Sprachvariation

The Verb Cluster in Mennonite Low German: A New Approach to an Old Topic*

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Abstract

The objective of this article is twofold: From a theoretical point of view its main goal is to combine a variationist approach to clause final verb clusters in 12.000 embedded Low German clauses with a generativist analysis of the structure of these clusters. From a more concrete point of view the article describes and inter-relates the different sequences of one, two, and three verbal element(s) and their complements. After analyzing the data collected in five Mennonite colonies in North and South America, three different types of speakers could be identified, their behavior suggesting that Mennonite Low German verb phrases are, contrary to modern syntactic theory, head-final and left-branching. All clusters surfacing as more parsing-friendly right-branching structures are considered to be the result of (multiple) raising and adjoining of verb phrases to the right of a head-final functional projection.

1 Introduction

The interest in clause final verb clusters in Continental West Germanic varieties has been a central issue in syntactic research for more than three decades now, but in spite of these long-standing efforts, many questions still remain unsolved. Kroch & Santorini (1991: 269) comment: "The analysis of the verb-raising phenomenon in West Germanic poses an interesting and difficult problem for

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syntactic theory." Koopman & Szabolcsi (2000: 1), almost ten years later, still agree with this evaluation: "The syntax of complex verb formation (also known as verb raising, verb projection raising, or the 'third' construction) constitutes one [of; sic!] the most difficult areas of syntax."

Lötscher (1978: 28) formulated very early a research desideratum which might have helped in solving these difficulties but was heeded by few, if any, researchers during most of the last thirty years:

> Zur Beantwortung solcher Fragen [*as for the variation and complexity of cluster sequences in different German varieties*] bedarf es allerdings nicht nur **genauerer und systematischerer Untersuchungen der Quellen**, als dies bisher meist der Fall war; im Hintergrund und als Basis der Heuristik muß vielmehr auch **eine explizitere syntaktische Theorie** stehen.

Lötscher calls for the combination of more serious data-based studies (*genauerer und systematischerer Untersuchungen der Quellen*) and a more explicit syntactic theory to analyze verb clusters (*eine explizitere syntaktische Theorie*). But although there have been many serious theoretical attempts to investigate verb clusters, especially since Evers' (1975) groundbreaking work, almost all of this mostly generative work lacks a satisfying empirical basis. On the other hand, those who used such a basis, such as Ebert (1981) and Takada (1994), meticulously counted tokens in their historical texts but failed to provide a satisfactory syntactic frame for their findings. Exceptions to these rather one-sided attempts are studies of historic syntactic change by researchers such as Kroch (1989) and Lightfoot (1999). And fortunately, in more recent work Lötscher's desideratum also seems to have been put on the research agenda for synchronic analysis. The *SAND*-project (*Syntactische Atlas van de Nederlandse Dialecten*) and the project *Dialektsyntax im Schweizerdeutschen* combine the sociolinguistic analysis of recently elicited corpora with modern syntactic theory. Barbiers (2005: 235) defines this interaction by saying that "[…] generative linguistics and sociolinguistics are complementary in that it is the task of sociolinguistics to describe and explain the patterns of variation that occur within a linguistic community given the theoretical limits of this variation uncovered by generative linguistics." This kind of complementary work may prove to be an important step forward in understanding several unsolved syntactic phenomena.

The project presented here fits in nicely with the efforts in Switzerland, the Netherlands, and Belgium. On the basis of extensive data gathered in five Low German-speaking Mennonite colonies in North and South America, I will endeavor to shed some light on the internal structure of verb clusters by analyzing their superficial make-up and the sociolinguistic distribution of the variants produced by 305 Mennonite informants. This analysis will be carried out in the spirit of Kroch (1989), Lightfoot (1999), and Hawkins (1994, 2004). Due to the enormous bulk of analytical work necessary to describe 12.000 clauses, this article will only touch on the more abstract layers of current syntactic theory since pursuing such questions in more detail would be too demanding at this point.

The structure of the article is as follows: In part 2, I give a brief overview of the migration paths of the Low German-speaking Mennonites and some crucial information about their current linguistic situation in the Americas. Part 3 gives a general introduction to the topic of verb clusters (3.1) and lists the syntactic assumptions underlying my analyses (3.2). Part 4 summarizes the elicitation method used to obtain the data and provides some information about the informants. The bulk of the article is formed by part 5. Its first section (5.1) analyzes in great detail the data for embedded clauses with two verbal elements. Both structural and sociolinguistic analyses will be carried out. Building on the results given in section 5.1, the following sections deal with embedded clauses with three verbal elements (5.2) and with single verbs (5.3). In these two sections the goal is to ascertain whether or not the structural rules postulated for clusters with two verbal elements can help in understanding the informants' preference for certain variants in embedded clauses with one and three verbal element(s). Part 6 concludes by contrasting my approach with other approaches and by raising crucial questions which remain to be answered.

2 The Mennonites

The origins of the Mennonites can be found in East Holland, Frisia, Flanders, and what is today Northwest Germany. In these regions Anabaptist communities had been formed during the Reformation. Due to religious persecution many of these Anabaptists emigrated to West and East Prussia during the 16th century. It was there that a koine out of the varieties the Mennonites had used in their homelands and the local form of Low German was formed. Some time later the Mennonites in West and East Prussia substituted Dutch for High German in their church services and for reading and writing. When the Prussian government imposed stricter rules on the Mennonites in the 18th century some of them started to look for other places to live and gladly accepted an invitation by Catherine II of Russia to settle in the Ukraine. There they lived in two colonies (Chortitza and Molotschna) in almost complete isolation for a century. At the end of the 19th century, however, Russian officials introduced laws to ensure a certain degree of integration, causing the more tradition-bound, conservative Mennonites to emigrate to Canada around 1870. During and after World War I, the situation for German-speaking immigrants there also became more difficult. It was again the more conservative parts of the Mennonite communities who would not yield to government pressure and decided to move on to Mexico where most of them settled in the northern state of Chihuahua (Ciudad Cuauhtémoc; today roughly 40.000 people). Others found a new home in Paraguay setting up the colony Menno (9.000 people). Mennonites from Mexico founded several daughter colonies, most importantly Santa Cruz de la Sierra in Bolivia, various communities in Belize, and one in Seminole, Texas (4.000 people).

The Mennonites who stayed in Russia in 1870 accepted the new situation and introduced among other things a more modern school system with better teaching of Standard German. In spite of these efforts and due to their economic success, the Mennonites faced severe problems in the Soviet Union especially when Stalin came to absolute power in 1927. Because of the unfavorable prospects, many of these more modern Mennonites tried to leave the Ukraine and some of them succeeded in doing so in 1930. They emigrated to Canada, Paraguay, and Brazil. In Canada and Paraguay (colony Fernheim; 4.000 people) they settled close to their conservative Mennonite brethren who had left sixty years earlier; in Brazil they first lived in the state of Santa Catarina and later moved to the states of Paraná and Rio Grande do Sul (Colônia Nova; 1.000 people). Table 1 summarizes the major itineraries of the Mennonites. The colonies in bold print are analyzed in this article.

Table 1: Important migrations of the Mennonites since the 16th century

Origin	Holland, Frisia, Flanders, "Northwest Germany"					
16th cent.	Danzig, West Prussia, East Prussia					
1790	Chortitza, Ukraine					
1800				Molotschna, Ukraine		
1870	Manitoba/Saskatchewan, Canada					
1920	**Chihuahua, Mexico**		**Menno, Paraguay**			
1930				**Fernheim, Paraguay**	Manitoba, Canada	Santa Catarina, Brazil
1950		Santa Cruz, Bolivia	Santa Cruz, Bolivia			**Rio Grande do Sul, Brazil**
1970	**Texas, USA**					

The different migration histories of the Mennonites offer the linguist the rare opportunity to compare different routes of language change within one speech community. Because of the common background of all Mennonite colonies analyzed here,[1] one has to explain the currently existing syntactic differences between them with their different migration histories and their different current social and linguistic living conditions. Table 2 gives an account of the informants' self-evaluation of their linguistic competence in the major contact languages.[2] Besides Low and Standard German, this includes the majority language of each colony's homeland.

[1] It is true that two dialects existed in the Ukraine (named after the villages of Chortitza and Molotschna) but the syntactic differences between them do not seem to have been very pronounced.

[2] A more detailed explanation about this method, its quantification and its results can be found in Kaufmann (1997: chapter 6.3.1.1) and Kaufmann (2004: 271 – table 5, 277 – table 8).

Table 2: Linguistic competence in three contact languages in five Mennonite colonies

	USA	Mexico	Brazil	Menno	Fernheim
			LOW GERMAN		
Younger	**good**	very good	**good**	very good	very good
Older	very good	very good	very good	very good	very good
Male	very good	very good	very good	very good	very good
Female	very good	very good	very good	very good	very good
			STANDARD GERMAN		
Younger	**bad**	OK	OK	**good**	**(very) good**
Older	OK	OK	**good**	OK	**(very) good**
Male	**bad**	OK	OK	**good**	**(very) good**
Female	**bad**	OK	OK	**good**	**(very) good**
			MAJORITY LANGUAGE		
	English	*Spanish*	*Portuguese*	*Spanish*	*Spanish*
Younger	**good**	OK	**very good**	OK	OK
Older	OK	OK	OK	OK	OK
Male	**good**	OK	**good**	OK	OK
Female	**good**	**bad**	OK	OK	OK

The information which is most important for our analyses is given in bold print in table 2. With regard to the interaction between the most important group language, Mennonite Low German (MLG), and the majority language in each country, one can detect clear signs of an initial language shift in the USA and Brazil. The younger Mennonites in these colonies do not any longer speak MLG very well. They show, however, the highest competence in the respective majority language, English or Portuguese. While one, therefore, has to state the existence of a subtractive bilingualism in the USA and Brazil, one can consider the bilingualism in the Paraguayan colonies and in Mexico as additive; learning the majority language there does not imply losing MLG.

Especially important for our analyses is the Mennonites' competence in Standard German, because a strong presence of this prestigious variety is bound to influence the linguistic behavior in MLG. With respect to competence in Standard German, a distinction has to be drawn between the Paraguayan colonies, where a modern form of Standard German is learned in modern schools, and the colonies in Mexico and the United States, where mostly a rather old fashioned form of Standard German is learned in a purely receptive manner. The difference between Paraguay on the one hand and the North American colonies on the other hand is obviously connected to the fact that the Mennonites in the USA and in Mexico left Russia before the teaching of Standard German there improved. Therefore, we will be calling the Paraguayan colonies more German-like and the North American colonies less German-like. The Brazilian colony is in an intermediate position and it will sometimes be mentioned together with the North American colonies and sometimes with the Paraguayan colonies. The

older Mennonites in Brazil speak Standard German quite well while the younger ones are losing it even faster than they are losing MLG (cf. the detailed description of the linguistic aftermath of Getúlio Vargas' *Estado Novo* in Kaufmann 2004: 264–266). The opposite route was taken by the originally conservative Mennonites in Menno, who have dramatically intensified their zeal for better instruction in Standard German over the last fifty years. The main reason for this is the close proximity between Menno and Fernheim. Fernheim's influence has led to a situation where younger Mennonites in Menno speak Standard German better than older ones (cf. also Kaufmann 2003b).

3 Verb Clusters

3.1 General Facts

Table 3 illustrates the pertinent facts for the sequence of two and three verbal elements in clause final clusters in embedded clauses in Standard German and Standard Dutch. V1 indicates the finite verb, V2 the non-finite verb embedded under V1, V3 the non-finite verb embedded under V2.

Table 3: Unmarked sequences of clause final clusters in embedded clauses with two and three verbal elements in Standard German and Standard Dutch

	Standard German	**Standard Dutch**
Two verbal elements	V2-V1	V1-V2 / V2-V1
Three verbal elements	V3-V2-V1 V1-(NP/PP/AP)-V3-V2	V1-V2-V3

The only exception to the otherwise rigidly left-branching sequence of Standard German is the front position of the finite verb in certain clusters of three verbal elements. This position is obligatory for the finite temporal auxiliary *haben* (English *have*) selecting a modal verb and its infinitive. The modal verb in this construction appears unexpectedly in the form of an infinitive instead of the expected past participle (the *infinitivum-pro-participio*-effect (IPP); cf. examples in (1)). The front position is preferred, albeit optionally, when finite *werden* selects two true infinitives (cf. examples in (2)).

(1) (a) [...] daß er ihn **hat**$_{V1}$ sehen$_{V3}$ können$_{V2}$
(b) *[...] daß er ihn sehen$_{V3}$ können$_{V2}$ hat$_{V1}$
gloss: [...] *that he him* (a) *has see can* / (b) *see can has*
translation: [...] *that he has been able to see him*

(2) (a) [...] daß er ihn **wird**$_{V1}$ sehen$_{V3}$ können$_{V2}$
(b) [...] daß er ihn sehen$_{V3}$ können$_{V2}$ **wird**$_{V1}$
gloss: [...] *that he him* (a) *will see can* / (b) *see can will*
translation: [...] *that he will be able to see him*

In a non-purist version of Standard German one may also find a finite modal verb in front of two true infinitives (cf. examples in (3)), but in no version of modern Standard German one will find a finite modal verb selecting either an Infinitive Perfect (cf. examples in (4)) or an Infinitive Passive (cf. examples in (5)) in the front position. Likewise, it is impossible to have the finite temporal auxiliary *haben* in front of a true past participle selecting an infinitive (cf. examples in (6)).[3]

(3) (a) ? [...] daß er ihn **will**$_{V1}$ leiden$_{V3}$ sehen$_{V2}$
(b) [...] daß er ihn leiden$_{V3}$ sehen$_{V2}$ **will**$_{V1}$
gloss: [...] *that he him* (a) *wants suffer see* / (b) *suffer see wants*
translation: [...] *that he wants to see him suffer*

(4) (a) *[...] daß er ihn **will**$_{V1}$ geschlagen$_{V3}$ haben$_{V2}$
(b) [...] daß er ihn geschlagen$_{V3}$ haben$_{V2}$ **will**$_{V1}$
gloss: [...] *that he him* (a) *wants beaten have* / (b) *beaten have wants*
translation: [...] *that he claims to have beaten him*

(5) (a) *[...] daß er von seiner Freundin **will**$_{V1}$ geküßt$_{V3}$ werden$_{V2}$
(b) [...] daß er von seiner Freundin geküßt$_{V3}$ werden$_{V2}$ **will**$_{V1}$
gloss: [...] *that he from his girl-friend* (a) *wants kissed be* / (b) *kissed be wants*
translation: [...] *that he wants to be kissed by his girl-friend*

(6) (a) *[...] daß er ihn **hat**$_{V1}$ schwimmen$_{V3}$ gesehen$_{V2}$
(b) [...] daß er ihn schwimmen$_{V3}$ gesehen$_{V2}$ **hat**$_{V1}$
gloss: [...] *that he him* (a) *has swim seen* / (b) *swim seen has*
translation: [...] *that he has seen him swim*

In Standard Dutch the ordering of two verbal elements is optional. The sequence *V1-V2* is preferred for modal verbs while the sequence *V2-V1* is more frequent for the perfect tense (cf. the examples in (7) and (8)):

(7) (a) [...] dat hij **kan**$_{V1}$ komen$_{V2}$
(b) [...] dat hij komen$_{V2}$ **kan**$_{V1}$
gloss: [...] *that he* (a) *can come* / (b) *come can*
translation: [...] *that he can come*

(8) (a) [...] wat hij **had**$_{V1}$ gezegd$_{V2}$
(b) [...] wat hij gezegd$_{V2}$ **had**$_{V1}$
gloss: [...] *what he* (a) *has said* / (b) *said has*
translation [...] *which/what he has said*

[3] Interestingly, all these variants can be found in earlier stages of German. Takada (1994: 206–208), who analyzes clusters with three and four verbal elements in six German dialect regions in the 17th century, shows that there is a growing tendency to postpone finite modal verbs in all German-speaking regions during this time.

With three verbal elements the Standard Dutch cluster is the exact mirror image of the default Standard German sequence (cf. example (9) from Robbers 1997: 56 – her example (29a)).

(9) […] dat Jan morgen **zal**$_{V1}$ kunnen$_{V2}$ werken$_{V3}$
gloss: […] *that Jan tomorrow will can work*
translation: […] *that Jan will be able to work tomorrow*

In a head-final analysis of German and Dutch, the exceptional sequence in Standard German (V1-V3-V2) and the Standard Dutch sequences *V1-V2* and *V1-V2-V3* are considered to be the result of (multiple) Verb Raising (VR). In VR the non-finite verbal element(s) move(s) to the right of the finite verb by way of adjunction. In the Dutch sequence *V1-V2-V3*, one has to assume two successive adjunctions (V3 to the right of V2, V2-V3 to the right of V1). The difference between Standard German and Standard Dutch is that VR in Standard Dutch is at least for three verbal elements a general grammatical rule whereas in Standard German it is a strictly limited phenomenon.

Besides VR, there exists a slightly different phenomenon which is traditionally called Verb Projection Raising (VPR; cf. Haegeman & Riemsdijk 1986). In VPR it is not only the non-finite verb which is being moved to the right but the non-finite verb with its complement(s), this movement causing the disruption of the verbal elements in the cluster. An example from Lötscher's (1978: 4 – his example (8a)) data from Zurich is (10):

(10) [...] wil de Joggel **wott**$_{V1}$ es gottlett ässe$_{V2}$
gloss: [...] *because the Joggel wanted the pork chop eat*
translation: [...] *because Joggel wanted to eat the pork chop*

Flemish varieties (cf. Kroch & Santorini's 1991: 275 – example (10a)) and the Standard German sequence *V1-NP/PP/AP-V3-V2* (table 3) show the same phenomenon.

With regard to historic German varieties, Ebert (1981) describes a corpus of letters written by citizens from the city of Nuremberg between 1300 and 1600. He only analyzes embedded clauses with two contiguous verbal elements thus excluding VPR. Ebert finds two linguistic factors which have an important influence on the ordering of the verbal elements: the type of syntagm, i.e., whether the finite verb is the temporal auxiliary *haben* or *sein*, the passive auxiliary *werden*, or a modal verb (Ebert 1981: 206), and stress, i.e., whether or not the word/grammatical category which precedes the verb cluster bears stress (Ebert 1981: 206–207). Curiously, as most researches working with verb clusters, Ebert does not discuss a possible influence of the type of the embedded clause. In the data presented here it is precisely the type of the embedded clause which proves to be a very important linguistic factor (cf. Kaufmann 2003a: 187 – table 3).

Although I will be considering VR as VPR with scrambling (cf. assumption (f) below), I will continue using the traditional labels VR for the clause final sequence *ObjNP-V1-V2* and VPR for the sequence *V1-ObjNP-V2*. For the se-

quence *ObjNP-V2-V1*, obligatory in Standard German, I will use the term *Non-Raised variant* (NR-variant). As all three variants can be found in all Mennonite colonies, it proved useful to label informants who predominantly use the NR-variant as German-like Mennonites. Informants who strongly prefer VPR will be called Flemish-like Mennonites, and informants who strongly prefer VR will be called Dutch-like Mennonites (cf. Evers' (1975: 54) labels *'Dutch' order* and *'German' order*).

3.2 Specific Syntactic Assumptions

The following list of assumptions serves two objectives. Firstly, they simply constitute the descriptive tool one needs to talk about the data presented. Secondly and more importantly, it will be shown that a subset of these assumptions, namely (a), (b), (c), (d), and (f), provides the best explanation for the data, and they do this although they could be qualified as rather old-fashioned within the current model of generative grammar strongly influenced by Kayne's (1994) theory of antisymmetry. The last two assumptions (i) and (j) connect structural considerations with some concepts of variation studies.

(a) The VP in MLG is head-final

Contrary to various authors (Kayne (1994), Zwart (1996), Haegeman (1998), Hinterhölzl (1999), and Koopman & Szalbolcsi (2000)), I will assume that the complement in MLG and in Continental West Germanic varieties in general precedes its verbal head, this assumption being shared by Haider (2003) among others.

(b) Movement to the right in MLG is possible

As I assume that MLG VPs are head-final, the surface sequence *(NP)-V1-(NP)-V2* in Dutch, Flemish or Swiss German is best explained as the result of some movement to the right[4] (again contrary to Kayne 1994; but cf. Hawkins 2004: 130).

