

**213 verb clusters exist. Evidence from new diagnostics to distinguish V(P)R and the 3rd construction:  
Misplaced *z(u)* and short relative clause extraposition in (Swiss) German**

**1. Introduction.** It is often claimed that of the 6 logically possible orders in West-Germanic 3-verb clusters, 213 does not exist, cf. Wurmbrand (2005), Barbiers (2005), Abels (2011). While unattested in the prominent Aux-Mod-Inf-, Mod-Mod-Inf-, and Mod-Aux-Part-clusters, 213 orders do occur in constructions with perception verbs, inchoatives and benefactives as V2, taking a bare infinitive as V3. Examples are found in Swiss German, Dutch and Luxemburgish varieties:

- (1) dass i en ghöört<sub>2</sub> ha<sub>1</sub> en Arie singe<sub>3</sub>  
that I him heard have.1SG an aria sing.INF  
'that I heard him sing an aria'

*Swiss German*, cf. also Lötscher (1978: 2)

**2. 213 as an instance of the 3rd construction?** 213 orders also occur in the 3rd construction (3rdC), where the infinitival V3 is accompanied by the particle *z(u)* (German) or *te* (Dutch) (scrambling from the lowest VP henceforth indicates coherence):

- (2) dass er dem Hans versucht<sub>2</sub> hat<sub>1</sub> t<sub>dem Hans</sub> die Uhr zu stehlen<sub>3</sub>  
that he the.DAT John tried has the watch to steal.INF  
'that he tried to steal John's watch'

*3rdC Standard German*

(1) and (2) are similar in that both have a lexical participial V2 and allow non-verbal material between V1 and V3. If (1) were an instance of the 3rdC, one could reduce the number of possible cluster orders to 5. However, I will show that (1) does not behave like the 3rdC but rather like Verb (Projection) Raising (VPR), implying that cluster-forming mechanisms must be more powerful than frequently claimed, i.e. must be able to generate all six orders, including 213 orders.

**3. Differences between V(P)R and the 3rdC.** There is no clear consensus in the literature whether VPR and the 3rd Construction should be distinguished, cf. e.g. Haegeman & van Riemsdijk (1986), Geilfuß (1991) [yes] vs. ter Beek (2008) [no]. I will present new evidence from short relative clause (RC) extraposition and misplaced-*z(u)* that the constructions systematically differ w.r.t. a central property: while VPR bears all the hallmarks of complementation, the 3rdC behaves like an adjunction structure.

**3.1. Misplaced-*z(u)*:** Bader (1995). While in ascending verb clusters (understood to include VR and VPR) *z(u)* ends up on the wrong verb, viz. not on V1 but on the rightmost verb of the cluster, cf. (3-a), *z* is not misplaced in the 3rdC, but occurs on V1, cf. (3-b) (*ohni/e* selects a *z(u)*-infinitive; in (3-b), V1 selects a *zu*-infinitive as well, accounting for *zu* on V2):

- (3) a. ohni mi [VP1 (\*z) welle<sub>1</sub> [VP2 t<sub>mi</sub> uf d bullesite \*(z) stelle<sub>2</sub>] ...  
without me to want.INF on the cops.side to put.INF ...  
'without wanting to side with the cops ...'  
b. ohne es [VP1 \*(zu) versuchen<sub>1</sub> [VP2 t<sub>es</sub> zu lesen<sub>2</sub>]  
without it to try.INF to read.INF  
'without trying to read it'

*VPR Swiss German*, internet

*3rdC Standard German*

**3.2. Short relative clause extraposition.** While in VPR, RCs extraposed from VP1 have to appear clause-finally (=long), cf. (4-a), they can intervene between V1 and VP2 (=short) in the 3rdC, cf. (4-b):

- (4) a. wil jede wett<sub>1</sub>, [X wo s betrifft], es Wörtli mitrede<sub>2</sub>, [✓ wo s betrifft]  
because everyone wants C it affects a word talk with.INF C it affects  
'because everyone who is affected by it wants to have a say' VPR  
b. weil ihr jeder versuchte<sub>1</sub>, [✓ der da war], t<sub>ihr</sub> nach Kräften zu helfen<sub>2</sub>, [✓ der da war]  
since her everyone tried who there was after forces to help.INF who there was 3rdC

