sprache und Sprachen e.V. Hamburg: Dr. Kovač. 73–91.

Öhl, Peter and Guido Seiler (2013). ‘Wörter und Sätze’ in: Auer, Peter (eds.). Sprachwissenschaft, Grammatik, Interaktion, Kognition. Stuttgart: Metzler. 137–185.

Paul, Hermann (1995). Prinzipien der Sprachgeschichte. Tübingen: Niemeyer.

Penner, Zvi (1990). ‘On the acquisition of verb placement and verb projection raising in Bernese Swiss German’ in: Rothweiler, Monika (ed.). Spracherwerb und Grammatik: Linguistische Untersuchungen zum Erwerb von Syntax und Morphologie. Opladen: Westdeutscher Verlag. 166–189.

Pittner, Karin (1996). ‘Attraktion, Tilgung und Verbposition: Zur diachronen und dialektalen Variation beim Relativpronomen im Deutschen’ in: Brandner, Ellen and Gisella Ferraresi (eds.). Language Change and Generative Grammar. Wiesbaden: Westdeutscher Verlag. 120–153.

Pittner, Karin (1999). Adverbiale im Deutschen. Untersuchungen zu ihrer Stellung und Interpretation. Tübingen: Stauffenburg.

Polenz, Peter von (1991/1994/1999). Deutsche Sprachgeschichte vom Spätmittelalter bis zur Gegenwart (3 volumes). Berlin/New York: de Gruyter.

Pollock, Jean-Yves (1989). ‘Verb movement, Universal Grammar, and the structure of IP’ in: Linguistic Inquiry 20/3. 365–424.

Popper, Karl R. (1935). Logik der Forschung: Zur Erkenntnistheorie der modernen Naturwissenschaft. Wien: Springer.

Popper, Karl R. (1968). The Logic of Scientific Discovery. London: Hutchinson.

Postma, Gertjan (2014). ‘Complex complementizers and the structural relation with weak T. New (morpho)syntactic data from a Pomeranian language island in Brazil’ in: STUF – Language Typology and Universals 67/4. 627–663.

Pullum, Geoffrey K. (2007). ‘Ungrammaticality, rarity, and corpus use’ in: Corpus Linguistics & Linguistic Theory 3/1. 33–47.

Ratzlaff, Gerhard, Jakob Warkentin, Uwe S. Friesen, Gundolf Niebuhr, Hans Theodor Regier, Beate Penner, and Lily August (2009). Lexikon der Mennoniten in Paraguay. Asunción: Verein für Geschichte und Kultur der Mennoniten in Paraguay.

Reis, Marga (1995). ‘Extractions from verb-second clauses in German?’ in: Lutz, Uli and Jürgen Pafel (eds.). On Extraction and Extraposition in German. Amsterdam/Philadelphia: Benjamins. 45–88.

Reis, Marga (1997). ‘Zum syntaktischen Status unselbständiger Verbzweit-Sätze’ in: Dürscheid, Christa, Karl Heinz Ramers, and Monika Schwarz (eds.). Sprache im Fokus: Festschrift für Heinz Vater zum 65. Geburtstag. Tübingen: Niemeyer. 121–144.

Reis, Marga (2001). ‘Bilden Modalverben im Deutschen eine syntaktische Klasse’ in: Müller, Reimar and Marga Reis (eds.). Modalität und Modalverben im Deutschen. Hamburg: Buske. 287–318.

Rijkhoff, Jan (2010). ‘Rara and grammatical theory’ in: Wohlgemuth, Jan and Michael Cysouw (eds.). Rethinking Universals: How Rarities Affect Linguistic Theory. Berlin/New York: de Gruyter. 223–239.

Roberts, Ian and Anna Roussou (2003). Syntactic Change: A Minimalist Approach to Grammaticalization. Cambridge: Cambridge University Press.

Rohkohl, Kai (1993). Die plautdietsche Sprachinsel Fernheim, Chaco (Paraguay): Dokumentation des Sprachverhaltens einer russlanddeutschen Mennonitenkolonie. Marburg: Elwert.

