The morphosyntax of verb movement revisited

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1. Background

(1) Minimalist starting points

a. structure is the result of bottom-up (binary) Merge

> **sisterhood hypothesis: grammatical relations are sisterhood relations**
> (Zwart 1993, Epstein et al. 1998)
> **dynamic hypothesis: structure is flexible (no absolute 'positions')**
> (Nilsen 2003, Zwart 2003/2004)

b. elements merged are meaningful
(Chomsky 1995, chapter 4)

> **exclusiveness hypothesis: 'uninterpretable' features are acquired features**
> (Zwart 2003a)
> **modularity hypothesis: (inflectional) morphology after syntax**
> (Halle and Marantz 1993)

c. merge is unconstrained (merge α)

> **cyclic hypothesis: element merged may be output of auxiliary derivation**
> **no-movement hypothesis: a displaced element is a 'remerged' element**
> (Bobaljik 1995)
> **opacity corollary: output of auxiliary derivation can only be merged as a whole**
> (Toyoshima 1997)

d. merge is uniform

> **simplicity hypothesis: merge affects one element at a time**
> **asymmetry corollary: output of merge is an ordered pair**
> (Jaspers 1998, Zwart 2005)
> **dependency hypothesis: dependency is a function of merge**
> (Epstein et al. 1998, Zwart 2002, Zwart 2004)
> **linearization hypothesis: linear order is a function of merge**
> (Zwart 2003b)

(2) Sources of variation:

a. Size of element remerged
(Koster 1999, Koopman & Szabolsci 2000)
b. Dependency realization
(Zwart 2004)
c. Selective expression of thematic/grammatical/discourse information
d. Lexical/morphological inventory
e. Other factors (probably needed for describing VERB MOVEMENT)

2. Brief history of verb movement

(3) Stages:

a. affix hopping
(Chomsky 1957 up to 1989)
b. feature checking/matching
(around since 1980, Chomsky 1993, Zwart 1993)
c. feature movement + lexicalization
(Chomsky 1995, Zwart 1997/2001)
d. 'phonology'
(Chomsky 1998)

(4) Variables:

minimalist ?

a. affixes merged in syntax
YES: Chomsky 1957 up to 1993
NO: Chomsky from 1993 on — **NO (1b)**

b. functional heads involved
YES: Chomsky before 1981, Zwart 2005
NO: Chomsky from 1981 on — **YES (1b)**

c. lexical integrity (no feature movement)
YES: Chomsky 1995, Zwart 1997
NO: Chomsky 1995, Zwart 1997 — **YES (1b)**

d. morphology after syntax
YES: Zwart from 1997 on
NO: Chomsky throughout (modulo readjustment) — **YES (1b)**

e. double representation of features
YES: Chomsky from 1993 on, Zwart up to 1997
NO: Chomsky before 1993, Zwart 2005 — **NO (1b)**

f. verb movement triggered by features
YES: Chomsky before 1998, Zwart up to 2001
NO: Chomsky from 1998 on, Zwart 2005 — **unclear**

3. Double representation of features

(5) Agreement

a. John   love-s   Mary
    [3SG]   [3SG]
    +inherent   –inherent

b. [$_{AGRSP}$ John   [$_{VP}$ love-s   Mary]]   (Chomsky 1993, Zwart 1993)
    N-feature   V-feature
    AGRS° (N-feature, V-feature)

c. [$_{TP}$ T°   [$_{VP}$ John   [$_{VP}$ love-s   Mary]]]   (Chomsky 2001)
    probe   goal
    $u\varphi$ φ
    Case uCase   (*u* = uninterpretable)