(c) There exists at least one functional head to the right of the VP into which the finite verb in MLG has to move

The idea that the least embedded verb in a finite clause in Continental West Germanic varieties moves to a functional head in order to pick up finite morphology (or check morphological features) is probably not controversial (cf. for example Müller 1995: 31 and Haegeman 1998). Deprez' (1994: 136) conviction that this movement goes to a head-final functional projection which takes the VP as its left-branching complement is, however, out of the question for lin-

[4] Different from Evers (1975: chapter 1.0.2), I do not assume that there is a string-vacuous adjunction of verbal heads in the basic sequence *V2-V1*.

guists working within Kayne's (1994) theory. In spite of this, I will show that this assumption is crucial in order to understand the distribution of the Mennonite data (cf. especially section 5.3). The nature of this head-final functional phrase, i.e. the question as to whether we are dealing with a tense, an agreement, or another type of projection (FP1, FP2, etc.), plays no important role in my argumentation and will not be pursued further.

(d) V(P)R in MLG adjoins a VP to the right of the head-final functional projection

With Barbiers (2005: 262 – endnote 18) and Von Stechow (1990: 149–150), I assume that at least modal verbs selecting an infinitive without *zu*/*te* and temporal auxiliaries selecting a past participle are constructed identically and coherently. This means that they embed a bare VP. I do, therefore, not consider V(P)R with modal verbs and temporal auxiliaries as a case of extraposition (but cf. Kroch & Santorini 1991, who do exactly this). Extraposition normally adjoins a functional IP- or CP-structure to a maximal projection (cf. Vanden Wyngaerd 1989: 435).

(e) Scrambling of NPs in MLG is leftward movement by adjoining to 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" (Bošković 2004: 630 – footnote 21), the relatively free order of NPs is one of its defining characteristics. There exist basically two approaches to the different possible surface sequences in the German middle field: base generation of the NP in different positions or movement of the NP. I will agree with Müller's (1995: 98, 120) assumptions for German. Scrambling in MLG is taken to be adjunction of a NP to VP or IP, i.e., the scrambled NP does not end up in a specifier position as NPs in wh-movement and topicalization do.

(f) VR in MLG is VPR with scrambling of the Object-NP

One of the most important assumptions in this article is that VR in MLG is considered a case of VPR with scrambling of the Object-NP (ObjNP).[5] This assumption will be shown to furnish the most adequate description for the data presented and can be found in several publications: Vanden Wyngaerd (1989: 436) has written about LNS (Light NP Shift) and remnant VP-movement, and for Den Besten & Broekhuis (1989; quoted in Haegeman 1994: 512), "[…] 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." Whether this analysis also holds for the Standard Dutch sequence V1-V2(-V3), which does

[5] For the question as to whether scrambling occurs prior or after raising confer Hinterhölzl (1999: 21, 30 – footnote 9). Although Hinterhölzl works in the spirit of Kayne (1994), he (1999: 12) shares the conviction that both VPR and VR are to be analyzed as XP-movement. However, Hinterhölzl (1999: 63, 70) does not see scrambling but pied-piping of different amounts of structure as the distinctive characteristic of VR and VPR.

not allow ObjNPs within the verb cluster, will be discussed in part 6. An important corollary to this assumption is that the raising domain of VPR and VR in MLG is supposed to be identical, i.e., it is not possible to explain differences in the size of the raised material by assuming that different layers of the VP have been raised (cf. for this view Den Besten & Edmondson 1983: 207).

(g) Adverbs in MLG do not move; they are base generated in different positions

Although Grewendorf & Sternefeld (1990: 21) write about scrambling of adverbials to IP, most researchers agree that adverbs are base generated in their surface position (cf. Pollock 1989 and Cinque 1999). Nevertheless, there exists a debate about the question as to what the precise position for adverbs is: Vanden Wyngaerd (1989: 425) adjoins adverbs to VP, Bayer & Kornfilt (1994: 40) say that they can be adjoined to any projection of V, and Cinque (1999) puts them into the specifier position of different semantic-functional projections. I will analyze adverbs as adjoining to (non-argumental) maximal projections, i.e. VPs and IPs, which Cinque (1999: 44) calls the common assumption in the current literature.

(h) Complements in MLG are base generated adjacent to the verb

This assumption presupposes that the surface sequence *ObjNP-Adverb-Verb* in MLG is the consequence of scrambling 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), i.e., the scrambling position is an adjoined position to the left of the adverb position. The non-argumental categories VP and IP, therefore, are supposed to have the structure in (11):[6]

(11) $[_{IP/VP}$ scrambling-position $[_{IP/VP}$ AdvP $[_{IP/VP}$ VP I / NP V]]]

(i) At least part of the variation with regard to the verbal sequence in clause final clusters in MLG must be explained by assuming more or less marked/costly derivations for these clusters

This is the most basic and theoretically the most far-reaching assumption. In phonetics, one is used to talking about economy and/or optimalization of the syllable structure when speakers reduce consonant clusters to simple consonants or insert a vowel into a consonant cluster. The same seems to be true for morphology, where one can describe the reanalysis of strong verbs as weak verbs as indicating a reduction of the mnemotechnical learning load for children. For syntax, a far less "quantifiable" level of language, however, it is more difficult to find clear examples for the concepts of economy and optimalization. Never-

[6] Mostly for reasons of representational simplicity of the syntactic structures presented, I am disregarding many current research topics, such as the existence of small v and functional projections like AgrSP, NegP, TP, AgrOP, PredP, FP1, FP2 etc. (cf. Cinque's 1999 and especially Haegeman's 1998, Hinterhölzl's 1999, and Koopman & Szabolcsi's 2000 necessity for an almost infinite number of landing sites for XPs).

theless, possible candidates for these concepts in syntax can be found. Within generative grammar, different derivational costs could be allotted to structures according to the number (and possibly the distance) of movements or to the number of mergers necessary to generate them. Barbiers (2005: 257–258), for example, refers to the sequence *V1-V2-V3*, which according to his analysis does not imply any movement, as the least costly order. Within the area of language processing, one possible consequence of marked orders are parsing difficulties. Lötscher (1978: 12), Hawkins (1994: 5, 97), and Haider (2003: 91, 119–123) see an advantage in right-branching structures, i.e. V(P)R in verb clustering, because these sequences avoid center embedding.[7] The base line of this article will, therefore, be that different verbal sequences imply different derivational costs for the speaker and pose different levels of parsing problems for the hearer.

(j) The natural sequence of syntactic change in verb clusters in embedded clauses in MLG should be NR-VPR-VR or VR-VPR-NR depending on the sociolinguistic setting

The concrete consequence of the assumptions presented here is that in embedded clauses in MLG the NR-variant (ObjNP-V2-V1) does not imply any (verbal) movement, while VPR (V1-ObjNP-V2) implies VP-movement, and VR (ObjNP-V1-V2) implies VP-movement and ObjNP-scrambling. The latter two variants are considered to reduce parsing complexity by avoiding center embedding. But there is a price to pay for this: V(P)R is the result of movement and is thus derivationally more costly than the NR-variant. As VR in our view implies more movement than VPR, it should make up for this higher derivational cost by being even more parsing-friendly than VPR (see part 6 for a discussion of this point). If this hierarchy of parsing-friendliness is correct, one expects that syntactic change in clause final verb clusters either follows the route *NR-VPR-VR* or the route *VR-VPR-NR*, depending on the sociolinguistic setting and the type of linguistic change connected to this setting (change from below or change from above; cf. Labov 2001). VPR constitutes in both cases an intermediate stage.[8]

[7] It is interesting that many German dialects prefer right-branching structures whereas Standard German is predominantly left-branching. At least for German, therefore, the question as to why supposedly parsing-unfriendly left-branching clusters exist at all could be answered by normative pressure. Obviously, normative pressure alone does not explain the fact that there exist so many strict OV-languages.

[8] If one assumed VR to be a case of head-movement and VPR to be a case of VP-movement, one would rather expect *NR-VR-VPR* and *VPR-VR-NR* as routes for syntactic change because VR in this view would move less (phonetic) material than VPR. This approach is not borne out by our data!

4 The Corpus

The data collected in this project consist of the oral and spontaneous translation of 46 stimulus sentences from English, Spanish, or Portuguese into MLG. The 305 informants did not have access to the written version of the stimulus sentences. These sentences were created in a way that allowed the analysis of three independent linguistic factors, a) the type of the finite verb, b) the number of verbal elements, and for embedded clauses c) the type of the embedded clause. For clusters with two verbal elements the goal was to elicit the MLG temporal auxiliary *han* (English *have*) selecting a past participle and modal verbs selecting an infinitive without *tu* (English *to*). For clusters with three verbal elements, the main focus was on the temporal auxiliary *han* selecting a modal verb with an infinitive, i.e. the construction which causes the IPP-effect in Standard German and Standard Dutch. Besides these cluster-stimulating sentences, some stimulus sentences aimed at eliciting embedded clauses with a single verbal element with or without a particle. The different cluster types were distributed over six isolated main clauses and four types of embedded clauses: relative clauses, initial conditional clauses, causative clauses, and complement clauses. All main verbs in the stimulus sentences required a complement, which allows us to distinguish unambiguously between VR and VPR. Some sentences additionally contained an adverb, which furnishes extra information as to the structure of MLG verb clusters.

Many readers will rightly object that such a method is unable to elicit natural language data (cf. the detailed critique of this method in Kaufmann 2005). However, one should not forget that the amount of free speech necessary to elicit enough comparable syntactic data from hundreds of speakers would be hard to obtain. The fact that three different languages served as medium of elicitation probably does not pose two large a problem as to the validity of the results. There are no major differences between Spanish, Portuguese, and English with regard to the position of verbal elements; all three languages have a basic SVO order, show no difference between embedded and main clauses, and do not exhibit the verbal frame typical of German and Dutch varieties.

The informants were chosen in order to obtain a more or less even distribution with two gender groups and three age groups. Although the Mennonite colonies are certainly not completely homogeneous with regard to social characteristics such as profession, education, and income, these characteristics do not seem to play such an important role as in modern western societies. For this reason, they were not used as an analytical factor in this project. Table 4 gives an overview of the informants' age and sex.

Table 4: Age and gender distribution of the informants in five Mennonite colonies

	Age	USA	Mexico	Brazil	Menno	Fernheim
Total number of informants		67	103	56	42	37
Younger men	≤ 25 years	13	19	9	9	7
Younger women	≤ 25 years	14	18	9	8	7
Middle-aged men	26-40 years	11	21	9	8	5
Middle-aged women	26-40 years	10	17	9	7	5
Older men	≥ 41 years	9	18	9	5	6
Older women	≥ 41 years	10	10	11	5	7

The total number of informants in the five colonies varied between 37 in Fernheim and 103 in Mexico, the reason for this huge difference being the fact that there exists much more variation in the less German-like colonies in the USA, Mexico, and Brazil. These colonies were, therefore, more thoroughly studied.

5 Analysis and Interpretation of the Data

5.1 Embedded Clauses with Clusters of Two Verbal Elements

Sixteen stimulus sentences (sts) for the elicitation of clusters with two verbal elements in embedded clauses were used. Of the sixteen clauses, seven will be used to analyze and compare the linguistic behavior in the five colonies. These clauses were chosen because firstly, there exists a robust number of informants in all colonies whose translations do not show grave deviations from the linguistic features of the stimulus sentences and secondly, these clauses do not pose any internal problem to a reliable analysis.[9] These seven stimulus sentences are four initial conditional clauses ((sts-15) to (sts-18); two with modal verbs, two with the temporal auxiliary *han*), two relative clauses with modal verbs ((sts-35) and (sts-36)), and one complement clause (object to a predicative adjective) with the temporal auxiliary *han* (sts-8).

[9] Four causal clauses had to be eliminated from the analyses because there are strong indications that in this clause type VPR has been reanalyzed as main clause verb second in the USA and in Mexico (cf. Kaufmann 2003a: 188–189). One complement clause with a modal verb could not be used because it might have allowed for the incorporation of the bare noun into the main verb (*to learn English*) leaving no way to distinguish between VR and VPR. In the other complement clause with a modal verb, there was frequent contamination from the negated matrix clause which led to a relatively high number of translations showing the negative element *nich* in the embedded clause. The remaining three sentences which had to be excluded show a high number of synthetic preterit forms instead of the expected temporal auxiliary *han* plus past participle.

(sts-8) Are you sure *that* he **has repaired** the chair?
(sts-15) *If* he **has to sell** the house now, he'll be very sorry.
(sts-16) *If* he **can solve** this problem, he's very smart.
(sts-17) *If* he really **killed** the man, nobody can help him.
(sts-18) *If* he **stole** the book, I won't trust him any more.
(sts-35) Is this the film you **want to show** to all your friends?
(sts-36) The doctor *who* **wants to see** my foot is very worried.

As the data of clusters with two verbal elements will serve as basis for the analyses of the other verbal contexts (one and three verbal element(s) in 5.2 and 5.3), special care had to be taken to guarantee an unbiased analysis. Whereas in sections 5.2 and 5.3 most of the extant good translations were included in the analyses, in section 5.1 many good translations were excluded in order to ensure a balanced data set. Three conditions had to be fulfilled for a translation to enter the balanced data set of clusters with two verbal elements: Firstly, the token was not to show any grave deviation from the linguistic features of the stimulus sentence – slight deviations had to be accepted in order not to reduce the pool of translations too much; secondly, each of the six gender and age subgroups in each colony was to contribute with the same number of tokens to the analysis of each clause; and thirdly, each clause was to contribute with the same weight to the final analysis in table 8.

The minimum number of tokens of each gender and age subgroup for each clause is determined by the statistical restriction that there be at least five tokens per cell. Counting all unflawed translations for the seven clauses in all colonies, the highest possible number of tokens per subgroup and clause turned out to be seven in Brazil, six in the USA and Mexico, and five in Paraguay (colonies Menno and Fernheim). If there were more tokens available than needed, the fixed number of tokens was randomly chosen.

In section 5.1.1 I will give a detailed analysis of the two clauses with two verbal elements and an adverb. Both the verbal sequences in the cluster and the position of the adverb will be analyzed from a structural and from a sociolinguistic point of view. In section 5.1.2 all seven clauses will be analyzed together abstracting away from the position of the adverbs. Section 5.1.3 analyzes the entire data set from a sociolinguistic point of view. In section 5.1.4 some final remarks for clusters with two verbal elements will be given.

5.1.1 Clauses with Adverbs

Two of the seven clauses will be analyzed in greater detail because they feature not only the embedding element, the Subject-NP, the ObjNP, and two verbal elements but also an adverb which might enable us to shed more light on the structural make-up of embedded clauses in MLG. The first sentence to be analyzed was offered to the Mennonites in the USA in the form *If he has to sell the house now, he'll be very sorry* (sts-15). For this sentence, six of the intended 174

tokens are missing (3.4%; two in Menno, four in Fernheim), and there are six slightly deviating translations among the remaining 168 tokens (3.6%). In five tokens, the informants did not include the adverb in their translations thus reducing the complexity of the sentence – complexity seems to favor V(P)R (see below) – and one initial conditional clause was not syntactically integrated into the matrix clause, i.e., the matrix clause did not start with the finite verb, but with the subject-pronoun (cf. Auer 2000: 175–180 and Kaufmann 2005: 74–75), slightly favoring VPR as additional analyses show. Table 5 lists the patterns for (sts-15):

Table 5: Distribution of syntactic patterns in (sts-15) in five Mennonite colonies

SENTENCE (sts-15)	**USA**	**Mexico**	**Brazil**	**Menno**	**Fern-heim**
If he has to sell the house now, he'll be very sorry					
Total (n)	36	36	42	28	26
NR-variant (ObjNP-V2-V1)	4 (11.1%)	12 (33.3)	19 (45.2)	26 (92.9)	25 (96.2%)
VPR/VR	0.25	0.69	0.9	-	-
(α):(β)	>28	>26	5.6	5.25	2.57
(α) **daut Hüs** NÜ (v5-2; v7-2; v6-2)	28 (77.8)	26 (72.2)	28 (66.7)	21 (75%)	18 (69.2%)
(β) NÜ **daut Hüs** (v5-1; v7-1; v6-1)	0	0	5 (11.9%)	4 (14.3%)	7 (26.9%)
(v5) NR-variant (ObjNP-V2-V1)	4 (11.1%)	12 (33.3)	19 (45.2)	26 (92.9)	25 (96.2%)
(v5) Waun hei **daut Hüs** verköpen mut	0	0	1 (2.4%)	1 (3.6%)	1 (3.8%)
(v5-1) Waun hei NÜ **daut Hüs** verköpen mut	0	0	2 (4.8%)	4 (14.3%)	6 (23.1%)
(v5-2) Waun hei **daut Hüs** NÜ verköpen mut	4 (11.1%)	11 (30.6)	16 (38.1)	21 (75)	18 (69.2)
(v5-4) Waun hei **daut Hüs** verköpen mut NÜ	0	1 (2.8%)	0	0	0
(v7) VPR-variant (V1-ObjNP-V2)	6 (16.7%)	9 (25%)	9 (21.4%)	2 (7.1%)	0
(v7-1) Waun hei mut NÜ **daut Hüs** verköpen	0	0	1 (2.4%)	0	0
(v7-2) Waun hei mut **daut Hüs** NÜ verköpen	2 (5.6%)	2 (5.6%)	4 (9.5%)	0	0
(v7-3) Waun hei NÜ mut **daut Hüs** verköpen	4 (11.1%)	6 (16.7%)	4 (9.5%)	2 (7.1%)	0
(v7-4) Waun hei mut **daut Hüs** verköpen NÜ	0	1 (2.8%)	0	0	0
"VR"-variant (ObjNP-V1-Adv-V2)	2 (5.6%)	2 (5.6%)	4 (9.5%)	0	0
(v6-5) Waun hei **daut Hüs** mut NÜ verköpen	2 (5.6%)	2 (5.6%)	4 (9.5%)	0	0
(v6) VR-variant (ObjNP-V1-V2)	24 (66.7)	13 (36.1)	10 (23.8)	0	1 (3.8%)
(v6) Waun hei **daut Hüs** mut verköpen	2 (5.6%)	0	0	0	0
(v6-1) Waun hei nü **daut Hüs** mut verköpen	0	0	2 (4.8%)	0	1 (3.8%)
(v6-2) Waun hei **daut Hüs** nü mut verköpen	22 (61.1)	13 (36.1)	8 (19%)	0	0

Statistical significance	(i) NR – VPR – VR:	p=0***	value: 73.2	df: 8
between the colonies:	(ii) NR – V(P)R:	p=0***	value: 65	df: 4
(Pearson's Chi-Square)	(iii) VPR – VR: (USA; Mexico; Brazil)	p=0.1$^{(*)}$	value: 4.6	df: 2
	(iv) (α) – (β):	p=0.006**	value: 14.4	df: 4

Starting out by analyzing the basic sequence *ObjNP-V2-V1* (NR), it can be seen that there is a significant (ii) and steady rise from the least German-like colony, Seminole in the USA, showing the NR-variant in only 11.1% of the cases (line *NR-variant* in table 5), to the most German-like colony, Fernheim in Paraguay, showing this variant almost exclusively (96.2% of the cases).[10] The next step in the analysis is the comparison of the informants' behavior with regard to VR and VPR, i.e. the position of the ObjNP in the verbal sequence *V1-V2*. This analysis cannot be done for the colonies in Paraguay because there are less than five tokens of V(P)R, a number which seems necessary in order to draw meaningful conclusions. For the three remaining colonies emerges a pattern which shows a statistical tendency (iii). The VPR-variant shows only a small difference between the colonies ranging from 16.7% in the USA to 25% in Mexico, while the VR-variant shows a large difference. It starts with 23.8% in Brazil and reaches 66.7% in the USA. If one divides the number of tokens of VPR by the number of tokens of VR, one obtains an index for the preference of either VR or VPR. This index (line *VPR/VR* in table 5) is 0.25 for the USA, 0.69 for Mexico, and 0.8 for Brazil. Since lower numbers indicate a higher proportion of VR (as compared to VPR), the colony in the USA shows the highest proportion of VR. As these Mennonites also have the lowest incidence of the NR-variant, we have a first indication that assumption (j) is correct; VPR is an intermediate stage in a sequence that has as its extreme poles the NR-variant and the VR-variant.[11]

Independent support for the scrambling analysis of VR (assumption (f)) may be seen in the positional distribution of the ObjNP *daut Hüs* (the house) and the temporal adverb *nü* (now). If we add all cases where the ObjNP directly pre-

[10] Three kinds of statistical analyses were used. For nominal scale variables like the token frequency of the syntactic variants, Pearson's Chi-Square was used. For interval scale variables like the age of the informants, a One-Way ANOVA was used. If there were more than two groups being compared in a One-Way ANOVA, an additional Post Hoc Scheffé-analysis was used to determine between which groups there existed a significant difference. All statistical results are presented with three values: the significance of the calculated value (value or F), the value itself, and the degree of freedom of the calculation. In all indications for the level of statistical significance, one asterisk * means that the probability for a Type I error is between 1% and 5% ($0.01 \leq p \leq 0.05$). Two asterisks ** mean that this probability is smaller than 1% ($0 \leq p < 0.01$), and three asterisks *** that it is virtually 0% (p=0). One asterisk in brackets $^{(*)}$ indicates a statistical tendency where the error margin lies between 5% and 10% ($0.05 < p \leq 0.1$).