Rothmayr, Antonia (2013). ‘Verb raising and verb projection raising at the syntax-phonology interface’ in: Auer, Peter, Javier Caro Reina, and Göz Kaufmann (eds.). Language Variation – European Perspective IV: Selected Papers from the Sixth International Conference on Language Variation in Europe. Freiburg. June 2011. Amsterdam/Philadelphia: Benjamins. 187–200.

Roussou, Anna (2010). ‘Selecting complementizers’ in: Lingua 120/3. 582–603.

Ruoff, Arno (1990). Häufigkeitswörterbuch gesprochener Sprache: Gesondert nach Wortarten, alphabetisch, rückläufig-alphabetisch und nach Häufigkeit geordnet. Tübingen: Niemeyer.

Saltveit, Laurits (1983) ‘Syntax’ in: Cordes, Gerhard and Dieter Möhn (eds.). Handbuch zur niederdeutschen Sprach- und Literaturwissenschaft. Berlin: Schmidt. 279–333.

Salzmann, Martin (2011). ‘Resolving the movement paradox in verb projection raising. In favor of base-generation and covert predicate raising’ in: Bonami, Olivier and Patricia Cabredo Hofherr (eds.). Empirical Issues in Syntax and Semantics 8. Paris: Centre National de la Recherche Scientifique. 453–485.

Sapp, Christopher D. (2011). The Verbal Complex in Subordinate Clauses from Medieval to Modern German. Amsterdam/Philadelphia: Benjamins.

Sawatzky, Harry Leonard (1986). Sie suchten eine Heimat: Deutsch-mennonitische Kolonisierung in Mexiko 1922–1984. Marburg: Elwert.

Schallert, Oliver (2011). ‘Formale Ansätze’ in: Fleischer, Jürg (in collaboration with Oliver Schallert). Historische Syntax des Deutschen: Eine Einführung. Tübingen: Narr

Schartner, Sieghard und Sylvia Schartner (2009). Bolivien: Zufluchtsort der konservativen Mennoniten. Asunción: Editora Litocolor.

Schmid, Tanja and Ralf Vogel (2004). ‘Dialectal variation in German 3-verb clusters: A surface-oriented optimality theoretical account’ in: Journal of Comparative Germanic Linguistics 7. 235–274.

Schmidt, Claudia Maria (1995). Satzstruktur und Verbbewegung: Eine minimalistische Analyse zur internen Syntax der IP (Inflection-Phrase) im Deutschen. Tübingen: Niemeyer.

Schmitz, Katrin (2006). Zweisprachigkeit im Fokus: Der Erwerb der Verben mit zwei Objekten durch bilingual deutsch-französisch und deutsch-italienisch aufwachsende Kinder. Tübingen: Narr.

Schnitzspahn, Ernst and Michael Rudolph (1995). „Wie sag’ ich’s richtig?“ – Kleiner plattdeutsch-hochdeutscher Sprachkurs: Ein Nachschlagewerk für alle, die Mennonitenplatt sprechen und ihr Deutsch verbessern wollen. Loma Plata, Kolonie Menno, Paraguay.

Schweizer, Bruno (2008). Zimbrische Gesamtgrammatik: Vergleichende Darstellung der zimbrischen Dialekte (edited by James R. Dow). Stuttgart: Steiner.

Seiler, Guido (2003). Präpositionale Dativmarkierung im Oberdeutschen. Stuttgart: Steiner.

Seiler, Guido (2004). 'On three types of dialect variation and their implications for linguistic theory: Evidence from verb clusters in Swiss German dialects' in: Kortmann, Bernd (ed.). Dialectology meets Typology: Dialect Grammar from a Cross-Linguistic Perspective. Berlin/New York: de Gruyter. 367–399.

Seiler, Guido (2015). 'Syntactization, analogy and the distinction between proximate and evolutionary causations' in: Adli, Aria, Marco García García, and Göz Kaufmann (eds.). Variation in Language: System- and Usage-based Approaches. Berlin/New York: de Gruyter. 239–263.