(6) simplification

a. $\langle$ John$_{[3SG]}$, $\langle$love, Mary$\rangle$ $\rangle$ $\longrightarrow$ $\langle$ John$_{[3SG]}$, $\langle$love, Mary$\rangle_{[3SG]}$ $\rangle$

feature sharing

b. a constituent realizes its features on (one or more of) its terms

(7) variation:

a. *main verb*

..dat	hij	in het bos	wandel-**t**
that	he	in the forest	walk-3SG

'..that he is walking in the forest.'   (Dutch)

b. *various verbal and adverbial elements*

Juma **a**-li-kuwa **a**-ngali **a**-ki-fanya kazi
Juma, 1-PAST-be 1-still 1-PROG-do work
'Juma was still working.' (Carstens 2003:395)   (Swahili)

c. *pronoun*

u bru pîn-yap pseñ **u**
the man cause-die snake 3SG
'The man killed the snake.' (Nagaraja 1997:355)   (Nongtung Khasi)

d. *object*

dios tupo-**n** naxo-xt'ewal wako·
god the-1PL we-annoy cause
'We annoyed God.' (Troike 1981:663)   (Coahuilteco)

(8) If correct...

a. there is no subject-verb agreement, just subject-predicate agreement
b. no functional heads are involved in agreement
c. the verb has no unvalued/uninterpretable φ-features
d. all features are (morphologically) interpretable

(9) Tense

a. John TENSE loves Mary
[PRES] [PRES]

b. ...and [love Mary], he does

c. [TP John T° [VP loves Mary]]   (Zwart 1997)
[TENSE: --] [TENSE: PRES]

overt/covert movement

d. [TP John T° [VP loves Mary]]   (Adger 2003)
[T:PRES] [uT]

probe/goal agreement

(10) Tense is not inherently associated with V

a. *past tense infinitive*
You must **have been** asleep when I came in

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b. *nominalizations*

[Datslapen / *geslapen hebben toen jij binnenkwam] irriteerde hem
that sleep:INF / sleep:PART have:INF when you came in irriteerde him
'The fact that I was asleep when you came in irritated him.'

c. Nominalizations involve tenseless verbs (cf. Alexiadou 2001)

(11) simplification

⟨ John ⟨ TENSE**PRES** ⟨ love, Mary ⟩⟩⟩ ——→ ⟨ John ⟨ TENSE**PRES** ⟨ love, Mary ⟩**PRES** ⟩⟩

(12) tense realized on the object   (Chamicuro)

a. p-aškalaʔt-is=**na** čamálo
2-kill-2:PL=THE bat
'You (plural) are killing the bat' (Parker 1999:553)

b. p-aškalaʔt-is=**ka** čamálo
2-kill-2:PL=THE:PAST bat
'You (plural) killed the bat' (Parker 1999:553)

4. Verb placement

(12) Dutch: tense/agreement realized on the verb, regardless its position

a. ...dat wij in het bos wandel-d-en
that we in the forest walk-PAST-PL
'.. that we walked in the forest.'

b. Wij wandel-d-en in het bos
we walk-PAST-PL in the forest
'We walked in the forest.'

(13) ⟨ we ⟨ TENSE ⟨ in the forest, walked ⟩⟩⟩
PL PAST

(14) Mirror principle: timing of feature sharing operations reflected in the order of inflectional morphemes.

(15) In order to realize tense/agreement, a verb does not need to move to T/Agr.

(16) Kayne/Hallman analysis of verb final clauses (Hallman 2000, Kayne 1994:52):

[subject [XP ... object ...] verb-AgrS/T° [VP — —]]

(17) A negative-marked verb need not be in Neg (contra Haegeman 2000):

a. ...da Valère dienen boek nie en-kent   (West Flemish)
that Valery that book not NEG-know:3SG

b. ⟨NEG ——→ ⟨... kent ...⟩⟩
negative

c. negative concord: multiple realization of [negative]

    ...da   Valère van **niemand** **nie** ketent **en**-was   (West Flemish)
    that   Valery of noone not content NEG-was
    '..that Valery was not pleased with anyone.'

d. Jespersen cycle (Jespersen 1917): changes in [negative] realization

    ne > ne oenum > non > ne > ne pas > pas

e. There is no spec-head agreement for [NEG], i.e. no Neg-Criterion > no NegP

(18) Adverbial notions (Cinque 1999)

a. evaluative > modal > aspectual > temporal > manner

b. ADV_1 ADV_2 ADV_3 V-adv3-adv2-adv1

c. ex. modal > temporal

  i   He *probably did* not go ADV_1 ADV_2

  ii anti-ci   re'an-aha-kon   V-adv2-adv1
       market-to   go-PAST-PROB
       'I think he went to the market.' (Bybee 1985:180)   (Garo)

d. [AdvP adverb   Adv°   [VP   verb-*adv*]]

e. ⟨MODAL ——→ ⟨TENSE ——→ ⟨anti-ci   re'an⟩⟩⟩
      probable   *past*

f. If adverbial notions are operators > no AdvPs > no V-movement to Adv

(19) Dutch: modality expressed by modal verbs

a. Jan   zal gisteren   vertrokken zijn
   John   will yesterday   leave:PART be:INF
   'John probably left yesterday.'

