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

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19th Comparative Germanic Syntax Workshop, CUNY, June 4, 2004

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 <x,y>

• Merge automatically creates a dependency relation S (for sisterhood):

(2)  Dependency
In <x,y>, 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?
\[ x = \text{why}, y = \text{John kiss Mary, and did is the linker between } x \text{ and } y \text{ appearing at the left edge of } y \]
• 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 to triggered XP-movement

(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) V2
   b. lexical head + complement complementizer (linker)

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

\[
\begin{array}{c}
\text{\textbullet~cycle} \\
\text{V} \\
\text{C} \quad \text{TP} \\
\text{SUBJECT} \quad \text{T} \\
\end{array}
\]
(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
   ‘I said that yesterday John kissed Mary.’

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. [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 **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)
   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
   ‘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 a 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 Stylisitic Inversion: fronted category must be a head

Ég hélt að kysst hefðu hana márgir 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
(Deelder, p. 93, in Jules Deelder, The Dutch Windmill, 2001, p. 93)

(33) a. S₁ < je tegenstander, neer was >
    b. S₂ < dan, je tegenstander was neer >

• apokoinou: both S₁ and S₂ show positional dependent marking
• antecedent of S₁ 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. S₁ < nooit van mijn leven, ik een match gebokst heb... >
    b. S₂ < 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. a single prosodic domain (only one Nuclear Pitch accent)
b. 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 fought

(Deelder, op.cit., p. 184)

‘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

(40) M
    x
    y
• 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 is unacceptable
      ‘This proposal however is unacceptable.’
   b. * Dit voorstel dat echter is onacceptabel
      this proposal 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 (Vfin, S) » EDGEMost (Vfin, L, S)

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

(51) V2 as positional dependent marking
   a. Dependency is a function of binary merge, yielding <x,y>
   b. In each pair <x,y>, the relation between x and y is marked on y (dependent marking)
   c. Dependent marking can be morphological or positional marking
   d. The element marking a dependency morphologically is the designated element for marking the dependency positionally
   e. 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).

References