Siebs, Theodor (1898). Deutsche Bühnenaussprache. Berlin/Köln/Leipzig: Albert Ahn.

Siegel, Vanessa (2014). 'Präpositionalphrasen ohne Präpositionen? Zur syntaktischen Reduktion im ‚Türkenslang'' in: Kotthoff, Helga and Christine Mertzlufft (eds.). Jugendsprachen: Stilisierungen, Identitäten, mediale Ressourcen. Frankfurt/Main: Lang. 67–93.

Siemens, Heinrich (2012). Plautdietsch: Grammatik, Geschichte, Perspektiven. Bonn: Tweeback.

Snell, Rupert and Simon Weightman (2003). Hindi. London: Hodder Education.

Stechow, Arnim von (1990). 'Status government and coherence in German' in: Grewendorf, Günther and Wolfgang Sternefeld (eds.). Scrambling and Barriers. Amsterdam/Philadelphia: Benjamins. 143–198.

Steffen, Joachim (2006). Vereinzelte Sprachinseln oder Archipel? Die Mennonitenkolonien in Belize im englisch-spanischen Sprachkontakt (2 volumes). Kiel: Westensee Verlag.

Stell, Gerald (2011). Ethnicity and Language Variation: Grammar and Code-Switching in the Afrikaans Speech Community. Frankfurt/Main: Lang

Sternefeld, Wolfgang (2008/2009). Syntax: Eine morphologisch motivierte generative Beschreibung des Deutschen (2 volumes). Tübingen: Stauffenburg.

Szczepaniak, Renata (2011). Grammatikalisierung im Deutschen: eine Einführung. Tübingen: Narr.

Takada, Hiroyuki (1994). 'Zur Wortstellung des mehrgliedrigen Verbalkomplexes im Nebensatz im 17. Jahrhundert' in: Zeitschrift für Germanistische Linguistik 22/2. 190–219.

Thiessen, Jack (2003). Mennonite Low German Dictionary – Mennonitisch-Plattdeutsches Wörterbuch. Madison, WI: Max Kade Institut.

Thomason, Sarah Grey and Terrence Kaufman (1988). Language Contact, Creolization, and Genetic Linguistics. Berkeley: University of California Press.

Thurmair, Maria (1989). Modalpartikeln und ihre Kombinationen. Tübingen: Niemeyer.

Truckenbrodt, Hubert (2006). ‘On the semantic motivation of syntactic verb movement to C in German’ in: Theoretical Linguistics 32/3. 257–306.

Ungerer, Friedrich (2002). ‘Arbitrarität, Ikonizität und Motivation’ in: Cruse, Alan D., Franz Hundsnurscher, Michael Job, and Peter Rolf Lutzeier (eds.). Lexikologie: Ein internationales Handbuch zur Natur und Struktur von Wörtern und Wortschätzen. Berlin/New York: de Gruyter. 371–380.

Urry, James (1989). None But Saints: The Transformation of Mennonite Life in Russia 1789-1889. New York: Hyperion Press Limited.

Vanden Wyngaerd, Guido (1989). ‘Verb projection raising and the status of infinitival complements’ in: Jaspers, Dany, Wim Klooster, Yvon Putseys, and Pieter Seuren (eds.). Sentential Complementation and the Lexicon: Studies in Honour of Wim de Geest. Dordrecht: Foris. 423–438.

Veldre, Georgia (2003). ‘‘Kognitive Präsenz’ und ‘schwache Topikalität’: Zwei Parameter zur funktionalen Beschreibung demonstrativischer Ausdrücke’ in: Stark, Elisabeth and Ulrich Wandruszka (eds.). Syntaxtheorien: Modelle, Methoden, Motive. Tübingen: Narr. 123–137.

Vermeer, Hans J. and Walter Schmitt (1988). Einführung in die Grammatik des modernen Hindi. Heidelberg: Groos.