b. ..dat   Jan   **gisteren**   vertrokken **zal**   zijn
                TEMPORAL   MODAL

c. Cinque order consistently violated in embedded clauses (IJbema 2002)

d. Possible solutions:
- AdvP is head-final, *zal* raised to Adv° ⊗
- AdvP is head-initial, *zal* raised to Adv°, rest moves around it ⊗
- there is no AdvP, verbal morphology is morphological realization of the adverbial feature acquired by the predicate through feature sharing ☺

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5. What remains of 'The morphosyntax of verb movement' ?

(20) Verb movement asymmetry in Continental West-Germanic (and Mnl. Scandinavian)

a. embedded clause (EMB)   (Dutch)
    ..dat   Jan   Marie   **kust**
    that   John   Mary   kisses
    '..that John kisses Mary.'

b. subject-initial main cl. (SIMC)   Jan   **kust**   Marie
                                  John   kisses   Mary

c. inversion main cl. (INV)   Dan   **kust**   Jan   Marie
                          then   kisses   John   Mary
                          'Then John kisses Mary.'

(21) Crucial ingredients of Zwart (1993, 1997):

a. Dutch is head-initial   (cf. position complementizer, determiner, etc.)

b. subject/object have designated derived positions   (Spec,AgrSP / Spec, AgrOP)

c. verb movement is a secondary phenomenon, triggered by the need to license elements in the specifier (1993: subject, topic, wh-phrase) or head (1997: a stray feature) position of functional projections

(22)

	[CP spec	C	[AgrSP spec	AgrS	[TP	T	[AgrOP spec	AgrO	[VP V]]]]
EMB		dat	Jan		Jan		Marie		Marie
SIMC		dan	Jan	kust	Jan		Marie		kust
INV		dan	kust	Jan	Jan		Marie		Marie

(23) What is left of the crucial ingredients ?

a. *Head-initial syntax:*   i.   internal argument is dependent of (selected by) verb
                           ii.   dependency is a function of merge (1d): verb is merged to the internal argument
                           iii.   linearization verb > internal argument (cf. complement clause)

    Question: why is the internal argument noun phrase remerged in object position?

b. *Subject/object positions:*   i.   there are no absolute positions (1a)
                                 ii.   subject merged to a potential predicate

    Question: why are argument noun phrases remerged in subject/object position?

c. *Verb movement:*   i.   no positions (1a) > no rule V-to-C
                    ii.   flexible structure: V2 = verb after whatever is first
                    iii.   'asymmetric' V2
                    iv.   verb movement not for feature licensing purposes

    Question: why is the verb remerged in second position?

6. V2 as a function of merge

(24) Why is V2 conditional on other fronting operations (i.e., on Merge) ?

a. merge yields $\langle x,y \rangle$, where y is a dependent of x (1d)

b. dependency may be marked (i) by form (inflection) (ii) by position (linker)

c. hypothesis: V2 is positional marking of the dependency relation between a fronted element (subject, topic, wh-element) and its sister (Zwart 2005)

(25) Positional dependency marking:

a. SIMC/INV: finite verb

b. EMB: complementizer

c. Icelandic/Yiddish: a/b combined in embedded clauses: embedded V2
Dutch/Mnl. Scandinavian: only one positional dependency marking per clause: V-last

(26) Pre-linker position ('Spec,CP') not available in embedded clauses:

a. Gisteren   kuste   Jan   Marie
   yesterday   kissed   John   Mary

b. (Ik denk)   ...   (*gisteren)   dat   Jan   Marie   kuste
   I think   yesterday   that   John   Mary   kissed   (Dutch)

c. (Ik denk)   ...   dat   gisteren   Jan   Marie   kuste
   I think   that   yesterday   John   Mary   kissed