[11] One rather problematic point is the handling of variant (v6-5). As for its derivation, we would have to include it with the tokens of VR, because it is the result of the two characteristics defining VR, i.e. scrambling of the ObjNP and raising of the VP. The only difference to the variants (v6-2) and (v6-1) is the position of the adverb. Differently from these variants *nü* (now) in (v6-5) is base generated within the raising domain VP2. In spite of the derivational similarity with (v6-2) and (v6-1), (v6-5) was not included in the tokens for VR, because at least on the surface it shares one typical characteristic of VPR; the verb cluster is interrupted by non-verbal material.

cedes the adverb (line *(α)* = (v5-2) + (v7-2) + (v6-2)) and all cases where the adverb directly precedes the ObjNP (line *(β)* = (v5-1) + (v7-1) + (v6-1)), it becomes clear that the second option is only available for some informants in the three more German-like colonies. This difference is statistically significant (iv). Mexican and US-American Mennonites do not show a single token for the sequence *Adverb-ObjNP* which does not seem to involve scrambling of the ObjNP according to our assumptions (e), (g), and (h). The division of (α) by (β) (line *(α)/(β)* in table 5) produces the highest index (>28) in the least German-like colony (Seminole in the USA), and the lowest index (2.57) in the most German-like colony (Fernheim). Fernheim, consequently, has the highest proportion of the sequence *Adverb-ObjNP*. If one excludes the possibility of adverb movement (assumption (g)), one has to assume the following structures for the VP2 headed by *verköpen* (to sell) with (13) and without scrambling of the ObjNP ((12); cf. also (11) in assumption (h)):

(12) $[_{VP2}$ AdvP $[_{VP2}$ NP V2]]
(13) $[_{VP2}$ NP_j $[_{VP2}$ AdvP $[_{VP2}$ t_j V2]]]

Scrambling is obligatory for all informants in the USA and Mexico independently of the question of whether or not the informants use the NR-variant, VPR or VR. Interestingly, the colonies in the USA and in Mexico are precisely the two colonies which also show absolutely and proportionately the highest frequency of the VR-variant. For this variant we assumed that scrambling of *daut Hüs* must have taken place (cf. assumption (f)). If we examine the Brazilian data, the only data which show variation between the two sequences of the ObjNP and the adverb with all cluster variants, it becomes clear that the sequence *ObjNP-Adverb* is most dominant in the NR-variant. The index here is 8 (16:2; (v5-2):(v5-1)) whereas it is only 4 for the VR-variant (8:2; (v6-2):(v6-1)) and for the VPR-variant (4:1; (v7-2):(v7-1)). This result seems to contradict the analysis we have just employed. If the sequence *ObjNP-Adverb* is the consequence of scrambling and the same is true for the VR-variant, one would expect to find the sequence *ObjNP-Adverb* especially often with the VR-variant. Surprisingly, this is not the case. A possible reason for this is a hypothesis according to which the adverb *nü* can be base generated in different positions. Cinque (1999: 12, 15; cf. also Hinterhölzl 1999: 57) stresses the fact that "temporal adverbs anchored to speech time, like ora, adesso 'now' and allora 'then' seem to enjoy a partially freer distribution." Claiming the existence of different possible base positions for *nü* is also necessary if we assume that the domain for V(P)R is identical for VR and VPR and that adverbs do not move (assumptions (f) and (g)).

The basic structure of the entire lower middle field of the NR-variant of (sts-15) including all possible adjunction positions for adverbs and scrambled ObjNPs (scr-pos) and the first functional projection IP is demonstrated for (v5-1) in (14a). Phonetically realized parts of the structure are indicated by bold print. V1 has already been moved to I^0 (cf. assumption (c)), *nü* is base generated

in VP2 and *daut Hüs* is not scrambled. The possible raising domain is indicated by shading: It is the complete VP2 which is the sister and the complement of V1. The structures in (14b–f) (from now on only realized adjunction positions are represented) show other possible configurations with the same surface appearance.[12] The adverb is now base generated in VP1 or in IP; the ObjNP has scrambled as far as VP1. Sentence (15) represents the concrete realization of the structures in (14a–f).

(14) (a) (v5-1): $[_{IP}$ scr-pos $[_{IP}$ AdvP $[_{IP}$ $[_{VP1}$ scr-pos $[_{VP1}$ AdvP $[_{VP1}$ $[_{VP2}$ scr-pos $[_{VP2}$ **AdvP** $[_{VP2}$ **NP V2**]]] t_g]]] **V1$_g$-I**]]]

(b) (v5-1): $[_{IP}$ $[_{VP1}$ **AdvP** $[_{VP1}$ $[_{VP2}$ **NP V2**] t_g]] **V1$_g$-I**]

(c) (v5-1): $[_{IP}$ $[_{VP1}$ **AdvP** $[_{VP1}$ $[_{VP2}$ **NP$_j$** $[_{VP2}$ t_j **V2**]] t_g]] **V1$_g$-I**]

(d) (v5-1): $[_{IP}$ $[_{IP}$ **AdvP** $[_{VP1}$ $[_{VP2}$ **NP V2**] t_g] **V1$_g$-I**]]

(e) (v5-1): $[_{IP}$ $[_{IP}$ **AdvP** $[_{VP1}$ $[_{VP2}$ **NP$_j$** $[_{VP2}$ t_i **V2**]] t_g] **V1$_g$-I**]]

(f) (v5-1): $[_{IP}$ $[_{IP}$ **AdvP** $[_{VP1}$ $[_{VP1}$ **NP$_j$** $[_{VP2}$ t_j **V2**] t_g]] **V1$_g$-I**]]

(15) (sts-15): [Waun hei] nü **daut Hüs verköpen$_{V2}$ mut$_{V1}$** […]
gloss: *[If he] now the house sell must* […]
translation: *If he has to sell the house now* […]

After raising and adjoining VP2 to the right of IP we obtain structure (16) for (v7-1). The adverb *nü* is base generated in the adverbial position in VP2. The ObjNP is not scrambled. This is the only possible structure for this variant:

(16) (v7-1): $[_{IP}$ $[_{IP}$ $[_{VP1}$ t_m t_g] **V1$_g$-I**] $[_{VP2}$ **AdvP** $[_{VP2}$ **NP V2**]]$_m$]

(17) (sts-15): [Waun hei] **mut$_{V1}$ nü daut Hüs verköpen$_{V2}$** […]
gloss: *[If he] must now the house sell* […]

In the VPR-variant with the sequence *ObjNP-Adverb* (v7-2), *daut Hüs* is in the scrambling position of VP2 (short-distance scrambling; (18) and (19)). Again, this is the only possible structure.

(18) (v7-2): $[_{IP}$ $[_{IP}$ $[_{VP1}$ t_m t_g] **V1$_g$-I**] $[_{VP2}$ **NP$_j$** $[_{VP2}$ **AdvP** $[_{VP2}$ t_j **V2**]]]$_m$]

(19) (sts-15): [Waun hei] **mut$_{V1}$ daut Hüs nü verköpen$_{V2}$** […]
gloss: *[If he] must the house now sell* […]

Raising and adjoining VP2 is different for VR in (20a–c). The adverb *nü* is now base generated either in the adverbial position in VP1 or in IP. In the VR-variant (v6-2) the adverb has to be base generated higher up in the structural tree than in the VPR-variant (except for v7-3; cf. (22a–d) below), because it is not raised together with the raising domain VP2. The ObjNP in the VR-variant is scrambled to the scrambling position of VP1 or IP (long-distance scrambling):

[12] I will not discuss the question whether different base positions of *nü* are the result of different interpretations the informants gave to the stimulus sentence (but cf. Cinque's (1999: 19) discussion of Jackendoff's example *cleverly*). Neither will I dwell on the question whether there is a semantic difference between different landing positions for scrambled ObjNPs (but cf. Barbiers 1995: 7).

(20) (a) (v6-2): [$_{IP}$ [$_{IP}$ [$_{VP1}$ **NP$_j$** [$_{VP1}$ **AdvP** [$_{VP1}$ t$_m$ t$_g$]]] **V1$_g$-I**] [$_{VP2}$ t$_j$ **V2**]$_m$]
(b) (v6-2): [$_{IP}$ [$_{IP}$ [$_{IP}$ **NP$_j$** [$_{VP1}$ **AdvP** [$_{VP1}$ t$_m$ t$_g$]] **V1$_g$-I**]] [$_{VP2}$ t$_j$ **V2**]$_m$]
(c) (v6-2): [$_{IP}$ [$_{IP}$ [$_{IP}$ **NP$_j$** [$_{IP}$ **AdvP** [$_{VP1}$ t$_m$ t$_g$] **V1$_g$-I**]]] [$_{VP2}$ t$_j$ **V2**]$_m$]

(21) (sts-15): [Waun hei] **daut Hüs nü mut$_{V1}$ verköpen$_{V2}$** […]
gloss: *[If he] the house now must sell* […]

With the structural analysis presented it should be clear that the sequence *ObjNP-Adverb* in VR must be the consequence of scrambling the ObjNP further than in VPR (and perhaps also than in the NR-variant). Even in the sequence *Adverb-ObjNP* scrambling of the ObjNP must have taken place in the VR-variant. In this case, however, scrambling does not lead to the sequence *ObjNP-Adverb* either due to a higher position of the adverb or to shorter scrambling of the ObjNP. In VPR, on the other hand, scrambling always changes the linear order. The fact that both short- and long-distance scrambling[13] can change the surface sequence of the ObjNP and the adverb in the case of the NR-variant could explain why this variant shows a higher proportion of the sequence *ObjNP-Adverb* than VPR where at least with regard to the direct contact position under question only short-distance scrambling is possible; the fact that even short-distance scrambling in the NR-variant may result in the sequence *ObjNP-Adverb* could explain why the proportion is higher than in VR where only long-distance scrambling changes the linear sequence.

After this initial structural description (cf. also the structures (22) through (27) below), I would like to close the analysis of (sts-15) by giving some sociolinguistic information: Although the sequence *Adverb-ObjNP* is exclusively found in the more German-like colonies, this does not mean that a majority of the informants in these colonies prefer this sequence. Therefore, it is interesting to see which informants use this minority sequence. In the most German-like colony, Fernheim, the distribution of the two sequences is sociolinguistically inconspicuous. In Brazil, however, not a single one of the five extant cases is found among the innovative younger informants, whereas in Menno, three of the four cases were produced by women (two by younger women, who also strongly favor the NR-variant (cf. the sociolinguistic analysis in table 10)). There seems to be a connection between these two phenomena: Informants who do not use the NR-variant often and prefer the VR-variant (younger Mennonites in Brazil; cf. table 9) do not produce the sequence *Adverb-ObjNP*; informants who favor the NR-variant hardly ever using VR (younger women in Menno) produce the sequence *Adverb-ObjNP* at least every now and then. Therefore, both VR and the sequence *ObjNP-Adverb* seem to be the result of the same mechanism: (long-distance) scrambling. This mechanism can be called innovative in Brazil,

[13] The term *long-distance scrambling* is used differently from Bošković (2004). It does not mean that the scrambled NP leaves the finite clause; it just means that it leaves the most deeply embedded VP (cf. also Hinterhölzl's (1999: 1, 13) use of the terms *short* and *long (distance) scrambling* and Kayne's (2000: 223) use of *short* and *long movement*).

but conservative in Menno. In Menno the innovation seems to be no scrambling or only short-distance scrambling.[14]

Table 6 shows the results for the second clause with an adverb (sts-17). Unfortunately, this sentence shows a higher number of missing or slightly flawed data: There are eight translations missing (4.6%; five in Menno, two in Fernheim, and one in the USA). Besides this, there are 18 cases of slightly aberrant translations (10.8%): six informants did not translate the adverb, in seven cases the initial conditional clause was not integrated, and the object was not translated as a full NP by five informants. These informants used a demonstrative pronoun instead, which seems to favor the VR-variant, as a more detailed analysis demonstrated (cf. footnote 18).

Table 6: Distribution of syntactic patterns in (sts-17) in five Mennonite colonies

SENTENCE (sts-17)	**USA**	**Mexico**	**Brazil**	**Menno**	**Fernheim**
If he really killed the man, nobody can help him					
Total (n)	35	36	42	25	28
NR-variant (ObjNP-V2-V1)	9 (25.7)	11 (30.6)	38 (90.5)	23 (92%)	28 (100%)
VPR/VR	0.63	1.27	-	-	-
(α)/(β)	0.47	0.16	0.08	0.24	0.13
(α) **den Maun** WIRKLICH (=WIR.) (v5-2; v6-2)	7 (20%)	3 (8.3%)	3 (7.1%)	4 (16%)	3 (10.7%)
(β) WIRKLICH (=WIR.) **den Maun** (v5-1; v6-1)	15 (42.9)	19 (52.8)	37 (88.1)	17 (68%)	23 (82.1)
(v5) NR-variant (ObjNP-V2-V1)	9 (25.7)	11 (30.6)	38 (90.5)	23 (92%)	28 (100%)
(v5) Waun hei **den Maun** umgebracht haft	0	0	2 (4.8%)	1 (4%)	0
(v5-1) Waun hei WIR. **den Maun** umgebracht haft	6 (17.1)	10 (27.8)	34 (81%)	17 (68%)	23 (82.1)
(v5-2) Waun hei **den Maun** WIR. umgebracht haft	3 (8.6%)	1 (2.8%)	2 (4.8%)	4 (16%)	3 (10.7%)
(v5-1+) Waun hei WIR. **den** umgebracht haft	0	0	0	0	1 (3.6%)
(v5-2+) Waun hei **den** WIR. umgebracht haft	0	0	0	1 (4%)	1 (3.6%)

[14] Due to the different sociolinguistic constellations in the Mennonite colonies, one has to be careful with the labeling of variants as innovative, conservative, or progressive. The NR-variant in the less German-like colonies in Mexico and the USA is a conservative variant – younger women there use it less frequently than older ones (cf. the discussion of table 9) –, whereas the NR-variant in the more German-like colonies in Paraguay can be called progressive or innovative, because younger women tend to use it more often than older ones (cf. tables 10 and 11). The necessity of cautious labeling also applies to the discussion of the sequence of ObjNP and adverb.

SENTENCE (sts-17)	USA	Mexico	Brazil	Menno	Fernheim
(v7) VPR-variant (V1-ObjNP-V2)	10 (28.6)	14 (38.9)	0	2 (8%)	0
(v7) Waun hei haft **den Maun** umgebracht	1 (2.9%)	0	0	0	0
(v7-3) Waun hei WIR. haft **den Maun** umgebracht	9 (25.7)	13 (36.1)	0	2 (8%)	0
(v7-3+) Waun hei WIR. haft **den** umgebracht	0	1 (2.8%)	0	0	0
(v6) VR-variant (ObjNP-V1-V2)	16 (45.7)	11 (30.6)	4 (9.5%)	0	0
(v6) Waun hei **den Maun** haft umgebracht	2 (5.7%)	0	0	0	0
(v6-1) Waun hei WIR. **den Maun** haft umgebracht	9 (25.7)	9 (25%)	3 (7.1%)	0	0
(v6-2) Waun hei **den Maun** WIR. haft umgebracht	4 (11.4)	2 (5.6%)	1 (2.4%)	0	0
(v6-2+) Waun hei **den** WIR. haft umgebracht	1 (2.9%)	0	0	0	0

Statistical significance (Pearson's Chi-Square)
(i) NR – VPR – VR: p=0*** value: 83.1 df: 8
(ii) NR – V(P)R: p=0*** value: 78.3 df: 4
(iii) VPR – VR: n.s. (USA; Mexico)
(iv) (α) – (β): n.s.

The NR-variant again shows the same significant order (ii): The Texan and Mexican Mennonites rarely use the NR-variant, while the Paraguayan Mennonites use it (almost) exclusively. One difference to (sts-15) is the fact that the use of the NR-variant in (sts-17) is on average higher. This is particularly true for the Brazilian Mennonites, but also holds to a minor degree for the US-American Mennonites. This result coincides with the situation in Dutch and German varieties (cf. Zwart 1996: 233; Ebert 1981: 228; Lötscher 1978: 10; and especially Barbiers 2005: 248–255). With regard to the proportional distribution of VR and VPR, we are faced with a non-significant pattern (iii) but if we only consider absolute numbers, the difference between the colonies in the USA and Mexico points in the same direction as in (sts-15).[15]

The positioning of the adverb *wirklich* (really) shows a marked difference to the behavior of *nü* (now). With *nü*, superficially notable scrambling of the ObjNP seems to be almost obligatory; with *wirklich*, the sequence *ObjNP-Adverb* occurs only in twenty cases.[16] The ratio between the two sequences for the adverb and the ObjNP (line *(α)/(β)* in table 6) again shows the highest value in the US-American Mennonites but the order between the other colonies does

[15] The Brazilian colony shows only four tokens of V(P)R and was, similar to the Paraguayan colonies, not included in this comparison. It might be granted, though, that even if a possible fifth token in Brazil would be a case of VPR, the result would still not fit the expected pattern.

[16] Because of this low number one could say that MLG is in between Standard German and Standard Dutch with regard to the possibility of scrambling the ObjNP in front of *wirklich*. This can be shown with Vikner's (1994: 510–511) examples (54a, b). In German ... *daß Peter **das Buch** wirklich Maria gezeigt hat* is not only a possible order but the preferred one, while Dutch *… *dat Peter **het boek** echt Marie getoond heeft* is impossible (both meaning: *that Peter really showed the book to Mary*). Vikner's conclusion is that "in German, scrambling can adjoin to IP, but not in Dutch."

not follow exactly the one we have found in (sts-15) and the result is not significant (iv). For a perfect match, the value for Menno should be lower and that for Brazil higher.[17] The different behavior of *wirklich* and *nü* is most probably not the consequence of a rule in MLG which suppresses scrambling of the ObjNP *den Maun* (the man) in (sts-17). There exists, after all, a robust number of VR-cases in this clause, which in our view presupposes a scrambling analysis. Therefore, one has to conclude that *wirklich* in MLG is adjoined to a position higher up in the structural tree than *nü*. Thus, short-distance scrambling of the ObjNP *den Maun* will always remain string-vacuous; only long-distance scrambling is able to change the surface order of the ObjNP and the adverb.[18] There are a couple of additional phenomena indicating that *wirklich* in MLG is really adjoined to a higher projection than *nü*. There exists, for example, not a single translation of the patterns *Waun hei* ***den Maun*** *haft* WIRKLICH *umgebracht* (v6-5), *Waun hei haft* ***den Maun*** WIRKLICH *umgebracht* (v7-2), or *Waun hei haft* WIRKLICH ***den Maun*** *umgebracht* (v7-1). The superficially identical sequences with *daut Hüs* (the house) und *nü*, on the other hand, appear sixteen times. Due to these facts, we are led to believe that *wirklich* can never be adjoined to VP2 because it never takes part in the raising of this category.

With the help of these distributional facts, we are now in a position to decide more accurately where *wirklich* is base generated, whether the ObjNP has been scrambled, and where it has been scrambled to. As *wirklich* is never raised, it cannot possibly be generated in the most embedded adverb position in VP2. The additional fact that the sequence *ObjNP-Adverb* with *wirklich* is rather infrequent leads one to assume that the adverb position of IP is the adequate base position for this assertive speaker-oriented adverb,[19] although, in principle, nothing excludes the adverb position of VP1 as another possible base position. The fact that in all colonies there are only three tokens of (v6-1) for (sts-15) (cf. (26) and (27) below) shows that the adverb position of IP is not a very natural

[17] The result implies a certain historical logic, though. Menno and Brazil are the two colonies which swapped sides with regard to the role of Standard German, Menno gaining this variety, the Brazilian Mennonites losing it (cf. the discussion of table 2). Perhaps, the result with *wirklich* still mirrors the linguistic situation before these changes took place, the Brazilian Mennonites patterning with the historically related colony Fernheim and the ones in Menno reflecting the historic relationship with the Mennonites in Mexico and the USA.

[18] Although there are only four tokens with the demonstrative pronoun *den* adjacent to *wirklich* in (sts-17) ((v5-2+), (v5-1+), and (v6-2+)), their behavior shows a clear difference to the tokens with the full-fledged NP *den Maun*. In general, pronouns are lighter, not stressed, and indicate "older" information than full-fledged NPs and, therefore, tend to appear earlier in the sentence than these (cf. Kiss 1994: 228). The data in table 6 confirm this. The sequence ***den Maun*** *WIRKLICH* appears only in 15.3% of the relevant cases (20 out of 131 tokens), whereas the sequence ***den*** *WIRKLICH* is preferred in three out of the four cases (75%). Thus long-distance scrambling is more frequent with *den* than with *den Mann* (cf. also the differences between pronouns and full NPs in the case of Icelandic and Danish object-shift mentioned in Vikner (1994: 505–506)).