Volodina, Anna (2006). ‘Wenn-Relationen: Schnittstelle zwischen Syntax, Semantik und Pragmatik’ in: Breindl, Eva, Lutz Gunkel, and Bruno Strecker (eds.). Grammatische Untersuchungen: Analysen und Reflexionen. Gisela Zifonun zum 60. Geburtstag. Tübingen: Narr. 359–379.

Warkentin, Jakob (1998). Die deutschsprachigen Siedlerschulen in Paraguay im Spannungsfeld staatlicher Kultur- und Entwicklungspolitik. Münster: Waxmann.

Warkentin Görzen, Jakob (1952). Low German in Canada: A Study of “Ploutdĭtš” as Spoken by Mennonite Immigrants from Russia. Unpublished Ph.D.-thesis submitted to the Department of Germanic Languages and Literatures of the University of Toronto.

Weber, Thilo (2015). ‘Zur tun-Periphrase in niederdeutschen Dialekten’ in: Elmentaler, Michael, Markus Hundt, and Jürgen Erich Schmidt (eds.). Deutsche Dialekte: Konzepte, Probleme, Handlungsfelder. Akten des 4. Kongresses der Internationalen Gesellschaft für Dialektologie des Deutschen. Stuttgart: Steiner. 227–245.

Weiß, Helmut (2013). ‘Satztyp und Dialekt’ in: Meibauer, Jörg, Markus Steinbach, and Hans Altmann (eds.). Satztypen des Deutschen. Berlin/New York: de Gruyter. 764–785.

Welke, Klaus (1993). Funktionale Satzperspektive: Ansätze und Probleme der funktionalen Grammatik. Münster: Nodus-Publishers.

Welke, Klaus (2005). Deutsche Syntax funktional: Perspektiviertheit syntaktischer Strukturen. Tübingen: Stauffenburg.

Wexler, Kenneth and Peter Culicover (1980). Formal Principles of Language Acquisition. Cambridge, MA: The MIT Press.

Woolhiser, Curt (2005). ‘Political borders and dialect divergence/convergence in Europe’ in: Auer, Peter, Paul Kerswill, and Frans Hinskens (eds). Dialect Change: Convergence and Divergence in European Languages. Cambridge: Cambridge University Press. 236–262.

Wurmbrand, Susanne (2001). Infinitives: Restructuring and Clause Structure. Berlin/New York: de Gruyter.

Zanoga, Karen (1988). Verb Phrase Syntax: A Parametric Study of English and Spanish. Dordrecht: Kluwer.

Zifonun, Gisela, Ludger Hoffmann, and Bruno Strecker (1997). Grammatik der deutschen Sprache (3 volumes). Berlin/New York: de Gruyter.

Zimmermann (2011). ‘On the functional architecture of DP and the feature content of pronominal quantifiers in Low German‘ in: The Journal of Comparative Germanic Linguistics 14/3. 203–240.

Zwart, Jan-Wouter (1996). ‘Verb clusters in Continental West Germanic dialects’ in: Black, James R. and Virginia Motapanyane (eds.). Microparametric Syntax and Dialect Variation. Amsterdam/Philadelphia: Benjamins. 229–258.

Appendix

(a) The stimulus sentences

Sometimes slightly different versions of the stimulus sentences were used, especially in the Spanish-speaking countries. This difference is caused by the different varieties of Spanish spoken. An example for such a difference is *coche* (‘car’) in sentences <1>, <20>, and <22>, which could also appear as *carro* (predominantly in Mexico) or *movilidad* in Bolivia.

