

# On verb second as edge alignment: verb placement as a function of Merge

Jan-Wouter Zwart  
University of Groningen

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## 1. Introduction

- Proposal: V2 is *the positional marking of a dependency relation*.
- There is only one structure generating procedure in syntax:
  - (1) *Merge*  
Add  $x$  to  $y$  yielding  $\langle x, y \rangle$
- Merge automatically creates a dependency relation  $S$  (for *sisterhood*):
  - (2) *Dependency*  
In  $\langle x, y \rangle$ ,  $x$  is invariably the antecedent (or *nondependent*) and  $y$  the dependent
  - (3) *Dependency marking*
    - a.  $S$  can be (and perhaps universally is) marked on  $y$  (= dependent marking)
    - b. if so,  $S$  is spelled out on one of the terms of  $y$
  - (4) *Dependent marking*
    - a. by inflectional morphology (tense, agreement marking)
    - b. by position (linker)
  - (5) V2 is positional marking of the relation between a fronted element and its sister, to the effect that the term of  $y$  spelling out  $S$  is realized as the leftmost element in  $y$ .
- V2 = V1 applied to the domain of the dependent in a dependency relation
- Why V1 (and not V-last) ? Verb placement serves to create a linker:
  - (6) *Linker*  
A linker is a left-edge element of  $y$  appearing only when  $y$  is a dependent.
- Linkers are positional markers appearing as a function of Merge.
  - (7) a. shifted linker: V2  
b. dummy linker: second position auxiliary, linkers within DP
- (8) Why *did* John kiss Mary ?  
 $x = \textit{why}$ ,  $y = \textit{John kiss Mary}$ , and *did* is the linker between  $x$  and  $y$  appearing at the left edge of  $y$
- the relation between morphosyntactic features and verb placement:
  - (9) *Consistency*  
If a term of  $y$  spells out a dependency of  $y$  positionally, it also does so morphologically.  
(not the other way around !)

## 2. General V2 properties

### (10) *General aspects of V2*

- a. V2 is a side-effect of a fronting operation
- b. Modulo parametric variation, V2 is insensitive to the type of element fronted

- Traditional approaches:
  1. V-to-C *followed by*
  2. XP-to-Spec,CP *triggered by (11)*

### (11) *The V2 constraint*

The verb must be second

- Problems:
  - a. predicates some requirement of the verb and triggers movement of some other category
  - b. independent triggers for XP-movement (subject placement, topicalization, expletive insertion, wh-movement)

- Shift from 

triggered V-movement generic XP-movement
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 to 

triggered XP-movement generic V-movement
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- (12)
  - a. Move XP to its designated position Spec,YP *followed by*
  - b. Move the verb to Y *triggered by (11)*

- (13) YP can be any (functional) projection (Travis 1984, Zwart 1993)

## 3. Problems associated with V2

### (14) *Difficult facts associated with V2*

- a. V2 asymmetries (between main and embedded clauses; construction specific ones; having to do with finiteness);
- b. nonstandard V2 phenomena (quotative inversion, conjunction-triggered inversion, apokoinou constructions);
- c. V2 deviations (V1, V3, verbs that fail to undergo V2).

#### 3.1 *V2 asymmetries*

- Whether or not a language uses positional marking must be stipulated for each dependency
- In Germanic positional marking is in principle limited to dependencies marking the end of a cycle (15).

### (15) *Cycle*

A cycle is constituted:
 

- (a) when no further operation Merge takes place, or
- (b) when the nondependent is a lexical term (i.e. a noun, verb, or adjective), or
- (c) in elsewhere cases.

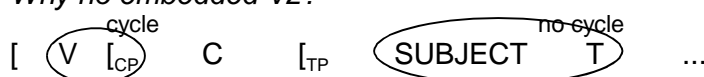
### (16) *Basic cycles*

- a. root (first constituent + sister)
- b. lexical head + complement

### *Positional dependent marking*

- V2
- complementizer (linker)

### (17) *Why no embedded V2?*



(cf. Chomsky 2001: CP is a phase, TP is not)

- The positional marking property applies to each dependency, but is passed on to each next dependency (taking the derivation to proceed in a bottom up fashion) until the end of a cycle is reached.