[19] The following quote from Webelhuth (1990: 55) is interesting in this context: "If the negation demarcates the left bracket of the VP, this means that the speaker-oriented adverbs occur outside of the VP while the VP-adverbs are inside." Confer also the similar behavior of sentential adverbs in Afrikaans (Robbers 1997: 83).

position for *nü*. With *wirklich*, on the other hand, this variant occurs 21 times, providing additional support for the assumption that *wirklich* is normally base generated in the adverb position of IP, the only possible position of the adverb in (v6-1).

In (v7-3) ((22a–d) and (23)), the ObjNP *den Maun* is either in its base position or in the scrambling position of VP2 (short-distance scrambling). The adverb *wirklich* is base generated in IP or VP1:

(22) (a) (v7-3): $[_{IP}\ [_{IP}\ [_{VP1}\ \mathbf{AdvP}\ [_{VP1}\ t_m\ t_g]]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ \mathbf{NP\ V2}]_m]$
(b) (v7-3): $[_{IP}\ [_{IP}\ [_{VP1}\ \mathbf{AdvP}\ [_{VP1}\ t_m\ t_g]]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ \mathbf{NP_i}\ [_{VP2}\ t_i\mathbf{V2}]]_m]$
(c) (v7-3): $[_{IP}\ [_{IP}\ \mathbf{AdvP}\ [_{IP}\ [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ \mathbf{NP\ V2}]_m]$
(d) (v7-3): $[_{IP}\ [_{IP}\ \mathbf{AdvP}\ [_{IP}\ [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ \mathbf{NP_j}\ [_{VP2}\ t_j\mathbf{V2}]]_m]$

(23) (sts-17): [Waun hei] **wirklich haft$_{V1}$ den Maun umgebracht$_{V2}$** […]
gloss: *[If he] really has the man killed* […]
translation: *If he really killed the man* […]

If *den Maun* appears in front of *wirklich* in the NR- or the VR-variant (for (v5-2) cf. (24a–f) and (25); for (v6-2) cf. (20a–c) and (21) above), it has most probably been scrambled to the scrambling position of IP (long-distance scrambling) or to the scrambling position of VP1 (or VP2) in case that *wirklich* is base generated in VP1 (or VP2).

(24) (a) (v5-2): $[_{IP}\ [_{VP1}\ [_{VP2}\ \mathbf{NP_j}\ [_{VP2}\ \mathbf{AdvP}\ [_{VP2}\ t_i\ \mathbf{V2}]]]\ t_g]\ \mathbf{V1_g\text{-}I}]$
(b) (v5-2): $[_{IP}\ [_{VP1}\ \mathbf{NP_j}\ [_{VP1}\ [_{VP2}\ \mathbf{AdvP}\ [_{VP2}\ t_i\ \mathbf{V2}]]\ t_g]]\ \mathbf{V1_g\text{-}I}]$
(c) (v5-2): $[_{IP}\ \mathbf{NP_j}\ [_{IP}\ [_{VP1}\ [_{VP2}\ \mathbf{AdvP}\ [_{VP2}\ t_i\ \mathbf{V2}]]\ t_g]\ \mathbf{V1_g\text{-}I}]]$
(d) (v5-2): $[_{IP}\ [_{VP1}\ \mathbf{NP_j}\ [_{VP1}\ \mathbf{AdvP}\ [_{VP1}\ [_{VP2}\ t_i\ \mathbf{V2}]\ t_g]]]\ \mathbf{V1_g\text{-}I}]$
(e) (v5-2): $[_{IP}\ \mathbf{NP_j}\ [_{IP}\ [_{VP1}\ \mathbf{AdvP}\ [_{VP1}\ [_{VP2}\ t_i\ \mathbf{V2}]\ t_g]]\ \mathbf{V1_g\text{-}I}]]$
(f) (v5-2): $[_{IP}\ \mathbf{NP_j}\ [_{IP}\ \mathbf{AdvP}\ [_{IP}\ [_{VP1}\ [_{VP2}\ t_j\ \mathbf{V2}]\ t_g]\ \mathbf{V1_g\text{-}I}]]]$

(25) (sts-17): [Waun hei] **den Maun wirklich umgebracht$_{V2}$ haft$_{V1}$** […]
gloss: *[If he] the man really killed has* […]

In the case of the NR-variant with the sequence *Adverb-ObjNP* (v5-1), *den Maun* can be in its base position or in the scrambling positions of VP2 or VP1. The adverb always has to be higher up than the (scrambled) ObjNP (cf. (14a–f) and (15) above for (sts-15)). In the case of VR, the sequence *Adverb-ObjNP* (v6-1) indicates that *den Maun* is in the scrambling position of VP1, i.e., outside the raising domain VP2 ((26) and (27)). The adverb *wirklich* has to be base generated in IP. This is the only possible structure for this variant:

(26) (v6-1): $[_{IP}\ [_{IP}\ \mathbf{AdvP}\ [_{IP}\ [_{VP1}\ \mathbf{NP_j}\ [_{VP1}\ t_m\ t_g]]\ \mathbf{V1_g\text{-}I}]]\ [_{VP2}\ t_j\ \mathbf{V2}]_m]$
(27) (sts-17): [Waun hei] **wirklich den Maun haft$_{V1}$ umgebracht$_{V2}$** […]
gloss: *[If he] really the man has killed* […]

As the minority non-scrambled or vacuously short-distance scrambled sequence *NÜ* ***daut Hüs*** in (sts-15) was predominantly used by linguistically conservative

informants in Brazil, I assume that (long-distance) scrambling is linked to an innovative behavior in MLG in this colony. Therefore, we would expect that the cases of clear long-distance scrambling in (sts-17), where the ObjNP precedes the adverb in IP, should be used particularly often by innovative speakers. The first striking result in this analysis is that out of the twenty tokens with the sequence ***den Maun*** *WIRKLICH*, fourteen are produced by women. This is no surprise in the non-Paraguayan colonies, which are under no (current) pressure from Standard German and where (young) women are linguistically more innovative than men (cf. for the following arguments the more detailed sociolinguistic analyses of table 9). In the USA, four of the seven cases are produced by women and not a single one by older informants; in Mexico, two of the three cases are produced by younger Mennonites (one man, one woman); and in Brazil, women are responsible for all three cases, two of them being produced by younger women. Long-distance scrambling in the less German-like colonies, therefore, really is an innovation led by younger women in a Labovian change from below.

If this is true, the result in the Paraguayan colonies does not seem to fit the conservative preference for the NR-variant found among women there (cf. tables 10 and 11), because they are responsible for six of the seven supposedly innovative cases of the sequence ***den Maun*** *WIRKLICH*. In order to explain this apparent contradiction, one could speculate that the sequence of the verbal elements is socially more monitored – Standard German only permitting the sequence *V2-V1* – causing Mennonite women in Paraguay to prefer this order as a result of a conscious change from above. The sequence of adverb and ObjNP, on the other hand, could be seen as socially less conspicuous. Women in Paraguay would in this case simply follow the typical female behavior in unconscious changes from below by introducing long-distance scrambling of the ObjNP. Although this is a possible explanation, one must not forget that there exists a striking difference between Standard German and MLG (cf. footnote 16). In Standard German like in MLG, both sequences of *wirklich* and *den Mann* are possible, but unlike in MLG, in Standard German the sequence ***den Mann*** *WIRKLICH* is the unmarked and preferred sequence. Therefore, one could also speculate that the women in Paraguay have paid so close attention to Standard German that they are even aware of this more subtle rule and start copying it. In this case, both the preference for the NR-variant and for the sequence ***den Mann*** *WIRKLICH* in MLG in Paraguay would be caused by a change from above.

5.1.2 Clauses with and without Adverbs

Table 7 repeats the crucial results for the sentences (sts-15) and (sts-17) and for the five sentences which do not include an adverb. In order to save space, only the number of the available tokens, the frequency of the NR-variant and the index for the proportion of VPR and VR (line *VPR/VR* in table 7) are given.

Footnote 20 summarizes the amount of missing or flawed data in the five sentences with no adverb.[20]

Table 7: Distribution of syntactic patterns for seven embedded clauses with two verbal elements (individual analysis) in five Mennonite colonies

	USA	**Mexico**	**Brazil**	**Menno**	**Fernheim**
SENTENCE (sts-35)	Is this the film you want to show to all your friends?				
Total (n)	36	36	40	26	27
NR-variant (ObjNP-V2-V1)	2 (5.6%)	13 (36.1%)	23 (57.5%)	21 (80.8%)	25 (92.6%)
VPR/VR	0.89	0.44	0.55	1.5	–
SENTENCE (sts-36)	The doctor who wants to see my foot is very worried				
Total (n)	36	36	41	26	29
NR-variant (ObjNP-V2-V1)	3 (8.3%)	9 (25%)	19 (46.3%)	23 (88.5%)	27 (93.1%)
VPR/VR	0.32	0.35	0.47	–	–
SENTENCE (sts-15)	If he has to sell the house now, he'll be very sorry				
Total (n)	36	36	42	28	26
NR-variant (ObjNP-V2-V1)	4 (11.1%)	12 (33.3%)	19 (45.2%)	26 (92.9%)	25 (96.2%)
VPR/VR	0.25	0.69	0.9	–	–
SENTENCE (sts-16)	If he can solve this problem, he's very smart				
Total (n)	36	36	41	30	30
NR-variant (ObjNP-V2-V1)	5 (13.9%)	18 (50%)	28 (68.3%)	28 (93.3%)	28 (93.3%)
VPR/VR	0.11	0.64	1.6	–	–
SENTENCE (sts-8)	Are you sure that he has repaired the chair?				
Total (n)	36	35	42	28	30
NR-variant (ObjNP-V2-V1)	8 (22.2%)	19 (54.3%)	35 (83.3%)	27 (96.4%)	30 (100%)
VPR/VR	1.33	1.29	2.5	–	–

[20] In (sts-8), there are three missing tokens (1.7%; two in Menno, one in Mexico), but the available data does not show a single deviation from the linguistic features of the stimulus sentence. In (sts-16), one token in Brazil is missing (0.6%). There exist five deviations (2.9%): Three informants use a pronoun instead of a full NP, one informant uses a non-integrated conditional clause, and one informant adds a *Dativus Commodi* to the translation (Standard German: *Wenn er **mir** das Problem lösen kann* [...] (English: If he can solve the problem **for me** […])). In (sts-18), seven tokens are missing (4%; four in Menno, three in Fernheim). The available data show just one non-integrated conditional clause (0.6%). In (sts-35), nine tokens are missing (5.2%; four in Menno, three in Fernheim, two in Brazil), but there is only one informant who uses a pronoun instead of the expected full NP (0.6%). In (sts-36), there are six tokens missing (3.4%; four in Menno, one in Brazil and Fernheim). The available data do not show a single deviation from the linguistic features of the stimulus sentence.

	USA	Mexico	Brazil	Menno	Fernheim
SENTENCE (sts-17)	If he really killed the man, nobody can help him				
Total (n)	35	36	42	25	28
NR-variant (ObjNP-V2-V1)	9 (25,7%)	11 (30.6%)	38 (90.5%)	23 (92%)	28 (100%)
VPR/VR	0.63	1.27	–	–	–
SENTENCE (sts-18)	If he stole the book, I won't trust him any more				
Total (n)	36	36	42	26	27
NR-variant (ObjNP-V2-V1)	29 (80.6%)	31 (86.1%)	40 (95.2%)	26 (100%)	27 (100%)
VPR/VR	<0.14	0.67	–	–	–

Starting with the analysis of the NR-variant, one does not find a single misfit. The Texan Mennonites always show the lowest percentage for the NR-variant, while Fernheim (twice together with Menno) always shows the highest percentage. The values for the other three colonies rise steadily between these extreme cases. The differences are highly significant for almost all sentences ((sts-18): p=0.013*; value: 12.7; df: 4; the other sentences: p=0***; values: 61.5 – 78.3; df: 4).

With the results in table 7, we are now in a position to judge whether an adverb creates a more complex clause structure thus influencing the sequence of verbal elements as was suggested above.[21] The two conditional clauses *If he* ***really*** *killed the man* (sts-17) and *If he stole the book* (sts-18) share an almost identical structure, the only difference being the presence of the adverb in (sts-17). This adverb seems to be responsible for a 25.9%-drop in the frequency of the NR-variant (for all colonies together, the percentage is 91.6% for (sts-18) and 65.7% for (sts-17)). The difference between the conditional clause (sts-15) *If he has to sell the house* ***now*** (NR-variant in all colonies 51.2%) and (sts-16) *If he can solve this problem* (NR-variant 61.8%) is with 10.6% smaller, but points in the same direction.[22] If it is correct that adverbs lead to structurally more complex clauses, a rise in the frequency of V(P)R may be the speakers' reaction to this increased complexity. The more substantial drop in the usage of the NR-variant between (sts-17) and (sts-18) could be explained by the fact that *wirklich* (really) in (sts-17) is normally base generated in the adverb position of IP whereas *nü* (now) in (sts-15) is normally base generated in the adverb position of VP2 (cf. the discussion of tables 5 and 6). As long as there is no V(P)R in (sts-17), the verbal projections headed by the temporal auxiliary *han* (VP1) and by the participle *umgebracht* (killed) (VP2) are nested between *wirklich* in the initial part of the IP-shell and the I^0-position. Bach et al. (1987) argue that nesting dependencies as found in Standard German are more difficult to parse than crossing dependencies as found in Standard Dutch. In (sts-15), no such long-

[21] The fact that a rise in the number of verbs definitely has such an effect is well known. The more verbs there are, the fewer left-branching clusters one finds (cf. Lötscher 1978: 11–13 and especially 17 (his rule (R2)) or the facts in Standard German where V(P)R is unexpectedly possible/obligatory for certain clusters with more than two verbal elements (cf. (1a) and (2a)).

[22] In this case, however, we also have to count with a possible effect caused by the different modal verbs.

distance frame exists because *nü* is base generated in a lower adverbial position close to the verbal head of VP2 *verköpen* (to sell). It seems that V(P)R is needed more to amend the problem of long-distance nesting dependencies. Adverbs in a low adverbial position which do not cause this extreme kind of nesting dependencies seem to pose less of a parsing problem and, consequently, the rise of V(P)R with *nü* is less dramatic.

With regard to the second crucial result of tables 5 and 6, the preference for either VR or VPR, there is only one sentence with a statistically highly significant difference between the colonies with at least five tokens of V(P)R. Sentence (sts-16) (p=0.001**; value: 13.2; df: 2) shows the expected rise of the proportion of the VR-variant in Mexico and particularly in the USA. This rise correlates negatively with the decrease in the frequency of the NR-variant in these colonies. Sentences (sts-15) ($p=0.1^{(*)}$; value: 4.6; df: 2) and (sts-18) ($p=0.067^{(*)}$; value: 3.4; df: 1) show a statistical tendency pointing in the same direction. The other sentences also exhibit this pattern but the differences are not significant. Only two cases deviate from the negative correlation between fewer cases of the NR-variant and a higher proportion of VR in comparison with VPR. In (sts-35), the index *VPR/VR* of the Texan Mennonites is higher than that of Mexico and Brazil (but lower than in Menno) and in (sts-8), the value in Texas is marginally higher than in Mexico. Although these differences are not significant, we would have expected in both cases the lowest value for the Mennonites in the USA.

So far I have dealt with the syntactic variation of single clauses from a structural point of view. The distribution of the three major variants within each colony and the comparison between the colonies support assumption (j) which claims that syntactic change should follow either the route *NR-VPR-VR* or the route *VR-VPR-NR*. V(P)R seems to be a more parsing-friendly and, therefore, a more natural sequence than the NR-variant, because it reduces left-branching, center embedded structures. This reduction occurs in our data especially often in the colonies which never had much contact with Standard German (USA and Mexico) or are losing this contact (Brazil). In these colonies, natural changes in syntax can gain space because there is no normative pressure from Standard German. In the Paraguayan colonies, on the other hand, Standard German plays a vital role in community life. Not only does there exist an institutional pressure for the correct usage of Standard German, but this pressure is strong enough to influence the behavior of many informants in MLG. Therefore, one can detect an increase of the basic, albeit parsing-unfriendly, NR-variant in the Paraguayan data (cf. tables 9 through 11). The different sociolinguistic constellations of the more or less German-like colonies lead to the preference of the NR-variant or V(P)R respectively. What distinguishes VR from VPR is that VR is supposed to be derivationally more distant to the NR-variant than VPR. The variation effect of this can be seen by the negative correlation between the frequency of the NR-variant and the proportion of VR in comparison to VPR. The lower the usage of the NR-variant, the higher the proportion of VR, i.e., statistically the loss of the

NR-variant feeds VR directly and bleeds at least partially VPR.[23] Table 8 considers the combined results of the seven clauses in table 7. The total risk for each colony due to missing or flawed data[24] is specified in footnote 24.

Table 8: Distribution of syntactic patterns for seven embedded clauses with two verbal elements (general analysis) in five Mennonite colonies

	USA	Mexico	Brazil	Menno	Fernheim
Clauses (n)	251	251	290	189	197
NR (ObjNP-V2-V1)	60 (23.9%)	113 (45%)	202 (69.7%)	174 (92.1%)	190 (96.4%)
VPR/VR	0.45	0.68	0.75	2	0.17
VPR (V1-ObjNP-V2)	59 (23.5%)	55 (21.9%)	36 (12.6%)	10 (5.3%)	1 (0.5%)
VR (ObjNP-V1-V2)	130 (51.8%)	81 (32.3%)	48 (16.8%)	5 (2.6%)	6 (3%)

Statistical significance between the colonies: (Pearson's Chi-Square)	(i) NR – VPR – VR:	p=0***	value: 375	df: 8
	(ii) NR – V(P)R:	p=0***	value: 365.7	df: 4
	(iiia) VPR – VR:	p=0.019*	value: 11.8	df: 4
	(iiib) VPR – VR: (without Fernheim)	p=0.018*	value: 10.1	df: 3

Table 8 indicates the frequencies for the NR-, the VPR-, and the VR-variant for all seven clauses in all colonies not specifying the precise position of the adverbs in (sts-15) and (sts-17). As was to be expected from the analysis of the individual clauses, there is a steady and highly significant rise (ii) in the frequency of the NR-variant from the Texan colony (23.9%) to Fernheim (96.4%). The index *VPR/VR* also shows a significant steady rise without the deviant colony Fernheim (iiib). In Menno, where there are only 15 cases of V(P)R, 66.7% of these cases are VPR-cases (an index value of 2). In the USA, this figure drops to 31.2% (59 out of 189 V(P)R-cases; an index value of 0.45). Although the index rises steadily and significantly, the difference between the colonies in Mexico and Brazil can only be considered as marginal (but cf. the discussion of table 9). One must not forget, though, that the colonies in Mexico and Brazil

[23] The different behavior of VR and VPR is an important argument against analyses where only the sequence of the verbal elements is taken into account (cf. Seiler 2003: 394). In such an analysis one runs the risk of losing important information.

[24] There is a total of forty missing tokens (3.3% of a total of 1218 expected tokens). The distribution of these missing cases is not even. In Menno, there are 21 tokens missing, in Fernheim thirteen, in Brazil four, and in the USA and Mexico one respectively. What makes the relatively high number of missing data in Menno (21 cases equal 10% of the expected 210 tokens) even worse is the fact that twenty of the 21 cases are found among the older informants (13 women (37.1% of the expected 35 tokens) and seven men (20%)). This might have skewed the sociolinguistic distribution of the data in this colony (but compare the relevant discussion in footnote 26). 31 tokens (2.6% out of a total of 1178 extant tokens) show deviations from the expected form: fourteen in the USA, six in Brazil, five in Menno, four in Fernheim, and two in Mexico. In spite of these missing or deviating data, one can conclude that the data in the balanced sample in general are quite reliable: 1147 sentences out of a total of 1218 were translated without any deviation from the linguistic features of the stimulus sentences. This translates into 94.2% of impeccable data.

have very different migration histories. Their forefathers separated 130 years ago and this fact may have interacted to a certain degree with the effects caused by the different structural make-ups of the three syntactic variants.