Complement sentence compounds

stimulus <1>	English	It is not good that he is buying the car
	Spanish	No es bueno que compre ese coche
	Portuguese	Não é bom que ele compre o carro
stimulus <2>	English	John doesn’t think that you know your friends well
	Spanish	Juan no cree que conozcas bien a tus amigos
	Portuguese	O João não acha que tu conheces bem os teus amigos
stimulus <3>	English	Don’t you see that I am turning on the light?
	Spanish	¿No ves que estoy prendiendo la luz?
	Portuguese	Não ves que eu estou acendendo a luz?
stimulus <4>	English	Can’t you see that I am wearing a new dress?
	Spanish	¿No ves que estoy usando un vestido nuevo?
	Portuguese	Não estás vendo que eu estou usando um vestido novo?
stimulus <5>	English	Henry doesn’t know that he can leave the country
	Spanish	Enrique no sabe que puede salir del país
	Portuguese	O Enrique não sabe que ele pode sair do país
stimulus <6>	English	Don’t you know that he should learn English?
	Spanish	¿No sabes que debería aprender inglés?
	Portuguese	Não sabes que ele teria que aprender inglês?
stimulus <7>	English	Peter is convinced that he has understood the book
	Spanish	Pedro está convencido que entendió el libro
	Portuguese	O Pedro está convencido que ele entendeu o livro
stimulus <8>	English	Are you sure that he has repaired the chair?
	Spanish	¿Estás seguro que él arregló la silla?
	Portuguese	Tem certeza que ele consertou a cadeira?
stimulus <9>	English	Elisabeth insists that you must have seen the truck
	Spanish	Marta insiste en que debes haber visto el camión
	Portuguese	Elisabete insiste que tu deves ter visto o caminhão
stimulus <10>	English	He didn’t know that he should have fed the dogs this morning
	Spanish	Él no sabía que debería haberles dado de comer a los perros esta mañana
	Portuguese	Ele não sabia que ele teria que ter dado comida para os cachorros esta manhã

Conditional sentence compounds

stimulus <11>	English	If he signs this contract, he will lose a lot of money
	Spanish	Si él firma ese contrato, va a perder mucho dinero
	Portuguese	Se ele assinar esse contrato, ele vai perder muito dinheiro

stimulus <12>	English	If he does his homework, he can have some ice-cream
	Spanish	Si hace sus deberes, puede tomar helado
	Portuguese	Se ele fizer o tema, ele pode comer sorvete
stimulus <13>	English	If he quits his job, I won’t help his family anymore
	Spanish	Si él deja el trabajo, ya no voy a ayudar a su familia
	Portuguese	Se ele largar o emprego dele, eu não vou ajudar mais à familia dele
stimulus <14>	English	If he opens the door, he will be very surprised
	Spanish	Si abre la puerta, se va a sorprender mucho
	Portuguese	Se ele abrir a porta, ele vai ficar muito surpreendido
stimulus <15>	English	If he has to sell the house now, he will be very sorry
	Spanish	Si tiene que vender la casa ahora, se va a poner muy triste
	Portuguese	Se ele tiver que vender a casa agora, ele vai ficar muito triste
stimulus <16>	English	If he can solve this problem, he is very smart
	Spanish	Si él puede resolver este problema, es muy inteligente
	Portuguese	Se ele puder resolver esse problema, ele é muito inteligente
stimulus <17>	English	If he really killed the man, nobody can help him
	Spanish	Si realmente mató al hombre, nadie lo puede ayudar
	Portuguese	Se ele realmente matou o homem, ninguém pode ajudar ele
stimulus <18>	English	If he stole the book, I won’t trust him anymore
	Spanish	Si él robó el libro, no voy a confiar más en él
	Portuguese	Se ele roubou o livro, eu não vou mais confiar nele
stimulus <19>	English	If he really had wanted to write this letter, he would have found the time
	Spanish	Si él realmente hubiera querido escribir esta carta, habría encontrado tiempo
	Portuguese	Se ele realmente tivesse querido escrever essa carta, ele teria achado tempo
stimulus <20>	English	If he could have repaired the car, he would have done it
	Spanish	Si él hubiera podido reparar el coche, lo habría hecho
	Portuguese	Se ele tivesse podido consertar o carro, ele teria feito isso