(18) *C as a linker*

- a. **Gisteren** heeft Jan Marie gekust  
yesterday has John Mary kiss-PART  
'Yesterday John kissed Mary.'
- b. \* Ik heb gezegd [ **gisteren** dat Jan Marie gekust heeft ]  
I have say-PART yesterday that John Mary kiss-PART has ]
- c. Ik heb gezegd [ dat **gisteren** Jan Marie gekust heeft ]  
I have say-PART that yesterday John Mary kiss-PART has ]  
'I said that yesterday John kissed Mary.'

(19) *Parametric variation*

- a. Generalize (16a) to dependent clauses → Icelandic/Yiddish embedded V2  
(NB, Swedish/Frisian/Colloquial Dutch embedded V2 clauses are root clauses)
- b. Restrict (16a) to certain types of first constituents → Mod. English residual V2

- (20) a. [Why] [ **did** John kiss Mary ]  
b. I [wonder] [ why (\*did) John kiss Mary ]

(21) *Linker in embedded wh-clauses (rare)*

We moeten eens vragen **of** waar die heen gaat  
we must once ask-INF if where DEM DIR.PRT goes  
'We should ask where he's going.' (Amsterdam dialect, Hoekstra 1994)

- Generalizing (16a) with XP = wh-phrase to embedded clauses is more common:

- (22) a. *Afrikaans: V2* (Biberauer 2002:37)  
Ek wonder wat **het** hy vandag weer aangevang  
I wonder what has he today again started  
'I wonder what he started today again.'

b. *Hiberno-English: dummy* (Henry 1995; Adger 2003:343)  
I asked who **did** Medea poison  
(cf. I asked did Medea poison Jason)

c. *Colloquial Dutch: dummy*  
Ik wou weten waarom **of dat** Jan dat gedaan had  
I wanted know-INF why if that John that do-PART had  
'I wanted to know why John did that.'

- Infinitives: a. extraposition: case of (16b) (e.g. Dutch complementizer *om*)  
b. 'verb raising': embedded clause defective/transparent → no cycle

- (23) a. ..dat Jan [probeerde] [(om) het boek te lezen ]  
that John tried for the book to read-INF
- b. ..dat Jan het boek probeerde (\*om) te lezen  
that John the book tried for to read-INF
- Both: '..that John tried to read the book.'

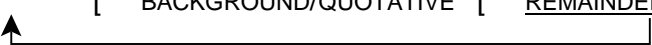
### 3.2 Nonstandard V2 phenomena

#### 3.2.1 Quotative inversion (Collins and Branigan 1997):

- (24) I am so sick **said** John (✓ John said)  
 (25) Ik voel me zo ziek **zei** Jan (\*Jan zei) Dutch  
 I feel me so sick said John

- Zwart (2002): involves backgrounding (suggested by intonation)

- (26) Ik ken hem niet die jongen  
 I know him not that boy

- (27) [ BACKGROUND/QUOTATIVE [ REMAINDER/QUOTE ] ]  


- Inversion inside the quote cannot be V-to-C
- Quotative inversion is just another case of positional dependent marking. When the quote raises across the quotative, a dependency is created in which the quote = x (the antecedent) and the quotative = y (the dependent), and the verb appears at the left edge of the dependent.

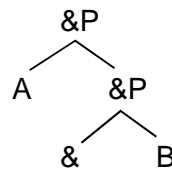
#### 3.2.2 Conjunction induced inversion

- (28) Alles is nu reeds bepaald en **kan** ik hierin moeilijk veranderingen maken  
 all is now already settled and can I herein hardly changes make  
 'Everything is already settled and it is difficult for me to make any changes.'  
 (from a Dutch letter by Jan Toorop, 1858-1929, in Van der Horst & Van der Horst 1999:298)

- attested in (at least) Old and Middle English (Kellner 1924:289-290), Old, Middle, and Early Modern High German (Paul 1919:78-81; Behaghel 1932:31-36), Middle and Early Modern Dutch, surviving in written Dutch until around 1930 (Stoett 1923:231; Van der Horst & Van der Horst 1999:296-299), Old Swedish (De Boor 1977:195), and Old French (Foulet 1963:120, 287).