The comparison between the Texan and the Mexican Mennonites is more crucial for our hypotheses. These two colonies share most of their history. The Mennonites in Seminole, Texas left the Mexican colony just thirty years ago (cf. table 1). The syntactic differences in table 8, therefore, must have arisen during the last three decades. The Texan Mennonites accelerated the change away from the NR-variant by 21.1% (frequency in Texas 23.9%, in Mexico 45%) but, as mentioned above, this loss only fed the VR-variant in Texas, which gained 19.5% in comparison to Mexico, whereas the VPR-variant was bled. The figures only show a marginal rise of 1.6% in Texas. The reason for the accelerated syntactic change in Texas is on the one hand the intense contact with the majority society and its language, which does not exist in Mexico (cf. Kaufmann 1997: chapter 6.3). On the other hand one has to state the imminent threat to the German varieties in Texas: Standard German as a functional variety has lost even its most basic domains and among younger Mennonites one can already detect an initial loss of MLG (cf. table 2 and Kaufmann 1997: 142 – table 6.3.1.1c). The loss of the NR-variant can thus be explained by the new sociolinguistic constellation in Texas. Increasing English pressure has already led to a possible loss of MLG and this seems to have led to structural simplifications in this variety. As the left-branching NR-variant is perceptually more complex than V(P)R, it is a typical victim of such simplification processes.

The only colony which lies outside the otherwise clear-cut results of table 8 is Fernheim. According to the theory promoted in this article, the Mennonites there should hardly use any VR because they exhibit the highest frequency of the NR-variant. In spite of this, six out of the seven tokens of V(P)R are VR-cases (85.7%; with 0.17 the lowest index of all colonies). The easy answer to this apparent riddle would be to dismiss Fernheim due to the low number of attested V(P)R-cases. If one takes a closer look, though, one is astonished by the fact that Mennonite men in Fernheim are responsible for five of the six VR-cases, whereas women only show two deviations from the NR-variant, the missing VR-case and the only VPR-case.

5.1.3 General Sociolinguistic Screening of the Results

This result in Fernheim is striking and calls for a more detailed sociolinguistic analysis of the data. In order to maintain our structural hypotheses, we should be able to show that there is a sociolinguistic reason which accounts for the structurally unexpected result in Fernheim. However, as there are only a few cases of V(P)R in the two Paraguayan colonies, the data-base for Menno and especially for Fernheim had to be enlarged as much as possible. In order to do so, all informants and all sentences with two verbal elements (either with a modal verb,

the temporal auxiliaries *han*, or *woare* (Standard German *werden*; frequently occurring in conditional clauses) were included in Paraguay as long as the tokens did not show any grave deviation from the linguistic features of the stimulus sentences. The causal clauses, for example, which had to be excluded from the analyses so far because of unambiguous main clause phenomena in the USA and in Mexico (cf. footnote 9), do not pose any threat to the validity of the data in Fernheim and Menno. In these colonies, no reanalysis of causal clauses has taken place. Nevertheless, there are some unwelcome side effects due to the enlargement of the data; firstly, the fact that we lose the possibility of a direct comparison with the other three colonies and secondly, the fact that there is now a higher risk of skewed data. However, the results are so clear-cut that it is highly improbable that they are merely the consequence of skewed data. Table 9 shows the sociolinguistic distribution of the data in the five colonies. Its upper part deals only with the differences between male and female informants, the lower part refines this analysis by adding information with regard to the age of the users of each variant.

Table 9: Age- and gender differences for embedded clauses with two verbal elements in five Mennonite colonies

	USA		**Mexico**		**Brazil**		**Menno**		**Fernheim**	
	men	women	men	women	men	women	men	women	men	wo.
Clauses (n)	125	126	126	125	145	145	353	308	323	311
GENDER (Pearson's Chi-Square)										
(v5) NR (NP-V2-V1)	29.6	18.3%	48.4%	41.6%	73.8%	65.5%	85.3%	81.2%	87%	91
sign. NR–VPR–VR	p=0.025* value: 7.4 df: 2		n.s.		n.s.		n.s.		p=0*** value: 17.4 df: 2	
sign. NR–V(P)R	p=0.029* value: 4.8 df: 1		n.s.		n.s.		p=0.094(*) value: 2.8 df: 1		p=0.097(*) value: 2.7 df: 1	
VPR/VR	0.59	0.36	0.62	0.74	1.06	0.57	3.08	3.46	0.67	7.67
sign. VPR–VR	n.s.		n.s.		n.s.		n.s.		p=0*** value: 15.3 df: 1	

	USA		Mexico		Brazil		Menno		Fernheim	
	men	women	men	women	men	women	men	women	men	wo.
AGE										
(v5) NR	37	23	61	52	107	95	301	250	281	283
(NP-V2-V1)	29.6	18.3%	48.4%	41.6%	73.8%	65.5%	85.3%	81.2%	87%	91
Average age	35.7	36.2	35.8	36.1	38.2	39.4	31.2	29.1	31.8	35.2
(v7) VPR	32	27	24	31	19	17	37	45	16	23
(V1-NP-V2)	25.6	21.4%	19%	24.8%	13.1%	11.7%	10.5%	14.6%	5%	7.4
Average age	29.2	30.7	34.8	32.5	28.6	26.5	24.3	32.5	44.9	42.3
(v6) VR	54	76	39	42	18	30	12	13	24	3
(NP-V1-V2)	43.2	60.3%	31%	33.6%	12.4%	20.7%	3.4%	4.2%	7.4%	1%
Average age	33.7	32.8	32.2	30	27.3	30.3	21.9	38.9	29.4	30.3
ONE-WAY ANOVA (+ Post Hoc Scheffé)										
significant differences NR–VPR–VR	n.s.	n.s.	n.s.	p=0.081 F: 2.6 df: 2	p=0.001 F: 7.8 df: 2	p=0*** F: 8.3 df: 2	p=0*** F: 8.5 df: 2	p=0.007 F: 5.1 df: 2	p=0.001 F: 7.2 df: 2	n.s.
localization of these differences				5–6(*)	5–7* 5–6**	5–7** 5–6*	5–7** 5–6*	5–6*	5–7** 6–7**	

With regard to the usage of the NR-variant, there is only one significant gender difference in the upper part of table 9 (line s*ign. NR–V(P)R*). In Seminole, Texas, Mennonite men use the NR-variant more frequently than women. In spite of this, a more detailed analysis shows that the behavior in the three less German-like colonies is strikingly similar. In all these colonies, it is younger women who show the lowest frequency of the NR-variant (the following numbers are not stated in table 9); in the USA they use the NR-variant in 14.3% of the tokens (the other informants 25.8%), in Mexico in 26.2% (the other informants 48.8%), and in Brazil in 47.9% (the other informants 74%). The highest value is always to be found among male informants: in the USA and in Mexico among the middle-aged men (35.7% (a difference in relation to the younger women of 21.4%) and 57.1% respectively (a difference of 30.9%)), in Brazil among the older men (97.9%; a difference of 50%). We are clearly faced with a typical change from below. Labov (2001: 279) describes such a change as "the primary form of linguistic change that operates within the system, below the level of social awareness." And he (2001: 280) adds an important comment about this kind of change: "Women have been found to be in advance of men in most of the linguistic changes in progress studied by quantitative means in the past several decades." The (young) women in the USA, Mexico, and Brazil are obviously no exception to this rule. Especially the extremely high difference between the most German-like and the least German-like subgroup in Brazil (50%) characterizes a very dynamic, probably recent change.

Since the variation in the Paraguayan colonies, which show a weak statistical tendency, is of a more complicated nature, they will be interpreted in greater

detail below. Here I only want to mention that the index *VPR/VR* only shows a significant difference in Fernheim (line *sign. VPR–VR*). The enlarged data-base shows – similar to the result in the balanced data set of table 8 – a strong gender difference, i.e., men use the VR-variant proportionally much more often than women. Although the differences in the USA, Mexico, and Brazil for the index *VPR/VR* are not significant, it is again interesting to see how the subgroups behave. As the average values for men and women suggest, the heaviest VR-using subgroups are female in the USA and Brazil (in both cases the middle-aged women with a value of 0.21 and 0.42 respectively) and male in Mexico (middle-aged men with 0.31). The heaviest VPR-using subgroups are the younger men in the USA (0.83), the middle-aged men in Brazil (1.25), and the older women in Mexico (1.33).[25]

With these gender-specific results we are now able to explain the curious fact that there is only a small difference in the index *VPR/VR* between Mexico and Brazil (cf. table 8). It is Mennonite women in Brazil who are responsible for this unexpected result; they apparently reacted to the loss of Standard German in a much stronger way than men and, therefore, have a lower value for the index *VPR/VR* than the women in Mexico. Nevertheless, they use the NR-variant more frequently than women in Mexico (the difference being 23.9%), a fact which could be considered a contradiction of our structural hypothesis. Mennonite men in Brazil, on the other hand, behave exactly as one expects them to behave; they have a much higher value for the index *VPR/VR* than men in Mexico, indicating a proportionately less frequent use of VR, and they use the NR-variant more often (the difference between men is 25.4%). In both cases, they are less innovative, i.e. more German-like. The difference between the Texan and the Mexican Mennonites is also worth analyzing more thoroughly. The male informants in the USA and Mexico virtually do not show any difference with regard to the index *VPR/VR*. The difference with regard to the NR-variant (18.8%), too, is less clear than that between the gender groups in Mexico and Brazil. The behavior of the women in these colonies differs greatly, though. The Mexican women use the NR-variant more frequently (23.3%) and the difference in the index *VPR/VR* is quite large indicating that Texan women use the VR-variant absolutely and proportionately much more frequently than women in Mexico.

[25] These results do not fit exactly our expectations. We would have expected the strongest preference for VR over VPR for the younger women in the three non-Paraguayan colonies, because they show the lowest percentages for the NR-variant. At least for younger women in Brazil and in the USA the reason for this incongruence may be the fact that they show a strong tendency towards the morphological reduction of definite articles in ObjNPs using *de* instead of *den* or *daut* (cf. generalized English *the* and Dutch *de* and Kaufmann 2004: 292–297). Interestingly, it seems that in these colonies the form of the definite article is not only influenced by the gender, number, and case of the ObjNP but also by its position. The phonetically reduced form *de* seems to favor the use of VPR (or vice versa; cf. also Hawkins' (1994: 399–400) quote below). If this really were the case we would have an explanation for the unexpected result for younger women in Brazil and in the USA. More tokens of VR would be surpressed by the occurrence of *de*. However, the precise interaction of the morpho-phonetic reduction of the article and the preference for certain syntactic variants in the verb clusters will have to be defined more thoroughly in further analyses.

The conclusion based on these facts is that in the USA and Brazil, where the Mennonites have suffered from strong sociolinguistic changes in recent history (emigration from Mexico to Texas and loss of Standard German in Brazil; cf. part 2), women reacted more intensely to the new situation than men. This has reversed the difference in the index *VPR/VR* between the Brazilian and the Mexican women and it created the difference between the Mennonite women in Mexico and the USA. As for Mennonite men, there is hardly any difference between the USA and Mexico. This proves their common background and the seeming inertness of men in linguistic change. The latter point is also true for men in Brazil. They have reacted rather passively to the loss of Standard German and its influence on MLG. Therefore, we find the expected difference in the syntactic behavior between them and the Mennonite men in Mexico. The lack of change among the Mexican Mennonites can be interpreted as the linguistic reflection of the generally stable situation in which they live. This is clearly expressed by the index *VPR/VR*. Although none of the three colonies shows a significant difference between men and women, the Mexican colony shows by far the smallest difference. Whereas men and women there only differ by 0.12 index points, the differences for the USA and Brazil are 0.23 and 0.49 respectively, and in both cases women are in the lead for VR.

The lower part of table 9 relates the frequency of the three major variants to the average age of the informants who produced these variants. The differences in the USA (both sexes) and for men in Mexico are not significant. In Mexico there is a statistical tendency showing that women who use the VR-variant are younger than women who use the NR-variant (cf. the last two lines in table 9). This could be interpreted as an initial change towards the VR-variant, which again seems to be initiated by younger women. In Brazil, this trend becomes highly significant for both sexes; a fact that reflects the strength of the change towards V(P)R in this country. The older informants of both sexes prefer the NR-variant, while younger Mennonites use the V(P)R-variants more often.

The most fascinating results, however, come from the Paraguayan colonies. Men and women in Menno show a completely opposed behavior, which is in either case highly significant. Older men prefer the NR-variant, whereas younger men are more frequent among the users of VPR and especially among the users of VR, a behavior comparable to that of Brazilian Mennonites. Women, on the other hand, are changing their behavior towards the NR-variant. This variant is predominantly used by younger women whereas the users of the VR-variant are to be found more often among older women. This behavior is to a certain extent comparable to the situation in Fernheim. For both sexes there, the users of the NR-variant show the lowest and the users of the VPR-variant the highest average age, although this difference is only statistically significant for men. Interestingly, the users of the VR-variant are younger (for men significantly; for women, there exist only three tokens) than the users of the VPR-variant but unexpectedly, the average age for VR-users is comparable to that of NR-users. This apparently contradicts the supposed intermediate position of VPR and

seems to undermine our strategy to make sociolinguistic sense out of the somewhat weird distribution of the V(P)R-cases in Fernheim (cf. tables 8 and 9). The complex gender pattern in Menno and the unexpected youth of the VR-users in Fernheim call for a more detailed analysis in these colonies. Table 10 summarizes the results for each of the six subgroups in Menno.[26]

Table 10: Age- and gender differences for embedded clauses with two verbal elements in Menno

MENNO	total	younger men	younger women	middle men	middle women	older men	older women
Clauses (n)	661	142	124	131	114	80	70
NR (ObjNP-V2-V1)	551 83.4%	110 77.5%	109 87.9%	113 86.3%	88 77.2%	78 97.5%	53 75.7%
VPR/VR	3.28	2.33	14	4.67	5.5	-	1.13
VPR (V1-ObjNP-V2)	82 12.4%	21 14.8%	14 11.3%	14 10.7%	22 19.3%	2 2.5%	9 12.9%
VR (ObjNP-V1-V2)	25 3.8%	9 6.3%	1 0.8%	3 2.3%	4 3.5%	0	8 11.4%

Statistical significance	(i) NR – VPR – VR:	p=0***	value: 35.6	df: 10
between the subgroups:	(ii) NR – V(P)R:	p=0***	value: 23.3	df: 5
(Pearson's Chi-Square)	(iii) VPR – VR:	p=0.068(*)	value: 10.2	df: 5

The women in Menno show a perfect negative correlation between the use of the NR-variant and the ratio for the index *VPR/VR*. The younger the informants, the fewer the deviations from the NR-variant (24.3% for the older women; 12.1% for the younger women) and the scarcer the occurrence of VR (the index *VPR/VR* rises steadily from 1.13 for older women to an impressive 14 for younger women). The difference between the female behavior in Menno and the general behavior in the USA, Mexico, and Brazil is, therefore, not the route of change but the direction of the change. In the less German-like colonies the change first goes towards VPR and finally towards VR, whereas for women in Menno it goes from VR via VPR towards the NR-variant. The reason for this is that women in Menno – differently from the Mennonites in the USA, Mexico, and Brazil – have come under the influence of Standard German and are assimilating to the variant of this prestigious variety; a clear case of a change from above. Labov (2001: 274) writes about such a change: "In linguistic change from above, women adopt prestige forms at a higher rate than men." The men in

[26] In footnote 24, it was said that there might exist a problem with skewed data in Menno. 21 of the forty missing tokens for the balanced sample came from Menno, and twenty of these 21 cases were to be found among older men and women. Looking at the behavior of older men and women in the enlarged data set in table 10, it becomes clear that these subgroups behave in extreme ways. The older women show the highest number of deviations from the NR-variant and the lowest index for VPR/VR; the older men show the lowest number of deviations from the NR-variant and not a single case of VR. One may hope, therefore, that the data in table 8 got skewed in both directions, thus more or less neutralizing the skewing effect of both subgroups.

Menno do not fit this description although they also have come into contact with Standard German. Not only do they not adopt the prestige form, not even at a lower rate, but to the contrary, they ostensibly turn their backs on it. They use the NR-variant less and less (97.5% for the older men; 77.5% for the younger men) and turn more and more to the VR-variant (the ratio drops from 4.67 for the middle-aged men to 2.33 for the younger men). This behavior is strongly reminiscent of the well-known "retreat of lower working class males from a female-dominated change" (Labov 2001: 297). Obviously, it goes without saying that the Mennonites in Menno are far from belonging to the urban lower working class, but the traditional roles for men and women in the predominantly rural Mennonite colonies are quite comparable to the ones in urban working class families. Summarizing the situation in Menno, one can say that women in Menno – like women in Brazil and in the USA – reacted intensely to a new linguistic constellation, this time to the introduction of Standard German. But whereas men in Brazil and the USA stayed more or less inert, men in Menno seem to react actively against new "legitimate ways of speaking." Bourdieu (1991) describes possible psychological reasons for Labov's "retreat of lower working class men" and women's adoption of prestige forms for African immigrants in France:

> It is clearly among men, and especially among the youngest and those who are currently and above all potentially the least integrated in the economic and social order, such as adolescents from immigrant families, that one finds the most marked rejection of the submissiveness and docility implied by the adoption of legitimate ways of speaking (Bourdieu 1991: 95).

> At the other extreme in the hierarchy of dispositions towards the legitimate language, one would doubtless find the youngest and the most educated women who, though linked professionally or through marriage to the world of agents poorly endowed with economic or cultural capital, are undoubtedly sensitive to the demands of the dominant market and have the ability to respond to it […] (Bourdieu 1991: 97).

Bourdieu's description fits the situation of the Mennonites in Menno (and Fernheim) quite well. Obviously, younger Mennonite men in Paraguay are not "the least integrated in the economic and social order," neither are they "agents poorly endowed with economic and cultural capital." Very much to the contrary, most of them own their own land in the Chaco region. But in spite of this, there is a general lack of integration of the Mennonite society into the Paraguayan society. Few men and even fewer women would regard themselves as Paraguayans because they want to distinguish their way of life from the Paraguayan one (cf. for Fernheim Kaufmann 2004: 263 – table 1 and the discussion of table 20 on pages 302–305). Surprisingly though, Mennonite men show a stronger liking for Spanish than for Standard German whereas women clearly prefer Standard German to Spanish (cf. for Fernheim the discussion in Kaufmann 2004: 269–270). Therefore, at least from the female point of view Mennonite men, after all, do show a certain lack of "*cultural capital*." As Fernheim is characterized by the same standard-with-dialect situation, one could expect a similar difference in the behavior of men and women there. Table 11 shows the relevant results.

Table 11: Age- and gender differences for embedded clauses with two verbal elements in Fernheim

FERNHEIM	total	younger men	younger women	middle men	middle women	older men	older women
Clauses (n)	634	128	116	93	79	102	116
NR (ObjNP-V2-V1)	564 89%	115 89.8%	111 95.7%	76 81.7%	71 89.9%	90 88.2%	101 87.1%
VPR/VR	1.44	0.18	-	0.5	1.67	3	>14
VPR (V1-ObjNP-V2)	39 6.2%	2 1.6%	4 3.4%	5 5.4%	5 6.3%	9 8.8%	14 12.1%
VR (ObjNP-V1-V2)	27 4.3%	11 8.6%	0	10 10.8%	3 3.8%	3 2.9%	0

Statistical significance: (i) NR – VPR – VR: p=0*** value: 40.1 df: 10
between the subgroups: (ii) NR – V(P)R: p=0.073(*) value: 10.1 df: 5
(Pearson's Chi-Square) (iii) VPR – VR: p=0*** value: 28.1 df: 5

One look on table 11 should suffice to convince the reader that the behavior of men in Fernheim is, at least at first sight, not comparable to the behavior of men in Menno. There, men show a difference of 20% with regard to the usage of the NR-variant (between younger and older men), while in Fernheim this difference shrinks to 8.1%. This means that men in Fernheim show a more homogeneous behavior although the absolute difference between the colonies is only 1.7% (cf. the numbers in table 9). Even more striking than the different magnitude in variation is the fact that it is younger men in Fernheim who use the NR-variant most frequently, clearly contradicting the behavior of younger men in Menno. For women, the difference between the colonies is bigger (9.8%), but the difference of the variation within the colonies is rather small (12.2% in Menno; 8.6% in Fernheim) and in both colonies, it is younger women who have assimilated most to the NR-variant.