Causal sentence compounds

stimulus <21>	English	He is not coming, because he doesn’t have any time
	Spanish	No va a venir porque no tiene tiempo
	Portuguese	Ele não vem porque não tem tempo
stimulus <22>	English	He doesn’t have a car, because he has no money
	Spanish	No tiene coche porque no tiene dinero
	Portuguese	Ele não tem carro porque não tem dinheiro
stimulus <23>	English	He can’t listen to you, because he is unpacking his luggage
	Spanish	No te puede escuchar porque está sacando las cosas de la maleta
	Portuguese	Ele não pode te ouvir porque ele está tirando as coisas da mala
stimulus <24>	English	He is not here, because he is helping your father out
	Spanish	No está aquí porque está ayudando a tu padre
	Portuguese	Ele não está aqui porque ele está ajudando o teu pai
stimulus <25>	English	He is crying, because he has to eat salad every day
	Spanish	Está llorando porque tiene que comer ensalada todos los días
	Portuguese	Ele está chorando porque ele tem que comer salada todos os dias
stimulus <26>	English	He needs glasses, because he can’t see the blackboard
	Spanish	Necesita lentes porque no puede ver el pizarrón
	Portuguese	Ele precisa de óculos porque ele não consegue enxergar o quadro negro

stimulus <27>	English	I will give him a good grade, because he has read the book
	Spanish	Voy a darle una buena nota porque leyó el libro
	Portuguese	Eu vou dar uma nota boa para ele porque ele leu o livro
stimulus <28>	English	I am very hungry, because I haven’t had lunch yet
	Spanish	Estoy con mucha hambre porque todavía no he comido
	Portuguese	Eu estou com muita fome porque eu ainda não almocei
stimulus <29>	English	He is angry, because he could have bought the house for much cheaper
	Spanish	Está furioso porque podría haber comprado la casa por mucho menos
	Portuguese	Ele está bravo porque ele poderia ter comprado a casa por muito menos
stimulus <30>	English	He is so sad, because he should have warned his friend
	Spanish	Está tan triste porque debería haber advertido a su amigo
	Portuguese	Ele está tão triste porque ele deveria ter avisado o amigo dele

Relative sentence compounds

stimulus <31>	English	I don’t like people who make a lot of noise
	Spanish	No me gustan las personas que hacen mucho ruido
	Portuguese	Eu não gosto de pessoas que fazem muito barulho
stimulus <32>	English	The stories that he is telling the men are very sad
	Spanish	Las historias que les está contando a los hombres son muy tristes
	Portuguese	As estorias que ele está contando para os homens são muito tristes
stimulus <33>	English	This is the journey I am inviting my mother on
	Spanish	Este es el viaje al que estoy invitando a mi madre
	Portuguese	Essa é a viagem para a qual eu estou convidando a minha mãe
stimulus <34>	English	This is the man who is always staring at my house
	Spanish	Este es el hombre que está siempre mirando mi casa
	Portuguese	Esse é o homem que está sempre olhando para a minha casa
stimulus <35>	English	Is this the film you want to show to all your friends?
	Spanish	¿Esta es la película que quieres mostrar a todos tus amigos?
	Portuguese	Esse é o filme que tu queres mostrar para todos os teus amigos?
stimulus <36>	English	The doctor who wants to see my foot is very worried
	Spanish	El doctor que quiere ver mi pie está muy preocupado
	Portuguese	O médico que quer ver o meu pé está muito preocupado
stimulus <37>	English	I have found the book that I have given to the children
	Spanish	Encontré el libro que les di a los niños
	Portuguese	Eu encontrei o livro que eu dei para as crianças
stimulus <38>	English	The man who caused the accident has disappeared
	Spanish	El hombre que provocó el accidente desapareció
	Portuguese	O homem que provocou o acidente desapareceu
stimulus <39>	English	The truth which you should have told the judge is horrible
	Spanish	La verdad que le deberías haber dicho al juez es horrible
	Portuguese	A verdade que tu deverias ter dito para o juiz é horrivel
stimulus <40>	English	Who is the guy who could have saved my brother’s life?
	Spanish	¿Quién es el hombre que podría haber salvado la vida de mi hermano?
	Portuguese	Quem é o pessoa que poderia ter salvado a vida do meu irmão?