- Problem: V2 not induced by XP-fronting

- (29) Munn/Kayne analysis of coordination



- merge establishes a pair <x,y> with & = x (the antecedent) and y (the dependent) = B

- (30) If <&, B> is taken to constitute a cycle (elsewhere case (16c)) conjunction induced inversion is positional dependent marking on B

- positional dependent marking does not care if the antecedent (x) is a head or a phrase

- (31) *Icelandic Stylistic Inversion: fronted category must be a head*  
 Ég hélt að kysst hefðu hana margir stúdentar  
 I thought that kiss:PART had her many students  
 'I thought that many students had kissed her.'

### 3.2.3 Apokoinou constructions ('herhalingsconstructie')

(32) En dan **was** [je tegenstander] **was** neer  
 and then was your opponent was down  
 (Colloquial Dutch, in Jules Deelder, *The Dutch Windmill*, 2001, p. 93)

(33) a. S<sub>1</sub> < je tegenstander, neer was >  
 b. S<sub>2</sub> < dan, je tegenstander was neer >

- apokoinou: both S<sub>1</sub> and S<sub>2</sub> show positional dependent marking
- antecedent of S<sub>1</sub> is the pivot in the final construction ('overloopdeel', marked [...])

(34) Ik heb [ nooit van mijn leven ] heb ik een wedstrijd  
 I have never of my life have I a match

gebokst die gemaakt was (Deelder, *op.cit.*, p. 125)  
 fought REL fixed was

'Never in my life have I fought a match that was fixed.'

(35) a. S<sub>1</sub> < nooit van mijn leven, ik een match gebokst heb... >  
 b. S<sub>2</sub> < ik, nooit van mijn leven heb ik een match gebokst... >

- Special feature: subject doubling; verb placement follows as before

(36) *the apokoinou construction is a single utterance*

- a single prosodic domain (only one Nuclear Pitch accent)
- dependencies between parts before and after the pivot (selection, NPI licensing, focus association)

(37) maar ik heb [ toen **WEL** ] heb ik [ toen drie keer  
 but I have then FOC-PRT have I then three times

kort na mekaar ] heb ik toen tegen **Van Dam**  
 short after each other ] have I then against Van Dam

gebokst (Deelder, *op.cit.*, p. 184)  
 fought

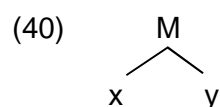
'But I did fight against Van Dam in those days, three times shortly after one another.'

- The higher verb may be a dummy (a less specific verb)

(38) Dat **was** [ in '35 ] **zal** dat **geweest zijn**  
 that was in 1935 MOD:PROB that be:PART be  
 'That must have been in 1935.' (Deelder, *op.cit.*, p. 149)

### 3.3 V2 deviations

(39) a. V1: the cycle functions as a dependent  
 b. V3: the dependent functions as a cycle



- Positional dependency marking that spells out a verb at the dependent left edge then yields V1 if M is a dependent and V3 if y is a cycle

### 3.3.1 V1

- Generalization: V1 constructions are never independent declarative expressions

#### (41) *Types of V1 constructions (Dutch)*

a.	yes/no-questions	Kom je ook?	[Are you coming too ?]
b.	imperatives	Kom (jij) nou eens op tijd!	[Be on time for a change!]
c.	conditionals	Kom je op tijd, dan ...	[If you're on time, then ...]
d.	counterfactuals	Was je op tijd gekomen, dan ...	[Had you been on time, then ...]
e.	narrative inversion	Kom ik daar binnen, zegt-ie ...	[So I come in, and he says ...]
f.	topic drop	Ken ik niet	[I don't know it]

- Traditional approach: V2 with empty operators
- Problem: empty operator must itself be licensed by discourse or pragmatics (Cardinaletti 1990)
- Alternative: The construction as a whole is a dependent (of the same factors of discourse or pragmatics), needing positional dependent marking, yielding V1.  
(Possible exception: topic drop.)

### 3.3.2 V3

- Special status of the first constituent: 'extracyclicity'

#### (42) *Oostende dialect (West-Flemish; Winkler 1874:364)*

Zonder entwat te zeggen [Wansje] [loat zen zwiins achter]  
without something to say Wansje leaves his pigs behind  
'Without saying anything, Wansje leaves his pigs behind.'