So one may wonder what is happening to (younger) men in Fernheim. Do they lack the guts to retreat from a female led linguistic change? Well, the answer is no – or at least not completely. The male retreat from female behavior in Fernheim is more subtle than that in Menno. This refinement has probably to do with the fact that there is a big difference in the (linguistic) history of the two Paraguayan colonies although the current social and linguistic state of affairs is rather similar. For Menno, real contact with Standard German only dates back to the 1950s, whereas for Fernheim this contact already started in Russia in 1870 (cf. part 2). The presence of Standard German and its influence on MLG in Fernheim has consequently a much longer history, which seems to make it impossible for men to mark their identity by not using the NR-variant. Men in Fernheim, therefore, are left with only one option. If they deviate from the NR-variant, they have to make it worth while and they do this by turning to the variant which is structurally most distant from the NR-variant, namely the VR-variant. Whereas men in Menno mark their (masculine) identity first by not

using the NR-variant and only secondly by a higher proportion of VR in comparison to VPR (which may just be the result of the structurally caused correlation described in this article), men in Fernheim mark their identity exclusively by producing a high number of VR-cases. Therefore, the value for the index *VPR/VR* in Fernheim drops steadily from 3 for older men to 0.18 for younger men. This change is responsible for the low average age of the users of the VR-variant in table 9.[27] The behavior of women in Fernheim and Menno fits our hypothesis perfectly. Women in Fernheim are closest to an exclusive use of the NR-variant among all subgroups in all colonies and they almost completely refrain from using the extreme VR-variant (3 out of 311 cases (1%)).

5.1.4 Final Remarks about Clusters with Two Verbal Elements

I have dedicated quite some space to the precise description of gender and age differences in the Paraguayan colonies because I deemed it necessary to dispel any possible doubt as to the correctness of the structural hypotheses proposed in this article. A merely superficial analysis of the Paraguayan data could have threatened these hypotheses. After analyzing the data more thoroughly, though, the possible threat has turned into a clear case of sociolinguistic confirmation for our structural analysis. For those who still doubt this conclusion, I would like to add two quotes by Lötscher (1978) and Den Besten & Edmondson (1983):

> In einem zweigliedrigen Verbalkomplex mit einem Modalverb kann das Modalverb mit einer Kette linksstehender Elemente vertauscht werden, **wenn diese ein nichtverbales Element enthält**. In diesem System ist es also nicht möglich, in einer zweigliedrigen Verbalgruppe **lediglich die beiden verbalen Elemente** miteinander zu vertauschen (Lötscher 1978: 19).

[27] Another possible explanation for this behavior could be that men in Fernheim consider VPR a typical female characteristic. After all, this non-standard variant still exists among the otherwise very German-like Mennonite women (23 tokens). Therefore, one could speculate that men simply refrain from using the female VPR-variant and rather go for VR. This explanation would be more sociolinguistic in nature since at least the male linguistic act of identity would not be governed by the structural nature of VR but by the mere wish to be different from women. With such an explanation one would not have to answer the somewhat difficult question how Mennonite men gained access to highly abstract derivational properties of V(P)R. What makes this sociolinguistic explanation a little doubtful, though, is the fact that while VR is clearly a male characteristic in Fernheim (24 tokens (7.4% of a total of 323 translations) against three tokens among women (1% of a total of 311 translations)), VPR is much less of an exclusive female characteristic (23 tokens (7.4%) against 16 tokens produced by men (5%)). VPR actually seems to be no gender characteristic at all but a characteristic for older speakers. It is used fourteen times by older women (60.9% of a total of 23 female tokens) and nine times by older men (56.2% of a total of 16 male tokens). Younger women seem to replace VPR by the NR-variant, while younger men replace it by VR.

The more progressive northwestern and southeastern varieties, i.e. Hollandic Dutch and Bavarian, **invert smaller chunks of VP**, whereas German (northern varieties, and especially Alemannic [sic!]); and some Belgian dialects **can permute nodes at higher syntactic levels** (Den Besten & Edmondson 1983: 207).

Lötscher (1978: 18–24) establishes in his article a taxonomy of six systems with regard to the ordering of verbal elements in verb clusters in various Upper German varieties (especially Zurich German). His first and most basic system is a system without any V(P)R. The higher the number of the other systems is, the more cases of V(P)R they allow. The decisive point for our analysis is that the first step away from the basic system (system I) for a modal verb selecting an infinitive is VPR (system III (1978: 19–20)) – Lötscher says that the modal verb can only swap places with the chain of elements to its left, "wenn diese ein nichtverbales Element enthält" (provided it contains a non-verbal element). It is not possible to swap "lediglich die beiden verbalen Elemente" (just the two verbal elements), which would be a case of VR. VR with modal verbs only becomes possible in a higher system (system V (1978: 21–22)). This ordering coincides with the syntactic change we have described for MLG in Brazil, Mexico, the United States, and among men in Menno. Den Besten & Edmondson confirm this view by saying that the more progressive Continental West Germanic varieties "invert smaller chunks of VP" (=VR), whereas other (one understands: less progressive) varieties "can permute nodes at higher syntactic levels" (=VPR).[28] One hardly needs to mention that the fact that the same regularities which seem to govern the syntactic change in MLG also apply to completely unconnected members of the Continental West Germanic language family strongly supports the view that there must be structural reasons for these shared regularities.

5.2 Embedded Clauses with Clusters of Three Verbal Elements

The most important asset of the data set presented here is the possibility to analyze the linguistic behavior of all informants with regard to different kinds of verb clusters. In order to take advantage of this rare constellation, the separation into five colonies hitherto used will be replaced from now on by a separation into four types of speakers; those who show a strong preference for the NR-variant in clusters with two verbal elements (German-like Mennonites), those who prefer the VPR-variant in this context (Flemish-like Mennonites), those who prefer the VR-variant (Dutch-like Mennonites), and finally those who do not show any particular preference for either of these variants (mixed group). This means that in the following analyses practically no attention is paid any more to the origin of the informants or their age and sex. What matters from now on is each informant's linguistic behavior, i.e., the structures of the clusters

[28] As mentioned above, Den Besten & Edmondson (1983: 207) assume that different layers of the VP are raised in VR and VPR.

he/she is producing. The criterion used for forming these new groups was simply the absolute number of each variant produced by each informant.[29] This criterion was applied to each colony individually; therefore, each colony had a chance to be represented in each new group of speakers. To broaden the basis for the formation of the new groups the data set was enlarged: With regard to two verbal elements the focus on only seven clauses, which formed the basis for the analyses in tables 5 to 8, was given up. All good translations with two verbal elements were included. Only the ban on causal clauses and some problematic stimulus sentences was maintained for all colonies (cf. footnote 9 and the different procedure in Menno and Fernheim (tables 9 through 11)).

The same rules apply for embedded clauses with three verbal elements. All non-causal clauses were included with the exception of translations that deviated too much from the linguistic features of the stimulus sentences. The base for the analysis of clusters with three verbal elements is the translation of basically five counterfactual stimulus sentences (two conditional, two relative, and one complement clause). The English versions of these sentences are:[30]

(sts-10) He didn't know *that* he **should have fed** the dogs this morning.
(sts-19) *If* he really **had wanted to write** this letter, he would have found the time.
(sts-20) *If* he **could have repaired** the car, he would have done it.
(sts-39) The truth *which* you **should have told** the judge is horrible.
(sts-40) Who's the guy *who* **could have saved** my brother's life?

Table 12 shows the results of the enlarged data set for clusters in embedded clauses with two verbal elements (modal+infinitive or *han*+past participle) and three verbal elements (*han*+modal+infinitive; in MLG the modal in this case appears as a true past participle without the prefix *ge-* (no IPP-effect)).

[29] 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. Table 12 includes the information on the origin of the informants in the different groups. In spite of the rather rough criterion used for grouping, one still sees a predominance of Paraguayan informants among the German-like Mennonites (42.9% (30 out of 70) against a share of 25.9% among all informants (79 out of 305)) and a dominance of US-American informants among the Dutch-like informants (32.5% (13 out of 40) against a share of 22% (67 of 305) among all informants). In the group of the Flemish-like Mennonites exists a dominance of speakers from Menno (27.8% (10 out of 36) against a share of 13.8% (42 out of 305) among all informants). It is interesting that seven of these ten informants are women showing that women in Menno like women in Fernheim prefer VPR to VR.

[30] Two of the sentences ((sts-10) and (sts-19)) feature an adverb and an adverbial phrase respectively. Due to space limitations their precise position will not be dealt with in this article, i.e., table 12 does not indicate the position of the adverbs (cf. the identical procedure in table 7). In further publications it will certainly be worthwhile to analyze this question, especially because in (sts-19) the assertive adverb *really* re-appears (cf. (sts-17)).

Table 12: Distribution of syntactic patterns in embedded clauses with two and three verbal elements for different types of speakers

	Total	Non-Dominant	Mixed Group	German-like (NR-users)	Flemish-like (VPR-users)	Dutch-like (VR-users)
INFORMANTS						
Informants (n)	305	variable	159	70	36	40
USA	67	variable	41	7	6	13
Mexico	103	variable	66	14	9	14
Brazil	56	variable	24	19	6	7
Menno	42	variable	15	15	10	2
Fernheim	37	variable	13	15	5	4
TWO VERBS						
Clauses (n)	2787	variable	1362	719	331	375
(v5) NR (NP-V2-V1)	1689 (60.6)	980 (47%)	709 (52.1)	677 (94.2%)	147 (44.4%)	156 (41.6)
VPR/VR	0.78	variable	0.73	1.19	5.57	0.12
(v7) VPR (V1-NP-V2)	456 (16.4%)	300 (12.2)	259 (19%)	19 (2.6%)	156 (47.1%)	22 (5.9%)
(v6) VR (NP-V1-V2)	585 (21%)	400 (16.6)	356 (26.1)	16 (2.2%)	28 (8.5%)	185 (49.3)
THREE VERBS						
Clauses (n)	991	variable	480	240	123	148
(v11) (NP-V3-V1-V2)	23 (2.3%)	6 (0.8%)	4 (0.8%)	17 (7.1%)	1 (0.8%)	1 (0.7%)
(v12) (NP-V1-V3-V2)	114 (11.5%)	45 (6%)	35 (7.3%)	69 (28.8%)	6 (4.9%)	4 (2.7%)
(v14) (V1-NP-V3-V2)	35 (3.5%)	23 (3.1%)	16 (3.3%)	12 (5%)	3 (2.4%)	4 (2.7%)
(v16) (V1-V2-NP-V3)	500 (50.5%)	400 (46.1)	249 (51.9)	78 (32.5%)	100 (81.3%)	73 (49.3%)
(v13) (NP-V1-V2-V3)	226 (22.8%)	179 (21.2)	125 (26%)	50 (20.8%)	4 (3.3%)	47 (31.8%)
(v15) (V1-NP-V2-V3)	45 (4.5%)	33 (3.9%)	28 (5.8%)	4 (1.7%)	1 (0.8%)	12 (8.1%)

The results for two verbs show the degree of preference the new groups exhibit for their particular variant (shaded cells in table 12). The German-like Mennonites use the NR-variant in 94.2% of their 719 clauses. All other informants grouped together in the column *Non-Dominant*, i.e. in this case the Flemish-like, Dutch-like, and mixed group, use the NR-variant only in 47% of the cases. The Flemish-like Mennonites use the VPR-variant in 47.1% of their 331 tokens. The non-dominant informants (German-like, Dutch-like, and mixed group) use VPR in just 12.2% of the tokens. Finally, the Dutch-like Mennonites translate 49.3% of their 375 tokens by means of the VR-variant. The non-dominant informants (German-like, Flemish-like, and mixed group) do this in only 16.6% of the cases. These differences guarantee that each of the groups really represents one linguistic way of dealing with verb clusters. It also means that a group which is specialized for one variant shows rather low values for the other two variants.

The differences mentioned in the last paragraph obviously do not come as a surprise but simply reflect the criterion used for grouping. It was important, though, to familiarize the reader with the dimension of the differences since this new grouping forms the base for the following analyses. Having done this, we can now tackle the question of whether speakers who exhibit a marked preference for one variant with two verbal elements also prefer particular variants in clusters with three verbal elements. This strategy may shed light on the internal structure of verb clusters because it is to be expected that speakers applying

certain linguistic processes in one specific verbal context will apply similar processes in other verbal contexts.[31]

With regard to the results with three verbal elements, we see that the six major variants ((v11) to (v16)) are responsible for 95.2% of all tokens (943 out of a total of 991). In most of the tokens which were not included it is the adverb which disrupts adjacency between the elements of the verb cluster (cf. variant (v6-5) in table 5). The sequence *ObjNP-V3-V2-V1*, which in a strictly head-final analysis constitutes the underlying structure for clusters with three verbal elements, does not occur superficially in MLG. Abstracting away from scrambling positions and adverbial positions (cf. the more detailed structure in (14)) and before moving V1 to the position of I^0 the underlying structure of clusters with three verbal elements is supposed to look like (28):

(28) $[_{IP}\ [_{VP1}\ [_{VP2}\ [_{VP3}$ NP V3] V2] V1] I]

The shaded raising domain is still the sister of V1, namely VP2. VP2, however, is larger than in clusters with two verbal elements because it contains VP3. I agree with Evers (1975: 75) and assume that V(P)R functions cyclically, i.e., VP3 can first be adjoined to the right of VP2 and then the result of this movement can be raised and adjoined to the right of IP, creating the surface verbal sequence *V1-V2-V3*. VP2 may also move without further internal reordering, creating the surface verbal sequence *V1-V3-V2*. As above, I assume that V(P)R always applies to the whole of VP2.

Concentrating first on the German-like Mennonites, we can see that they show a strong preference for **(v11) (ObjNP-V3-V1-V2)** and **(v12) (ObjNP-V1-V3-V2)** and a somewhat weaker preference for **(v14) (V1-ObjNP-V3-V2)**. The strength of preference can be quantified by dividing the percentage of the dominant informants, here the German-like Mennonites, by the percentage of the non-dominant informants. The bigger the value, the stronger the preference for a particular variant. The index for (v12) is 4.8 (28.8 divided by 6), the one for (v11) equals an impressive 8.9, and the one for (v14) is 1.6. These are exactly the preferences we expect from German-like informants. With the temporal auxiliary selecting a modal verb which itself selects an infinitive, (v12) and (v14) are the only sequences prescriptively allowed in Standard German. And (v11), the variant most dominantly used by the German-like Mennonites, occurs in many German dialects (cf. Lötscher 1978: 21 – examples (34a–c)) and some Germans consider (v11) a possible option in Standard German (cf. the comment in Den Besten & Edmondson 1983: 182).

Obviously, for (v12) and (v14) we have to assume the raising of VP2, which distinguishes the behavior of the German-like informants with regard to three verbal elements from their behavior with regard to two verbal elements where they hardly showed any tokens of V(P)R. But as we will see presently, the

[31] This approach contradicts Ebert's (1981: 204) statement that "syntagms consisting of three or more verbal elements pattern quite differently at this time [1300–1600] than do these two-part constructions and consequently are not considered here."

amount of raising is not very extensive, because it is not cyclic, i.e., no movement from VP3 to VP2 takes place. To derive (v12) and (v14) from the basic structure (28) now including the movement from V1 to I^0 is rather easy (different possible scrambling positions for the ObjNP are not considered).

(29) (v14): $[_{IP}\ [_{IP}\ [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ [_{VP3}\ \mathbf{NP\ V3}]\ \mathbf{V2}]_m]$
(30) (sts-20): [Waun hei] **hat$_{V1}$ die Coa fertigmeaken$_{V3}$ könnt$_{V2}$** […]
gloss: *[If he] had the car repair could* […]
translation: *If he could have repaired the car* […]

(31) (v12): $[_{IP}\ [_{IP}\ [_{VP1}\ \mathbf{NP_j}\ [_{VP1}\ t_m\ t_g]]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ [_{VP3}\ t_j\ \mathbf{V3}]\ \mathbf{V2}]_m]$
(32) (sts-20): [Waun hei] **die Coa hat$_{V1}$ fertigmeaken$_{V3}$ könnt$_{V2}$** […]
gloss: [If he] *the car had repair could* […]

In (v14) the raising domain is raised and adjoined to the right of IP without previous raising of VP3 to VP2 (cf. (29) and (30)). String-vacuous scrambling of the ObjNP within the raising domain, i.e. till the scrambling position of VP2, is possible. The only difference between (v14) and (v12) is the fact that the ObjNP in (v12) has been scrambled out of the raising domain (cf. (31) and (32)). Scrambling here necessarily means long-distance scrambling because the ObjNP has to land at least in the scrambling position of VP1.

Variant (v11) has to be derived differently because in this case, it is impossible to assume that VP2 has been raised because VP3 which is contained in VP2 stays to the left of the finite verb. Therefore, one has to assume that V2 has been moved to the right by means of head movement either being morphologically incorporated with or syntactically adjoined to the complex V1-I in I^0.[32] Its structure looks like (33):

(33) (v11): $[_{IP}\ [_{VP1}\ [_{VP2}\ [_{VP3}\ \mathbf{NP\ V3}]\ t_h]\ t_g]\ \mathbf{V1_g\text{-}I\text{-}V2_h}]$
(34) (sts-20): [Waun hei] **die Coa fertigmeaken$_{V3}$ hat$_{V1}$ könnt$_{V2}$** […]
gloss: *[If he] the car repair had could* […]

Variant (v11) moves much less structure and phonetic material than (v12) and (v14) and this could explain why (v11) is proportionately most strongly preferred by the German-like Mennonites. Remember that the only movements we assumed for their preferred NR-variant are the obligatory head movement from V1 to I^0 (cf. assumption (c)) and possible scrambling of the ObjNP. The fact that scrambling is not excluded for users of the NR-variant could also help us explain the somewhat unexpected fact that German-like Mennonites proportionately prefer (v12) to (v14) although the latter variant implies less movement. If

[32] An alternative derivation for (v11) within a head-final approach was suggested by one of the reviewers. If one assumes that VP3 is scrambled to the left of V1 and then the partially evacuated VP2 is raised to the right of V1, one ends up with the superficially correct structure $[_{IP}\ [_{IP}\ [_{VP1}\ [_{VP1}\ t_m\ [_{VP3}\ \mathbf{NP\ V3}]_k\ t_g]]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ t_k\ \mathbf{V2}]_m]$. The advantage of such an assumption would be that we could do without a new mechanism, namely head movement. Unfortunately, though, the German-like Mennonites using (v11) dislike VP-movements very much (see discussion below) and for this alternative derivation we would have to assume two VP-movements.

we take a closer look, the only difference between the two variants turns out to be the distance of scrambling. In (v14) the ObjNP can scramble as far as the scrambling position of VP2, in (v12) it must go just one step further. So the difference between the two variants could be reduced to a minimally different distance of scrambling taking place. One could then postulate that the stronger preference for (v12) over (v14) mirrors a general preference for verb clusters without ObjNPs (cf. the discussion of Standard Dutch in part 6).

There is another possible objection to our structural explanation. It could be claimed that the greater preference for (v12) and (v14) has nothing to do with structural reasons whatsoever. The suggested similarities between (v12) and (v14) on the one hand and the NR-variant on the other hand could just be the consequence of the high proportion of informants from the Paraguayan colonies among the German-like Mennonites. These informants have much contact with Standard German and could have simply borrowed the Standard German sequences for two and three verbal elements independently. In Standard German, only the NR-variant, (v12), and (v14) are possible and (v12) is – as in our data – more frequent than (v14). Although it must be granted that this might be a possible explanation for the distribution of (v12) and (v14), one would still wonder where (v11), the most exclusive variant of the German-like Mennonites, comes from. This variant is definitely not taught by teachers of Standard German working in Mennonite schools in Paraguay and the Mennonites will hardly ever encounter (v11) in books written in Standard German. What is even more important than these points is the sociolinguistic distribution of this variant. Variant (v11) appears nine times in Brazil (five different informants; eight tokens produced by men) and Menno (six different informants; five tokens by men), four times in Fernheim (four different informants; three tokens by women) and once in Mexico.

In the two German-like Paraguayan colonies it is almost exclusively the younger informants who use (v11). In Menno the average age of (v11)-users is 18.7 years (the rest of the informants have an average age of 30.4 years; p=0.007**; F: 7.4; df: 1), in Fernheim the average age of (v11)-users is 19.3 years (the other informants 34.8 years; p=0.06$^{(*)}$; F: 3.6; df: 1)). This means that (v11) is not a relic form but a syntactic innovation which has not been borrowed from Standard German and, therefore, fits the general structural rule of German-like Mennonites perfectly: Move VPs as little as possible! Interestingly, in Brazil a less German-like colony, there is no age difference ((v11)-users: 37.4 years – rest: 38.8 years; n.s.). This missing age difference taken together with the fact that eight of the nine users are non-innovative men (cf. table 9) shows clearly that – differently from Paraguay – in Brazil, where the NR-variant is also less and less frequently used, (v11) is about to turn into a structurally not fitting relic form.

