

Easy as 1-2-(3)? Acquiring verb clusters in Dutch

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As is well-known, both the order MOD-INF and INF-MOD are grammatical in (standard) Dutch in sentences like (1). The order in (1a) is known as the ascending (a.k.a. 1-2) order, the one in (1b) as the descending (a.k.a. 2-1) one.

- (1) a. (...) dat ik koekjes **wil eten.** (ascending, 1-2 order)
 (...) that I cookies want.1SG eat.INF
 b. (...) dat ik koekjes **eten wil.** (descending, 2-1 order)
 that I cookies eat.INF want.1SG

Both: ‘(...) that I want to eat cookies.’

The co-existence of (1a) and (1b) is attributed to the fact that these verbs form a verb cluster. A verb cluster is a group of verbs at the end of a clause that, due to a process of verb raising, becomes impenetrable by phrasal material, as originally proposed in Evers 1975 (which led to a stream of publications, cf. Wurmbrand 2005 for an overview). The verb(s) in the complement domain of the highest verb move(s) up in the structure, forming a cluster (as in Figure (1) for (1a) and (1b)). These clusters consist of two or more verbs, and may contain different types of verbs.

While many studies have focused on verb clusters, the question remains how children acquire them. At first glance, it seems that previous work would predict that 2-1 orders (e.g. (1b)) are acquired first, and that 1-2 orders (e.g. (1a)) follow later. For example, De Sutter (2009) and Stroop (2009) both show that 2-1 orders are vastly more frequent in spoken Dutch than 1-2 orders. This not only means children are more familiar with 2-1 orders from the input, but also suggests, according to some, that 2-1 orders are somehow unmarked (cf. Coussé, Arfs & De Sutter 2008). Thus, the 2-1 order is expected to be dominant in young L1 Dutch, which is exactly what Zuckerman (2001) seems to find in his experiments: children, he says, first acquire 2-1 order (around the age of three) and only later (at four to five years old) also produce 1-2 orders.

However, this picture begs to be painted with a finer brush. We administered sentence repetition tasks (SRTs) to nearly fifty L1 kindergartners (aged 4;0-6;3) and preschoolers (aged 3;0-4;0) acquiring standard Dutch, in addition to twenty adult controls. Besides cluster order, our tasks take an elaborate set of variables into account: the highest verb in the cluster is finite or infinitival, the highest verb is an auxiliary like *hebben* (‘have’) or a modal like *mogen* (‘may’), the cluster contains two or three verbs, and the prosody of the cluster is balanced or unbalanced.

The results of these experiments provide various arguments to believe that the actual development consists of three stages. In stage (i), children prefer 2-1 orders, while remarkably 1-2 orders are preferred in stage (ii) (as shown in Tables (1) and (2)). In stage (iii), finally, both orders are allowed and 2-1 returns as the more dominant order. We argue that 2-1 orders used by the youngest children in stage (i) are not actual clusters, i.e. products of verb raising, but are simply a consequence of Dutch having OV word order. Sparked by the need to analyze 1-2 orders, verb raising is acquired by means of a learning algorithm, resulting in stage (ii). Once verb raising is established, the 2-1 orders in the input have to be analyzed in accordance with this cluster requirement as well, which paves the way for the final and adult-like stage (iii). In other words, 1-2 verb cluster orders trigger verb raising, while 2-1 clusters do not inherently prompt children to interpret them as such. We will also show that this is supported by children’s behavior in clusters containing three verbs, in which the order 1-2-3 is clearly unmarked in adult (standard) Dutch.

Figure (1): basic representation of verb raising

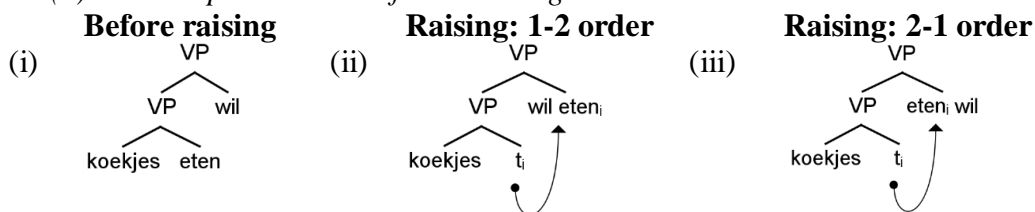


Table (1): Cluster orders given in response to bipartite (two-verb) stimuli

Stimulus Order	Correct Order	Reversed Order	Doubling Error	Other	Total
1-2	188	18	1	93	300
2-1	161	44	14	81	300
Total	349	62	15	174	600

Table (2): Bipartite (two-verb) orders given in response to tripartite (three-verb) stimuli

Response order	Stimulus Orders						Total
	1-2-3	?1-3-2	*2-1-3	*2-3-1	3-1-2	?3-2-1	
1-2	22	13	22	12	19	18	106
2-1	0	6	4	15	4	8	37
Subtotal	22	19	26	27	23	26	143

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