#### (43) *Standard Dutch V3 with D-pronouns*

- a. Jan die ken ik niet  
John DEM:NNTR know I not  
'John, I don't know.'
- b. Dat het regent dat verbaast me niet  
that it rains that amazes me not  
'That it's raining does not amaze me.'

Clauses are invariably extracyclic (i.e. are not antecedents in a dependency)

#### (44) *Speech act adverbials (Meinunger 2004)*

- a. Eerlijk (gezegd), dit voorstel is onacceptabel  
honest said this proposal is unacceptable
- b. Eerlijk \*(gezegd) is dit voorstel onacceptabel  
honest said is this proposal unacceptable
- Both: 'To be honest, this proposal is unacceptable.'

- Special status of the second constituent: prosodic effects

(45) Dit voorstel echter is onacceptabel  
this proposal however is unacceptable

- (46) *Adverb leaning on the first constituent*
- a. Dit voorstel echter dat is onacceptabel  
 this proposal however DEM:NTR is unacceptable  
 'This proposal however is unacceptable.'
- b. \* Dit voorstel dat echter is onacceptabel  
 this proposal DEM:NTR however is unacceptable

- Possibly: positional edge marking sensitive to enclitic material
- Special status of the second constituent: focus sensitive adverbs (Nilsen 2002)

- (48) a. Jens bare gikk b. Jens nesten gråt  
 John just left John almost cried

V-ADV order ruins focus association

- (49) *Similar problem in German, different solution (Meinunger 2004)*
- a. ...weil die Kommission nichts als meckerte  
 because the committee nothing but grumbled  
 '...because the committee did nothing but grumble'
- b. Die Kommission hat nichts als gemeckert  
 the committee has nothing but grumble-PART  
 'The committee did nothing but grumble.'
- c. \* Die Kommission meckerte nichts als  
 the committee grumbled nothing but

- Parametric variation: adverbs may be 'extradependent' in Norwegian but not in German

NB. Nilsen (2002) takes the Norwegian facts to suggest that verb movement in Norwegian involves masked XP-movement, so that the finite verb occupies a specifier rather than a head position (X-movement = XP-movement).

#### 4. A note on OT approaches to V2

- (50) *V2 results from constraint ordering (Anderson 2000, Legendre 2001)*  
 NONINITIAL ( $V_{fin}, S$ ) » EDGEMOST ( $V_{fin}, L, S$ )

- Sensitivity to structure (after first *constituent*) follows from conditions on movement or syntactic well-formedness

- (51) *V2 as positional dependent marking*
- Dependency is a function of binary merge, yielding  $\langle x, y \rangle$
  - In each pair  $\langle x, y \rangle$ , the relation between  $x$  and  $y$  is marked on  $y$  (dependent marking)
  - Dependent marking can be morphological or positional marking
  - The element marking a dependency morphologically is the designated element for marking the dependency positionally
  - Positional marking is done by lexicalizing the left edge of the dependent (i.e. the positional marker is a *linker*)

- Sensitivity to structure follows automatically
- V2 is *not* the outcome of an application of Wackernagel's Law.

## 5. Conclusion

1. Linearization ('phonological verb movement') is a syntactic process:
  - it is a function of the derivational process of Merge
  - it is sensitive to the configurational properties of the output of Merge
  - it is part of a general theory of dependency marking
2. Verb-second is not triggered by features residing in functional heads
  - There is no relation between V2 and finiteness, beyond the consistency principle (9)
3. Richness of verb morphology is an arbitrary property of the paradigm associated with a verb spelling out a dependency in its inflectional morphology (cf. (4a)).
  - No a priori reason to think that richness of morphology has anything to do with generalized V2 (i.e. 'V-to-I' in both main and embedded clauses)
4. V2 must be understood in the context of a theory of *linkers* marking dependency, and found more generally in the nominal domain (Den Dikken & Singhapreecha 2004).

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Faculty of Arts, PO Box 716, NL-9700 AS Groningen, Netherlands  
zwart@let.rug.nl ! <http://www.let.rug.nl/~zwart/>

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