More than half of all tokens with three verbal elements belong to **(v16) (V1-V2-ObjNP-V3)**. Variant (v16) is in all colonies and in all groups in table 12 the most frequent variant. Nevertheless, it is the Flemish-like Mennonites who excel

in its usage. The figure for (v16) in this group reaches 81.3%. Due to the fact that this variant is generally the most frequent one, the value for the strength of preference is only 1.8; the absolute difference between the Flemish-like informants and the non-dominant informants is, however, a high 35.2%. The fact that it is the Flemish-like informants who prefer (v16) clearly fits the structural analysis outlined above and it can be supposed that (35) is the correct structural description for (v16):

(35) (v16): $[_{IP}\ [_{IP}\ [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ [_{VP2}\ t_k\ \mathbf{V2}]\ [_{VP3}\ \mathbf{NP\ V3}]_k]_m]$

(36) (sts-20): [Waun hei] **hat$_{V1}$ könnt$_{V2}$ die Coa fertigmeaken$_{V3}$** […]
gloss: *[If he] had could the car repair* […]

As with VPR, only short-distance scrambling to the scrambling position of VP3 is possible in (v16). Besides this, it has to be assumed that there are two cycles of raising. First, VP3 adjoins to the right of VP2 and then the reordered VP2 adjoins to the right of IP. The behavior of this specific group with regard to clusters with two and three verbal elements can again be found in other language communities. In most Swiss German varieties and Flemish both VPR and (v16) co-occur (cf. for (v16) Lötscher 1978: 6 – example (11b); Kroch & Santorini 1991: 326 – example (116a);[33] Robbers 1997: 50 – example (12); and Haegeman 1998: 632 – example (1b)).

The last group we have to consider are the Dutch-like Mennonites. It should not be surprising any more that they show a preference of 1.5 for **(v13) (ObjNP-V1-V2-V3)** which is the only possible variant for Standard Dutch (cf. example (9)). What is somewhat surprising, though, is the fact that they show an even stronger preference of 2.1 for **(v15) (V1-ObjNP-V2-V3)**, for which Kroch & Santorini (1991: 326 – example (116b)) give a Swiss German example. A glance at the structures (37) and (39) resolves this surprising fact.

(37) (v13): $[_{IP}\ [_{IP}\ [_{VP1}\ \mathbf{NP_j}\ [_{VP1}\ t_m\ t_g]]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ [_{VP2}\ t_k\ \mathbf{V2}]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]_m]$

(38) (sts-20): [Waun hei] **die Coa hat$_{V1}$ könnt$_{V2}$ fertigmeaken$_{V3}$** […]
gloss: *[If he] the car had could repair* […]

(39) (v15) $[_{IP}\ [_{IP}\ [_{VP1}\ t_m\ t_g]\ \mathbf{V1_g\text{-}I}]\ [_{VP2}\ [_{VP2}\ \mathbf{NP_j}\ [_{VP2}\ t_k\ \mathbf{V2}]]\ [_{VP3}\ t_j\ \mathbf{V3}]_k]_m]$

(40) (sts-20): [Waun hei] **hat$_{V1}$ die Coa könnt$_{V2}$ fertigmeaken$_{V3}$** […]
gloss: *[If he] had the car could repair* […]

[33] It should be noted, though, that the examples in Lötscher (1978) and Kroch & Santorini (1991) feature a different set of verbal elements. Additionally, Lötscher's (1978) example is a main clause with three clause-final verbal elements and the finite verb in second position. In spite of this, it is highly interesting that he only accepts (v16) as completely grammatical adding a question mark to two main clauses with our sequences (v13) (his example (11a)) and (v15) (his example (11c)). This could be seen as independent proof for the fact that VPR does not combine with (v13) and (v15) (cf. the results of table 12).

Like (v16), both (v13) and (v15) are the result of two adjunctions to the right (VP3 to VP2, reordered VP2 to IP). What distinguishes these variants from (v16) is the fact that the ObjNP is scrambled further to the left. In (v15), it is moved to the scrambling position of VP2, while the ObjNP moves at least to the scrambling position of VP1 in (v13). Such long-distance scrambling is exactly the explanation we have given for VR with two verbal elements. Another interesting point is the fact that it is the Flemish-like Mennonites who show very low figures for these variants. They use (v15) in only 0.8% and (v13) in only 3.3% of the cases confirming their dislike for long-distance scrambling. The German-like Mennonites, on the other hand, show with 1.7% for (v15) and especially with 20.8% for (v13) more affinity towards these sequences. This again shows that long-distance scrambling is nothing strange for German-like Mennonites.

The results presented so far allow a first characterization of the three basic groups. The German-like Mennonites show a certain tendency towards (long-distance) scrambling which can be seen in their strong use of (v12) (ObjNP-V1-V3-V2). Additionally, (long-distance) scrambling might happen string vacuously in the NR-variant and in (v11) (ObjNP-V3-V1-V2; cf. also the relatively high percentages for (v13) and (v15) in this group). What this group avoids as much as possible is the raising of VPs. The Dutch-like Mennonites show clear signs of long-distance scrambling in their preferred variants, i.e. VR, (v15), and especially (v13). They share this characteristic with the German-like Mennonites, but differently from these Mennonites, they raise VPs across the board. This feature is also present among the Flemish-like Mennonites. What distinguishes them from the other two groups is the avoidance of (long-distance) scrambling.[34]

Probably, the most important result of the analyses of two and three verbal elements among the Mennonites in North and South America is the fact that their behavior coincides with the behavior of other Continental West Germanic language communities; a strong indication for structural restrictions. The labels German-like, Flemish-like, and Dutch-like were given to three groups of Mennonites according to their preference for the NR-variant, VPR, and VR, respectively. After analyzing the behavior of the Mennonite groups with regard to three verbal elements, we see that this behavior also coincides with the unmarked cases in Standard German, Flemish, and Dutch in this verbal context.

A final fascinating corroboration of the power of structural explanations is the case of Afrikaans. Afrikaans only allows the sequence *ObjNP-V2-V1* (NR-variant) in clusters with the temporal auxiliary *het* (Robbers 1997: 52 – example (16a)). In a cluster with a finite modal verb selecting an Infinitive Perfect only the sequence *ObjNP-V1-V3-V2* (v12) seems to be possible (Robbers 1997: 52 – example (18b)). In passive constructions, we again find the sequence *ObjNP-*

[34] Whether the fourth possible group showing neither raising nor (long-distance) scrambling exists, is difficult to say. On the surface the data presented in this article cannot distinguish between such a group and the German-like Mennonites. In order to verify the existence of such a fourth group one would need more adverbs in the stimulus sentences.

V2-V1 (NR-variant; Robbers 1997: 53 – example (22a)). If an Infinitive Passive is embedded under a finite modal verb, two sequences are possible: *ObjNP-V1-V3-V2* (v12) and *ObjNP-V3-V1-V2* ((v11); Robbers 1997: 54 – examples (24b,c)). This patterning resembles the behavior of the German-like Mennonites and to a certain degree of Standard German. With regard to modal verbs selecting an infinitive, Afrikaans only allows the sequence *ObjNP-V1-V2* (VR; Robbers 1997: 56 – example (28a)). If we embed this structure under another modal verb (e.g. *zal* used as a marker for future), Afrikaans shows the sequence *ObjNP-V1-V2-V3* ((v13); Robbers 1997: 56 – example (30a)). If the finite verb is *het*, however, the temporal marker for the past, the required sequence is *ObjNP-V2-V3-V1*[35] (Robbers 1997: 57 – example (32a)). In this linguistic context Afrikaans does not resemble German-like Mennonites or Standard German but rather Standard Dutch and the Dutch-like Mennonites. Therefore, we are led to conclude that whereas the language communities of MLG are split according to different types of speakers, Afrikaans is split according to different types of verb clusters. Different sequences for two and three verbal elements which are open to variation in MLG seem to have become grammaticalized in Afrikaans according to the type of the finite verb.

5.3 Embedded Clauses with One Verbal Element

Although the results with regard to two and three verbal elements show clear parallel structures for the three most important groups, one could obviously postulate VO-based rules to generate these parallel structures (cf. part 6 for more details). The decisive argument for an OV-analysis comes from the somewhat unexpected behavior of the Flemish-like Mennonites with regard to one verbal element with or without a particle. Sixteen stimulus sentences with this characteristic were included in the questionnaire, five of them showing a high number of the particularly interesting variant (v2):

(sts-2) John doesn't think *that* you **know** your friends well.
(sts-21) He's not coming, *because* he doesn't **have** any time.
(sts-22) He doesn't have a car, *because* he **has** no money.
(sts-4) Can't you see *that* I'm **wearing** a new dress? (expected particle ***aun-han***)

[35] To generate the sequence *ObjNP-V2-V3-V1*, which does not occur in Standard Dutch or MLG, one has to assume scrambling of the ObjNP and the application of the first cycle of right-adjunction of VP3 to VP2. The second cycle which would right-adjoin the complex *VP2-VP3* to VP1 seems to be blocked by an independent rule which requires the finite temporal auxiliary *het* to appear cluster-finally (cf. also the West Flemish example (58) in Robbers 1997: 131; the descriptions in Robbers 1997: 75, 100–101; and the explanation in Barbiers 2005: 252–254). This rule would also explain the strictly left-branching pattern *ObjNP-V2-V1* of finite *het* and a past participle in West Flemish and Afrikaans (cf. also the otherwise hardly understandable example (37c) with the sequence V1-V3-V4-V2 in Robbers 1997: 60 where *het* appears as a non-finite V2).

(sts-23) He can't listen to you, *because* he's **unpacking** his luggage. (particle ***üt****riemen*)

There is one important difference between the data set of embedded clauses with two and three verbal elements in table 12 and the data set of embedded clauses with one verbal element in tables 13 and 14. In order to obtain a sufficient number of the interesting variant (v2), it was necessary to include causal clauses in the Brazilian and the Paraguayan colonies where the reanalysis of VPR with two verbal elements into cases of main clause syntax has not taken place (cf. footnote 9). In table 13, there are 106 clauses out of the 2964 translations with one verbal element, where the ObjNP surfaces after the finite verb, i.e. as the last element in the embedded clause or in between the finite verb and its particle. This is a rather unexpected variant for modern Continental West Germanic varieties.[36]

Table 13: Distribution of syntactic patterns in embedded clauses with one (with or without particle) and two verbal element(s) for different types of Mennonite speakers

	Total	Non-Dominant	Mixed Group	German-like (NR-users)	Flemish-like (VPR-users)	Dutch-like (VR-users)
ONE VERB (with or without particle)						
Clauses (n)	2964	variable	1393	824	387	360
(v1) (NP-(Particle)-V1)	2825 (95.3)	2017 (94.3)	1329 (95.4)	808 (98.1%)	337 (87.1%)	351 (97.5)
(v2) (V1-NP-(Particle))	106 (3.6%)	61 (2.4%)	48 (3.4%)	8 (1%)	45 (11.6%)	5 (1.4%)
TWO VERBS						
Clauses (n)	2787	variable	1362	719	375	331
(v5) NR (NP-V2-V1)	1689 (60.6)	980 (47%)	709 (52.1)	677 (94.2%)	147 (44.4%)	156 (41.6)
(v7) VPR (V1-NP-V2)	456 (16.4)	300 (12.4)	259 (19%)	19 (2.6%)	156 (47.1%)	22 (5.9%)
(v6) VR (NP-V1-V2)	585 (21%)	400 (16.3)	356 (26.1)	16 (2.2%)	28 (8.5%)	185 (49.3)

What makes the occurrence of (v2) especially interesting is the fact that it is extremely dominant among Flemish-like Mennonites. Whereas the non-dominant group (in this case the German-like, Dutch-like, and mixed group) shows (v2) only in 2.4% of the cases, the Flemish-like Mennonites use it in 11.6% of their translations (an index of preference of 4.8), this difference being highly significant between the German-like, Flemish-like, Dutch-like and mixed groups (p=0***; value: 94.4; df: 3). More detailed information with regard to (v2) can be found in table 14.[37]

[36] Older varieties of German, Dutch, and English do show variants with a clause final ObjNP quite frequently. Pintzuk & Kroch's (1989) example from the Beowulf (in Hinterhölzl 2004: 141 – his example (19a)) shows an ObjNP after two verbs in the NR-variant. Robbers' Dutch examples (1997: 113–114) with final ObjNPs only occur in embedded clauses with one verb or in main clauses with two verbs, one of them occurring in second position.

[37] The strikingly different number of translations per informant for embedded clauses with one verbal element depends mainly on the different behavior in the five colonies with regard to the *do*-support (Colloquial German *Ich* ***tue*** *einen Brief* ***schreiben*** (English: I **am writing** a letter) instead of Standard German *Ich* ***schreibe*** *einen Brief*). The US-American Mennonites provide only 6.1 clauses for each informant (407 clauses for 67 informants), the Mexican Mennonites 7.8, the Brazilian

Table 14: Distribution of syntactic patterns in embedded clauses with one verbal element (with or without particle) in five Mennonite colonies

	USA	Mexico	Brazil	Menno	Fernheim
Informants (n)	67	103	56	42	37
ONE VERB (with or without particle)					
Clauses (n)	407	802	653	579	523
(v1) (NP-(Particle)-V1)	370 (90.9)	775 (96.6)	616 (94,3)	564 (97.4%)	500 (95.6%)
(v2) (V1-NP-(Particle))	24 (5.9%)	17 (2.1%)	34 (5.2%)	12 (2.1%)	19 (3.6%)
Informants with (v2)	20	12	19	8	11
Clauses with (v2)	7	7	11	6	4
(v2) TYPE OF CLAUSE					
Causal clauses	Not available	not available	23 (13.1%)	11 (8%)	19 (14.7%)
Complement clauses	18 (12.1%)	13 (5.1%)	9 (5.1%)	1 (0.7%)	0
Relative clauses	3 (1.9%)	2 (0.5%)	2 (1.1%)	0	0
Conditional clauses	3 (2.9%)	2 (1.1%)	0	0	0
(v2) TYPE OF SPEAKERS					
Non-Dominant	18 (4.8%)	7 (0.9%)	26 (4.4%)	1 (0.2%)	9 (2%)
Mixed group	16 (7.1%)	6 (1.2%)	17 (5.8%)	1 (0.5%)	8 (4.4%)
German-like group	0	1 (0.8%)	6 (2.7%)	0	1 (0.5%)
Flemish-like group	6 (17.1%)	10 (16.1%)	8 (12.3%)	11 (7.5%)	10 (12.8%)
Dutch-like group	2 (2.2%)	0	3 (3.9%)	0	0
Flemish Preference	3.6	17.9	2.8	37.5	6.4
Sign. Mixed – German – Flemish – Dutch	p=0.002** value: 14.7 df: 3	p=0*** value: 63.3 df: 3	p=0.018* value: 10.1 df: 3	p=0*** value: 28.6 df: 3	p=0*** value: 27.4 df: 3

The more German-like Paraguayan colonies show (v2) almost exclusively in the least embedded clause type, i.e. causal clauses. In Fernheim causal clauses are the only type of embedded clause where (v2) occurs. The next clause-type which allows (v2) to a certain extent are complement clauses. The deeply embedded relative and initial conditional clauses show this pattern only very marginally.[38] The decisive proof for the fact that the comparison between the colonies in table 14 is possible although we are using partially different data sets comes from the level of significance between the German-like, Flemish-like, Dutch-like and mixed groups in each colony (last line in table 14). All colonies show the significantly highest percentage of (v2) for the Flemish-like Menno-

Mennonites 11.7, and the Paraguayan Mennonites 13.8 clauses in Menno and 14.1 clauses in Fernheim. This distribution confirms the non-standard origin of *do*-support in German varieties (cf. Kaufmann 2004: 284–286). *Do*-support is most frequent in the USA and in Mexico and hardly ever happens in Paraguay. If all informants had translated all sentences the way they were devised, one would expect sixteen clauses with one verbal element for each informant.

[38] This hierarchy of clause types mirrors the results for embedded clauses with two verbal elements in Kaufmann (2003a: 187 – table 3) and in Kaufmann (1997: 194–195 (for the verbal sequence in Standard German among Mexican Mennonites)) quite closely. In these publications it could be shown that initial conditional clauses and relative clauses reduce the chance of the occurrence of VPR significantly (and consequently hardly show (v2) in table 14) while causal clauses and complement clauses show a strong preference for VPR (and consequently show many tokens of (v2) in table 14).

nites. In view of this, there seems to be a clear structural connection between (v2), VPR, and (v16) (V1-V2-ObjNP-V3).

To see whether there is a connection between the occurrence of (v2) and a more general syntactic change and what form this connection takes, some sociolinguistic information will be included here. First of all, it is important to know that (v2) is not just a phenomenon of some isolated speakers (cf. the line *Informants with (v2)* in table 14) or of only few clauses (cf. the line *Clauses with (v2)* in table 14). Besides this, there are four significant differences with regard to age, sex, and the interaction of age and sex. Firstly, (v2) is preferred among younger and middle-aged informants. In Brazil older people hardly ever produce (v2) (average age of (v1)-users 36.6 years, for (v2)-users 30.5 years; p=0.024*; F: 5.1; df: 1) and in Mexico they never produce it (average age of (v1)-users 32.9 years, for (v2)-users 24.1 years; p=0.006**; F: 7.7; df: 1). Besides this, in Brazil and Mexico it is again younger women who show the significantly highest percentage of (v2). In Brazil they use (v2) in 10.6% of the cases (p=0.006**; value: 16.2; df: 5; the other informants show (v2) in 4%) and in Mexico the figure is 4.4% (p=0.01*; value: 15.2; df: 5; the other informants 1.7%). The reader may remember that it was younger women in the USA, Mexico, and Brazil who showed the lowest percentage of the NR-variant (cf. the discussion of table 9). Therefore, the younger women's preference for (v2) in Mexico and Brazil can be interpreted as an additional sign for a general syntactic change from below. Besides these significant results, there exists a statistical tendency towards a more frequent use of (v2) among women of all ages in the German-like colony Fernheim (p=0.082$^{(*)}$; value: 3; df: 1; women 4.9%, men 2.1%). At first sight, this seems to be a contradiction to the otherwise marked German-like behavior of the women in Fernheim, especially because even the most German-like subgroup, the younger women, uses (v2) above average in 4.5% of the cases (total average 3.6%). Once again, however, this seemingly contradictory behavior stresses the importance of a structural explanation because it is Fernheim women who use VPR (and hardly ever VR), the structural sister of (v2), more often than men who prefer VR (cf. tables 9 and 11).

One possibility to explain (v2) within an OV-analysis would be to assume a kind of object shift to the right (cf. Hawkins' (1994: 399–400) quote below). If this were the right kind of explanation, we would also expect a robust number of clause final ObjNPs in embedded clauses with two, three, and four verbal elements (some translations with four verbal elements occurred in the data). Surprisingly, there are only six tokens with this characteristic in 6623 embedded clauses with more than one verbal element (excluding again causal clauses in the USA and Mexico). This translates into a share of 0.09% of clause final ObjNPs in embedded clauses with more than one verbal element as compared to 3.6% in embedded clauses with one verbal element (cf. Kayne 2000: 224–225 for a somewhat similar fact in Norwegian); a clear indication for a translation error in few clauses with more than one verbal element. Refusing object shift as a possible explanation, one automatically has to return to the distributional rela-

tionship between (v2), VPR, and (v16) among the Flemish-like Mennonites. Structurally, the Flemish-like Mennonites were characterized as non-scramblers and VP-raisers.

The basic structure of embedded clauses with one verbal element with (42) or without a particle (41) in a head-final analysis looks like this (following Bennis 1992, I assume a small clause analysis for particles):

(41) $[_{IP}\ [_{VP1}\ NP\ V1]\ I]$

(42) $[_{IP}\ [_{VP1}\ [_{SC}\ NP\ Particle]\ V1]\ I]$

The shaded raising domain in this case is not VP2 but VP1. If this domain is raised after the obligatory movement of V1 to the position of I^0 and without the scrambling of the ObjNP or the small clause, we naturally end up with (v2) (cf. (43) and (45)).

(43) (v2): $[_{IP}\ [_{IP}\ t_m\ \mathbf{V1_g\text{-}I}]\ [_{VP1}\ \mathbf{NP}\ t_g]_m]$
(44) (sts-12)[39]: [Waun her] **dät$_{V1}$ sin Hüsarbeit** […]
gloss: *[If he] does his homework* […]
translation: *If he does his homework* […]

(45) (v2): $[_{IP}\ [_{IP}\ t_m\ \mathbf{V1_g\text{-}I}]\ [_{VP1}\ [_{SC}\ \mathbf{NP\ Particle}]\ t_g]_m]$
(46) (sts-4): […] [daut ik] **han$_{V1}$ en nüet Kleid an$_{Particle}$**
gloss: […]*[that I] have a new dress on*
translation: […] *that I am wearing a new dress*

In this analysis, (v2) is the consequence of VPR without a verb. VP1 is raised with the trace of the verbal head (cf. Bennis 1992: 43, who does not exclude the possibility of cluster formation with a verbal trace; and Kayne 2000: 263 – footnote 17). If we continue in this line of thinking, the most probable structure for (v1) among the German-like Mennonites who are characterized by scrambling without raising (cf. (48) and (51)) and for (v1) among the Dutch-like Mennonites who are characterized by scrambling and raising (cf. (47) and (50)) follows below. The different structures for these two groups result in the same surface linearization of the phonetically realized elements.