Main clauses

stimulus <41>	English	Every Sunday I bake a cake
	Spanish	Todos los domingos cocino un pastel
	Portuguese	Todos os domingos eu faço um bolo
stimulus <42>	English	Before leaving the house I always turn off the lights
	Spanish	Antes de irme de casa siempre apago las luces
	Portuguese	Antes de sair de casa eu sempre apago as luzes
stimulus <43>	English	I always want to help everybody
	Spanish	Yo siempre quiero ayudar a todo el mundo
	Portuguese	Eu sempre quero ajudar todo mundo
stimulus <44>	English	I have found the keys this morning
	Spanish	Encontré las llaves esta mañana
	Portuguese	Eu achei as chaves esta manhã
stimulus <45>	English	Yesterday I could have sold the ring
	Spanish	Ayer podría haber vendido el anillo
	Portuguese	Ontem eu poderia ter vendido o anel
stimulus <46>	English	I should have shown the little dog to the kids
	Spanish	Yo les debería haber mostrado el perrito a los niños
	Portuguese	Eu deveria ter mostrado o cachorrinho para as crianças

(b) The judgment test

As in the translation task (cf. Appendix (a)), the sixteen stimulus sentences of the judgment test were offered in an English, a Spanish, and a Portuguese version. In all versions, the sentence to be judged appeared in MLG and in the majority language of the respective colony (cf. Figures 2-2, 2-3, and 4-6 for examples of the three versions). We only present the English translations in the appendix. The orthography of MLG differs slightly for each language and for each colony. This variation is caused by linguistic differences between the varieties. For the reader's convenience, we add glosses which did not appear in the questionnaires.

{1} *Henrik weit, daut hei daut Launt feloten kaun*
Henrik knows that he the country leave can
'Henry knows that he can leave the country'

{2} *Hei haft nich en Hüs, wejens hei haft kjein Jelt*
he has not a house because he has no money
'He doesn't have a house because he has no money'

{3} *Wan hei den Maun doutjemeakt haft, dan kaun ahm kjeena halpen*
if he the man killed has then can him nobody help
'If he killed the man, nobody can help him'

{4} *Ekj ha grouten Hunga, wiels ekj ha noch nich Meddach jejeten*
I have great hunger because I have not yet lunch eat
'I am very hungry because I haven't had lunch yet'

{5} *Henrik weit, daut hei kaun daut Launt feloten*
Henrik knows that he can the country leave
'Henry knows that he can leave the country'

{6} *Wan hei nü mott daut Hüs fekjeipen, hei woad sea trüarich senne*
if he now must the house sell he will very sad be
'If he has to sell the house now, he will be very sad'

{7} *Daut is nich gout, daut hei daut Hüs kjaaft*
it is not good that he the house buys
'It is not good that he is buying the house'

{8} *Ekj jef ahm en ice-cream, wiels hei daut Büak jelest haft*
I give him an ice-cream because he the book read has
'I'll give him an ice-cream because he has read the book'

{9} *Wan hei den Breif hod wollt schriewen, wuud hei han Tiet jefungen*
if he the letter had wanted write would he have time found
'If he had wanted to write the letter, he would have found the time'

{10} *Henrik weit, daut hei kaun feloten daut Launt*
Henrik knows that he can leave the country
'Henry knows that he can leave the country'

{11} *Ejk weit, daut hei daut Büak haft festonen*
I know that he the book has understood
'I know that he has understood the book'

{12} *Wan hei haft den Maun doutjemeakt, dan kaun ahm kjeena halpen*
if he has the man killed then can him nobody help
'If he killed the man, nobody can help him'

{13} *Hei roat, wejens hei aule Dach Frucht mott eten*
he cries because he every day fruit must eat
'He is crying because he has to eat fruits every day'

{14} *Wan hei hod könnt die Coa fixen, wuud hei daut jedon han*
if he had could the car repair would he it done have
'If he could have repaired the car, he would have done it'

{15} *Henrik weit, daut hei daut Launt kaun feloten*
Henrik knows that he the country can leave
'Henry knows that he can leave the country'

{16} *Hei bruckt ne Brell, wejens hei nich kaun den Boum seene*
he needs a glass because he not can the tree see
'He needs glasses because he can't see the tree'