

Merging Verb Cluster Variation

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As is clear from the Syntactic Atlas of the Dutch Dialects (SAND I & II, Barbiers et al. 2005 / 2008) variation in word order in Dutch dialects is a rather infrequent phenomenon. Most variation is found in the domain of morphosyntax, and thus relates to variation in form rather than in order.

Compared to morphosyntactic variation, the word order we find within the Dutch language area is remarkably constant. For instance, all 267 dialects that are part of the SAND-research show exactly the same pattern for the placement of the finite verb. There is no variation with respect to Verb Second, although the placement of the finite verb is very variable cross-linguistically. Similarly, although the OV-order is cross-linguistically relatively exceptional, all Dutch dialects have the verb following the object in subordinate clauses.

However, there is one domain in which word order variation is abundant. This concerns the famous verb raising phenomenon in Dutch (and German). If we find more than one verb at the end of the clause, for instance a main verb and one or more auxiliary or modal verbs, the order appears to be unstable across dialects. In a subordinate clause in which the main verb is accompanied by two modals, we find four orders (out of six logically possible orders). This is shown in (1).

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| (1) a. | Ik vind dat iedereen <i>moet kunnen zwemmen</i> . | V1-V2-V3 |
| b. | Ik vind dat iedereen <i>moet zwemmen kunnen</i> . | V1-V3-V2 |
| c. | Ik vind dat iedereen <i>zwemmen kunnen moet</i> . | V3-V2-V1 |
| d. | Ik vind dat iedereen <i>zwemmen moet kunnen</i> . | V3-V1-V2 |
- I find that everyone must can swim
'I think that everybody should be able to swim.'

These sentences are semantically and pragmatically identical. The different orders found in verb clusters appear to be determined by:

- (2) (i) geographical location of the dialect
- (ii) type of the auxiliaries in the verbal cluster
- (iii) hierarchy of auxiliaries in the verbal cluster

There is a vast literature on verb cluster formation and the variation in order of the verbs in clusters, starting with the seminal publication of Arnold Evers in (1975). Our approach differs from most of the other literature in at least five respects.

- 1) our analysis takes dialect geography as a starting point. We will concentrate on the variation we find at different locations to see if there are particular co-occurrence patterns that might help us to understand the phenomenon of verb clustering;
- 2) we will approach different order possibilities as the consequence of the structure building process Merge, together with differences in the categorial status of the elements involved in the cluster. We thus present an analysis without movement rules of the type Verb Raising (rightward head movement) or VP-intrapolation (leftward XP-movement);

3) we briefly show that the results of our theoretical analysis of dialect geographical variation converge to a large extent with the results of the reversed dialectometrical, i.e. quantitative-statistical approach to verb clusters recently put forward by Jeroen van Craenenbroeck (2015). Van Craenenbroeck concludes that the variation in verb cluster ordering can be reduced to three grammatical parameters;

4) we will demonstrate that the intuitions speakers have of the various orders in verbal clusters, even with respect to cluster orders they don't produce themselves, correlate quite nicely to the patterns we find within the Dutch speaking area. We argue that this must be due to their syntactic knowledge and cannot be due to processing preferences or familiarity with the various orders;

5) we will argue that our analysis of verb cluster formation can be extended to account for the interruption of verb clusters by non-verbal constituents, such as particles, adjectival participles, nouns, etc. Verb clustering and verb cluster interruption both follow from the theory in which verbal complexes are derived through Merge. An important ingredient of our theory is that the complex verb generated through Merge can behave as a single symbol in a subsequent derivation, as argued for in Zwart (2015).

We will argue that the word order variation in clusters with three verbs in the Dutch language area, as found in SAND Volume 2, can be reduced to verbal orders: V1-V2-V3 and V3-V2-V1. In two other attested orders, V1-V3-V2, V3-V1-V2, the main verb (V3) is not verbal but adjectival (in the case of a participle) or nominal (in the case of an infinitive). The order V2-V3-V1 is exceptional in that it is only possible if V2 and V3 form an adjectival cluster. The order V2-V1-V3 is unattested.

With the help of the geographic distribution of the various orders we will argue that these variation data are best captured in terms of a syntactic analysis that merges verb clusters (without any movement) and includes three parameters:

- (i) A dialect is {descending/ascending} in the ordering of verbs
- (ii) A dialect {does/does not} have verbal participles
- (iii) A dialect {does/does not} have nominalized infinitives in “verb” clusters

This analysis is supported by correlations between cluster orderings and cluster interruptions. For example, in dialects in Belgium, the cluster order *V1-participle-V2* is quite frequent, which follows from the strong preference in that area for participles to be adjectival and the fact that most of these dialects allow cluster interruption with predicative adjectives.

We compare the geographic SAND data with the results of a ranking experiment in which respondents from the whole Dutch language area had to provide a relative ranking of the six logically possible word orders in three-verb clusters. The most important feature of this experiment was that the respondents thus had to give judgments on word orders that do not occur in their own language varieties. Strikingly, the rankings of the respondents show a strong convergence, independently from the dialect area that they live in. This shows that these rankings cannot be explained in terms of familiarity or frequency of use. Ease of processing is also shown to predict the wrong rankings. These rankings must in part be due to the grammatical knowledge of the respondents. This strengthens our explanation of verb clustering variation within the Dutch language area.