**3.3. Accounting for the differences.** (i) (4-a) and (4-b) trivially follow if VPR involves complementation while the 3rdC involves right-adjunction (= classical extraposition): in VPR, adjunction to VP1 places the RC clause-finally, cf. (5-a), but in the 3rdC, the RC can surface between V1 and VP2 because VP2 adjoins to VP1 as well, cf. (5-b):

- (5) a. [VP1 [VP1 V<sub>1</sub> t<sub>RC</sub> [VP2 V<sub>2</sub>]] RC] b. [VP1 [VP1 [VP1 V<sub>1</sub> t<sub>RC</sub> t<sub>VP2</sub>] RC] [VP2 V<sub>2</sub>]]

(ii) misplaced *z(u)*: Since *z(u)* always ends up on the last V of the V-cluster irrespective of the cluster order (i.e. 1*z(u)*2, 2*z(u)*1, 31*z(u)*2 etc.), I analyze it as a separate syntactic element, a clause-final functional head F above VP, that is associated with a V post-syntactically by Local Dislocation (linear reordering under adjacency, cf. Embick & Noyer 2001), after all reordering in the V-cluster. Starting from a left-branching base, I assume that ascending orders obtain either via VP-inversion (VPR) or via extraposition/right-adjunction (3rdC). Since VR/VPR involves complementation, *z(u)* will end up adjacent to the "wrong" verb V2, cf. (6-a), while in the 3rdC extraposition removes VP2 from the domain of *z(u)* so that it ends up on V1, cf. (6-b):

- (6) a. ohni mi [FP [VP1 [VP2 t<sub>mi</sub> uf d Bullesiite stelle<sub>2</sub>] wele<sub>1</sub>] z] → VP-inversion  
ohni mi [FP [VP1 wele<sub>1</sub> [VP2 t<sub>mi</sub> uf d Bullesiite stelle<sub>2</sub>] ] z] → z-placement  
ohni mi wele<sub>1</sub> uf d Bullesiite z+stelle<sub>2</sub> VPR  
b. ohne [vP es [FP1 [VP1 [FP2 [VP2 t<sub>es</sub> lesen<sub>2</sub>] zu] versuchen<sub>1</sub>] zu]] → Extrapos of FP2  
ohne [vP [vP es [FP1 [VP1 t<sub>FP2</sub> versuchen<sub>1</sub>] zu]] [FP2 [VP2 t<sub>es</sub> lesen<sub>2</sub>] zu]] → z-placement  
ohne es zu+versuchen<sub>1</sub> zu+lesen<sub>2</sub> 3rdC

**4. Applying the diagnostics to 213 orders.** Crucially, (1) behaves like VPR (I will also address the subtlety of the data): short RC extraposition is not possible, cf. (7-a), and *z* is misplaced, cf. (7-b) ((2), on the other hand, shows the behavior of a 3rdC):

- (7) a. dass si s eme Maa ghulffe<sub>2</sub> hät<sub>1</sub>, [X wo si guet kännt], t<sub>s</sub> in Ornig bringe<sub>3</sub>, [✓ wo si guet kännt]  
that she it a.DAT man helped has C she well knows in order bring.INF C she well knows  
'that he helped a man who she knows well to bring it in order'  
b. ohni en ghöört<sub>2</sub> \*(z) ha<sub>1</sub> en Arie \*(z) singe<sub>3</sub>  
without him heard to have.INF an aria to sing.INF  
'without having heard him sing an aria'

213 orders are derived as follows: (i) VP-inversion leads to an ascending order = 123, (ii) V1 and V2 are inverted (by head-mvt in syntax or, as I will argue more generally, by means of Local Dislocation). RC-extraposition to VP1 thus surfaces clause-finally; *z* being in FP above VP1 is associated with the last element of the cluster, viz. V3, as *z*-placement follows cluster-reordering.