(47) (v1): $[_{IP}\ [_{IP}\ \mathbf{NP_j}\ [_{IP}\ t_m\ \mathbf{V1_g\text{-}I}]]\ [_{VP1}\ t_j\ t_g]_m]$
(48) (v1): $[_{IP}\ \mathbf{NP_j}\ [_{IP}\ [_{VP1}\ t_j\ t_g]\ \mathbf{V1_g\text{-}I}]]$
(49) (sts-12): [Waun her] ***sin homework dät$_{V1}$*** […]
gloss: *[If he] his homework did* […]

(50) (v1): $[_{IP}\ [_{IP}\ [_{SC}\ \mathbf{NP\ Particle}]_j\ [_{IP}\ t_m\ \mathbf{V1_g\text{-}I}]]\ [_{VP1}\ t_j\ t_g]_m]$
(51) (v1): $[_{IP}\ [_{SC}\ \mathbf{NP\ Particle}]_j\ [_{IP}\ [_{VP1}\ t_j\ t_g]\ \mathbf{V1_g\text{-}I}]]$
(52) (sts-4): […] [daut ik] **en nüet Kleid an$_{Particle}$ han$_{V1}$**
gloss: […] *[that I] a new dress on have*

[39] The stimulus sentence for (sts-12) was: If he does his homework, he can have some ice-cream.

Despite Chomsky's dislike for string-vacuous movements, we have moved an entirely empty VP1 in (47) and (50) because both the head and its complement have been moved out of VP1 before raising; an analysis one might rightly call strange. There is, however, a curious fact which supports this analysis. The only case where the result of the mixed group does not lie between the results of the specialized group and the two non-specialized groups in tables 12 and 13 is (v1). The German-like group is specialized for (v1) and uses this variant in 98.1% of the cases. Not surprisingly the Flemish-like Mennonites use (v1) in only 87.1%. The mixed group lies with 95.4% between these two groups. The Dutch-like Mennonites unexpectedly show (v1) in 97.5% of the cases and thus surpass the mixed group by 2.1%. The difference to the German-like Mennonites is a marginal 0.6%. As the linguistic differences between the German-like and the Dutch-like Mennonites are very marked with regard to embedded clauses with two and three verbal elements (cf. table 12), we are led to believe that such a difference should also be visible with one verbal element. The comparable frequencies of (v1) for the two groups does not fit this expectation. This misfit could be explained as a mere superficial coincidence of two different underlying structures. Variant (v1) is fed by only two structures ((48) and (51)) in the case of German-like Mennonites, while it is fed by four structures ((47), (48), (50), and (51)) in the case of Dutch-like Mennonites.

6 Conclusions

At several points in this article it was said that the reason for the raising of VPs may be the speaker's attempt to reduce the hearer's processing load by producing less complex, right-branching structures. A high tendency towards V(P)R in a clause seems to correlate positively with a high parsing complexity of the structure of this clause. Complexity can be caused by a higher number of complements (Hawkins 2004: 65), additional adverbs (cf. the discussion of table 7), and especially by more verbal elements (cf. footnote 21). Table 15 distinguishes superficially left- and right-branching structures with one, two, and three verbal elements.

Table 15: Percentage of superficially left- and right-branching structures with one, two, and three verbal element(s) for different types of Mennonite speakers

	Total	**Mixed Group**	**German-like**	**Flemish-like**	**Dutch-like**
Informants (n)	305	159	70	36	40
ONE VERB (with or without particle)					
Clauses (n)	2489	1212	650	314	313
(v1) (ObjNP-(Particle)-V1)	2436 (97.9)	1183 (97.6)	649 (99.8)	294 (93.6)	310 (99%)
(v2) (V1-ObjNP-(Particle))	53 (2.1%)	29 (2.4%)	1 (0.2%)	20 (6.4%)	3 (1%)

	Total	Mixed Group	German-like	Flemish-like	Dutch-like
TWO VERBS					
Clauses (n)	2750	1337	714	331	368
NR (v5) (V2-V1)	1689 (61.4)	709 (53%)	677 (94.8)	147 (44.6)	156 (42.4)
V(P)R (v7,v6) (V1-V2)	1061 (38.6)	628 (47%)	37 (5.2%)	184 (55.6)	212 (57.6)
THREE VERBS					
Clauses (n)	991	480	240	123	148
NR (v11) (V3-V1-V2)	23 (2.3%)	4 (0.8%)	17 (7.1%)	1 (0.8%)	1 (0.7%)
Partial V(P)R (v12,v14) (V1-V3-V2)	157 (15.8)	54 (11.3%)	86 (35.8%)	9 (7.3%)	8 (5.4%)
Full V(P)R (v16,v13,v15) (V1-V2-V3)	811 (81.8)	422 (87.9)	137 (57.1)	113 (91.9)	139 (93.9)

There are some important differences with regard to the data set used in table 12. As for two and three verbal elements, table 12 did not analyze the cases in which the verb cluster was only interrupted by an adverb. Due to the fact that table 15 is only concerned with (multiple) raising of VPs and not with possible scrambling of the ObjNP or different base positions of adverbs, it analyzes all unambiguous cases just distinguishing between the differing sequences of the verbal elements (but cf. footnote 23). For example, (v13), (v15), and (v16) now form one sequence type, because they all feature the verbal order *V1-V2-V3*. With regard to clauses with one verbal element, causal clauses, which were included for specific reasons in the South American colonies in tables 13 and 14, were excluded in table 15 in order to guarantee the comparability between the colonies.

As was to be expected, V(P)R increases dramatically when a clause contains three instead of two verbal elements. This fact parallels the situation both in Standard German and in Standard Dutch (cf. table 3). German-like Mennonites show the highest percentage of all groups for the NR-variant (v5), the non-raised variant (v11) (ObjNP-V3-V1-V2), and the partially raised variants (v12) (ObjNP-V1-V3-V2) and (v14) (V1-ObjNP-V3-V2). But whereas raising only takes place in 5.2% of the tokens with two verbal elements, tokens with three verbal elements show some form of raising in 92.9% of the cases (partial raising in 35.8%; full raising in 57.1%). With three verbal elements, the Flemish- and the Dutch-like Mennonites reach this level just considering full raising (91.9% and 93.9% respectively). In this context, these two groups produced only two tokens with no raising at all. They also show much lower levels of the NR-variant with two verbal elements (44.6% and 42.4% respectively).

The question we now have to answer is how these results can be meaningfully connected to the results for embedded clauses with one verbal element. For these clauses it seems strange to assume that parsing complexity could have caused the raising of the partially (cf. (43) and (45) of the Flemish-like Mennonites) or completely emptied VP (cf. (47) and (50) of the Dutch-like Mennonites), simply because one verbal element with a single complement cannot possibly be considered a complex structure. One is reminded, however, of Hawkins' claim that parsing in an OV-language like MLG becomes easier for the

hearer if the verbal element(s) appear early in the linear sequence. Hawkins claims that this facilitates the hearer's identification of the VP (and possibly the IP), especially if the complements are not case marked morphologically. He (1994: 399–400) writes (cf. also Hawkins 2004: 21, 25–29, 61):

> Imagine now that a German-type system were to lose its surface case marking on some or all of its NPs and pronouns. This account would then predict that the verb would have to take over as the constructor of VP […]. NPs should then be progressively postposed as their uniqueness to VP is eroded. Since non-nominative case marking is lost on full NPs before pronouns, this predicts a historical stage in which VP[NP V] merges progressively into VP[V NP], at the same time that pronouns remain pre-verbal, i.e. VP[Pro V].

An early appearance of the (finite) verb in a head-final analysis can be either the consequence of postposing the ObjNP, which is Hawkins' analysis, or of raising the VP. We have excluded the postposition of the ObjNP as a possible explanation for (v2) because the ObjNP only appears clause finally in embedded clauses with one verbal element. As the appearance of (v2) was also strongly bound to Flemish-like informants, we adopted a raising analysis without scrambling. Since, as mentioned above, a single verbal element with one complement cannot be considered a complex structure, one may assume that the non-German-like Mennonites are grammaticalizing a performance rule (cf. Hawkins' (2004) *Performance-Grammar Correspondence Hypothesis*). V(P)R among the Flemish-like and the Dutch-like Mennonites seems to turn into an integral part of their grammar. Therefore, the concrete complexity of the verbal context does not play such an important role any more. What makes the case of Flemish-like Mennonites especially interesting is the fact that raising the VP1 in (v2) is not string-vacuous as it is for the Dutch-like Mennonites (cf. (47) and (50)) and that (v2) is the only variant where one ends up with a surface VO-structure. This VO-structure could constitute the germ of a possible reanalysis of an OV-language as a VO-language. As we have already seen several syntactic similarities between different types of Mennonite speakers and completely unrelated language communities, one should also mention the possibility that the occurrence of (v2) might have played a role in the history of languages like English and Yiddish, which have switched the position of the verbal head and its complement.[40]

The fact that (v2) happens especially often among the Flemish-like Mennonites and not in the otherwise comparable Flemish and Swiss German language communities can be explained by the extreme sociolinguistic situation of the Mennonites. They form language islands in countries where a different language is used by the huge majority of the population. This constellation might have led to levels of syntactic simplification unknown to non-standard varieties in Belgium and Switzerland. Be this as it may, (v2) seems to have been introduced into the variety of the Flemish-like Mennonites only a short time ago (cf. the low percentage of 6.4% in table 15 and the significant age differences in Mexico and Brazil above), but this rather low figure fits well into the general picture of

[40] With regard to Old English one step in this change seems to have been precisely the existence of V(P)R (cf. Hinterhölzl 2004: 141).

parsing complexity: The Flemish-like Mennonites show completely right-branching structures in 91.9% of the tokens with three verbal elements, in 55.6% of the tokens with two verbal elements, and in 6.4% of the tokens with one verbal element.

An interesting point which is connected to the matter of parsing complexity and also has been mentioned several times in this article is the question as to why VR should be considered the most parsing-friendly variant for clusters of two verbal elements. After all, there are several indications that would make VPR the ideal candidate for such a role. In the VPR-variant, the ObjNP appears adjacent to its selecting head (cf. Lightfoot 1999: 97; Hawkins 2004: chapter 5.4) and the finite verb appears early allowing for a rapid identification of the IP. Both these parsing-friendly features are absent from the VR-variant and from the related variant (v13) (ObjNP-V1-V2-V3). On top of this, one should not forget that the structural sister of the VPR-variant, namely (v16) (V1-V2-ObjNP-V3), is by far the most frequent variant in embedded clauses with three verbal elements (cf. table 12). But in spite of these facts, there are also some indications which point in the opposite direction. VPR does not only seem to be an intermediate, probably unstable stage in MLG but also in other language communities – the reader will remember the telling quotations by Lötscher (1978: 19) and Den Besten & Edmondson (1983: 207). And besides this, one should also note that Standard German and Standard Dutch prescribe the NR-variant and the VR-variant respectively, whereas only non-standard varieties like Flemish and some Swiss German varieties allow for VPR. Interestingly, like Flemish and these Swiss German varieties earlier varieties of German and Dutch fulfilling standard functions at the time also allowed for VPR. The standardization process in both languages, however, excluded this variant categorically.

One reason for the disappearance of VPR in Standard Dutch could have been the existence of a parsing advantage for VR which overruled all advantages of VPR. The advantage we are looking for could be the fact that there is no ObjNP interrupting the verb cluster in VR. If we put aside the high frequency of the interrupted variant (v16), the structural sister of the VPR-variant, for a moment, one sees the following: With regard to three verbal elements the Dutch-like Mennonites preferred the variants (v13) and (v15), the structural sisters of the VR-variant. If we now analyze all speakers, we see that they use (v13) five times more often than (v15) (V1-ObjNP-V2-V3), i.e. the variant which is not interrupted by the ObjNP is clearly preferred (cf. table 12). And although the NR-variant itself seems to be far from parsing-friendly, its structural non-interrupted sisters (v12) (ObjNP-V1-V3-V2) and (v11) (ObjNP-V3-V1-V2) are used almost four times more frequently than its interrupted sister (v14) (V1-ObjNP-V3-V2; cf. also table 12). Besides the processing advantage of right-branching verb clusters, there may, therefore, also exist a parsing advantage for scrambled ObjNPs. I will not, however, try to answer the question as to what the precise nature of this advantage might be. What is more important for our data

set is the fact that it is only the Dutch-like Mennonites who combine both advantages, right-branching clusters and long-distance scrambled ObjNPs.

In spite of this possible parsing advantage of long-distance scrambled ObjNPs, it is somewhat strange that with the exception of clearly incorporated nouns (cf. Robbers 1997: 50, 144), Standard Dutch never allows ObjNPs in its verb clusters. That there is no non-verbal material interrupting left-branching verb clusters like the NR-variant has to do with general syntactic rules (cf. Bayer & Kornfilt 1994: 43; Koopman & Szabolcsi 2000: 81; and Haider 2003: 92), but these rules do not apply to the right-branching verb clusters we find in Standard Dutch. One could assume that a reanalysis of verb clusters has taken place in the history of Dutch. At the time when the more parsing-friendly VR-variant started to outnumber the VPR-variant, Dutch speakers and hearers probably analyzed the VR-variant still as VPR with scrambling of the ObjNP, because there was still a robust number of clear cases of raising VPs with the ObjNP in their language. Later on, when the frequency of the VPR-variant fell under a certain transition phase, which Lightfoot (1999: 156) puts between 17% and 30% of all relevant tokens, the indication for movement of VPs with ObjNPs was not robust enough any more to be acquired by children. Therefore, these children may have reanalyzed VR as head-movement automatically excluding ObjNPs from the resulting complex head (but cf. also Barbiers 1995: 200). This could be analyzed as the consequence of Lightfoot's Transparency Principle. The bigger the difference between the underlying structure and the surface structure, the bigger the probability of reanalysis.[41]

Another question one has to answer is how Kayne's (1994) theory would cope with the data presented. If one abstracts away from the innumerous movements many linguists currently assume (cf. Haegeman 1998; Hinterhölzl 1999; Koopman & Scabolcsi 2000) and concentrates on a rather superficial analysis for clusters with two verbal elements, linguists working in Kayne's spirit would start out with a strictly right-branching base sequence *V1-V2-ObjNP*. VPR would then require just one short movement of the ObjNP to the left of V2, whereas VR would require a somewhat longer movement of the ObjNP to the left of V1. The NR-variant, finally, would be the consequence of a leftward movement of VP2 (cf. discussion below) and, additionally, of a movement of the ObjNP to the left of V2. With regard to the number and the distance of mo-

[41] This analysis of the formation of modern Dutch verb clusters obviously constitutes a powerful alternative to our analysis. One could rightly ask why we have excluded head movement as an explanation for the VR-variant in MLG (cf. footnote 8). There are two answers to this: Firstly, the statistical data does not support this analysis for our data. Secondly, head movement could be seen as a dispreferred option in the line of Koopman & Szabolcsi (2000: 5): "Thus, although head movement is retained, it is eventually restricted to an ancillary role, to aid pied-piping by a complement and to derive the right word order in certain restricted cases." Unlike Koopman & Szabolcsi (2000: 29), I am of the opinion that one of these restricted cases could be (v11) where the derivation by means of phrasal movement is much more costly than the derivation by means of head movement (cf. structure (33) and footnote 32) and, therefore, the generally dispreferred option applies. With regard to VR, the difference in the derivational costs between the alternative derivations is far smaller.

vements, this would imply probable routes *VPR-VR-NR* or *NR-VR-VPR* in case of syntactic change. In this case VPR would not be an intermediate stage in syntactic change contrary to the results documented in tables 5 to 8. It should not be forgotten, though, that such right-branching base structures would have some conceptual advantages over left-branching base structures. For example, they would not face the problem that VR and VPR, variants which are less marked with regard to on-line processing, require more movement in a head-final analysis than the parsing-unfriendly NR-variant. In a head-initial analysis the fact that the NR-variant is the most marked variant would coincide with the fact that this variant requires the highest number of movements. As mentioned before, though, the empirical facts do not support a head-initial analysis. The only empirical datum which could be seen as pointing towards a head-initial analysis is the fact that (v16) (V1-V2-ObjNP-V3) is the most frequent variant for three verbal elements (cf. table 12).

The strongest empirical fact against a right-branching, head-initial analysis without the possibility of movement to the right is the existence of (v2). The asset of our head-final analysis for (v2) is the fact that we could use scrambling of the ObjNP and raising of the VP in order to derive it. The presence or absence of these two mechanisms has convincingly explained the derivation of all variants in MLG apart from (v11). In order to derive (v2) within a strictly head-initial framework, one would have to show that there exists a movement of the finite verb to a rather high functional position to the left of (one of) the landing site(s) of the moved ObjNP. Assuming an obligatory leftward movement of the ObjNP would be necessary in order to explain the non-clause final position of the ObjNP in ten out of the eleven variants we find in our data (cf. the theoretical background in Hinterhölzl 1999: 42, 50, 64; and Hinterhölzl 2004: 147). It would be strange, indeed, if such a movement would only be absent in (v2).[42] What would, therefore, remain unclear would be the status of the movement of the finite verb. Either it would have to be an optional rule because six of the eleven variants in our data do not have the finite verb in front of the ObjNP or we would have to assume that the ObjNP can be moved to different positions (either before or after the position of the moved finite verb). The first option can be ruled out, because optionality does not seem to be an adequate feature for the head movement of a finite verb in Continental West Germanic varieties (cf. the V2-rule and also the obligatory nature of assumption (c)). The second option would be easier to accept because it would at least superficially coincide with the different scrambling positions we assumed for MLG cluster variants. The only problem, then, would be the derivation of the NR-variant and the variants (v11), (v12), and (v14). For these four variants we would have to assume an

[42] Hinterhölzl (2004: 147) describes the situation for German in the following way: "For instance, one can say that German has unmarked OV order because objects obligatorily move out of the VP and the verb stays low, presumably in the VP (except in cases of V2 [and except in (v2) in our data])." Robbers (1997: 114 – footnote 4) explains the occurrence of clause final ObjNPs in Middle Dutch and Cape-Afrikaans with the lack of leftward movement of the ObjNP to Spec AGRoP.

additional leftward movement of VP2 and VP3 respectively. This movement would be longer in the case of the NR-variant and (v11) (landing side between the ObjNP and V1) and shorter in the case of (v12) and (v14) (landing side between V1 and VP2). There are two arguments against such an analysis: Firstly, Kayne (2000: 252) assumes that VP-preposing necessary to derive these variants is only allowed in very limited circumstances in Dutch and German varieties. Secondly and more importantly, it just sounds a little odd: We start out with a perfect right-branching order; then we create a partially left-branching order by moving the ObjNP to the left, after that we move the finite verb to the left, and finally in some cases we keep on creating left-branching orders by preposing VP2 or VP3. One wonders why any language community should create and maintain such parsing problematic movements. There is no advantage implied, neither for the speaker who has to move things around nor for the hearer who has to deal with the resulting parsing problematic structures. With a head-final analysis, one can at least say that the speaker has a certain advantage in not raising VPs thus reducing the derivational costs (cf. also footnote 7).

To wrap up this article, I would like briefly to mention some unsolved questions connected to this research project. Firstly, the interdependency between the type of the finite verb and the type of embedded clause on the one hand and the distribution of the cluster variants on the other hand is still little understood. While Barbiers (2005: 248–255) uses different agreement features in order to explain the different influence exercised by different types of finite verbs, Webelhuth (1990: 65) analyzes the kind (depth) of embedding of the clause in question as another important factor:

> One more aspect of verb raising should be mentioned, though. As I said above, adjunct clauses also do not allow verb raising. In the previous section I argued that some adjuncts can be generated within the VP. We thus have to set up the theory in such a way that VP-internal adjuncts do not qualify for verb raising.

As adjuncts generated within the VP have to be considered deeply embedded, Webelhuth suggests a connection between verb raising and the depth of embedding. Hinterhölzl (2004: 157 – endnote 4) also relates a study by Pintzuk (1999) who found a dependency between clause type and the sequence between the verb and its complement.

Another question which should be researched more thoroughly concerns the nature of syntactic variation. Seiler (2003: 382) and Barbiers (2005: 234–235) consider (free) variation an integral part of grammatical systems. This rather new point of view within the framework of generative grammar might be considered the first theoretical result of seriously combining variation studies with generative theory.

The next steps which have to be taken up in this project are the improvement of the index responsible for the grouping of the Mennonite informants into different types of speakers (cf. footnote 29), the question as to whether there is a connection between case marking and cluster variants (cf. footnotes 25), and a technical refinement of the syntactic analyses.

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