(27) Other facts suggesting V2 = linker

a. *Quotative inversion*
   Ik   voel   me   zo   ziek   **zei**   Jan   (*Jan zei)
   I   feel   me   so   sick   said   John   (Dutch)

   [Jan zei]   [ik voel me zo ziek]
   background   *focus*

b. *V2 triggered by conjunction*
   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)

c. *double* V2
   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)

   ⟨dan   ⟨je tegenstander   ⟨neer was⟩⟩⟩

7. The Zita facts

(28) ..zet-te   ik   >   zet-ik-te
     put-PAST.SG   1SG   put-1SG-PAST.SG   (Flikweert 1994, Barbiers & Van Koppen 2005)
                                                                (Child Dutch)

(29) Restricted to: - inversion
                      - 1SG subject pronoun
                      - past tense

(30) Barbiers & Van Koppen (2005) analysis:

a. *-te* is generated in $T°$ (cf. (4a))

b. TP is head initial ©

c. inversion: V-to-T-to-C, stranding *-te* in $T°$

d. embedded clauses: Kayne/Hallman analysis (cf. (16))

   *..dat   ik-te   het   neer   zet
   that   1SG-PAST   it   down   put
   '..that I put it down.' (past)

   dat ik   [het neer] zet-te   (past)

(31) My observations (from Zita, consistent from age 2 up to age 5)

a. dat   bedoel-**d-ik-te**   ook
   that   mean-PAST.SG-1SG-PAST.SG   also

b. restriction to 1SG suggests: *-te* = PAST.**1SG**

c. ⟨ik   ⟨TENSE   ⟨dat ook bedoel⟩⟩⟩
   1sg   *past*

d. EMB: *1sg* and *past* realized on V (bedoel-de), no verb movement
   SIMC: *1sg* and *past* realized on V (bedoel-de), V2
   INV: *1sg* and *past* realized on V (bedoel-de), V2, second realization on T (*-te*)

e. ⟨dat   ⟨bedoelde   ⟨ik   ⟨TENSE   ⟨~~dat ook bedoel~~⟩⟩⟩⟩⟩
   1sg   *past*

f. pattern follows if kid wants to explicitly mark the subject's sister for 1SG: with the verb gone, a dummy 1SG.PAST marker *-te* is inserted as a positional dependency marker for the subject's sister

... THE PAPER IS OPEN FOR DISCUSSION ...

References

Adger, David. 2003. *Core syntax.* Oxford: Oxford University Press.

Alexiadou, Artemis. 2001. *Functional structure in nominals: nominalization and ergativity.* Amsterdam: John Benjamins.

Barbiers, Sjef and Marjo van Koppen. 2005. A place for tense in the Dutch middle field. Paper presented at the Verb Clusters and Coordination Workshop, Leiden, November 4.

Bobaljik, Jonathan D. 1995. In terms of Merge. *MIT Working Papers in Linguistics* 27, 41-64.

Bybee, Joan. 1985. *Morphology: a study of the relation between meaning and form.* Amsterdam: John Benjamins.

Carstens, Vicky. 2003. Rethinking complementizer agreement: agree with a case-checked goal, *Linguistic Inquiry* 34, 393-412.

Chomsky, Noam. 1957. *Syntactic structures.* The Hague: Mouton.

Chomsky, Noam. 1981. *Lectures on Government and Binding.* Dordrecht: Foris.

Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20: essays in linguistics in honor of Sylvain Bromberger,* Ken Hale and Samuel J. Keyser, eds., 1-52. Cambridge: MIT Press.

Chomsky, Noam. 1995. *The minimalist program.* Cambridge: MIT Press.

Chomsky, Noam. 1998. Derivation by phase. *MIT Occasional papers in linguistics* 18 (1999).

Chomsky, Noam. 2001. Derivation by phrase. In *Ken Hale: a life in language,* Michael Kenstowicz, ed., 1-52. Cambridge: MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and functional heads.* New York: Oxford University Press.

Epstein, Samuel D., Erich M. Groat, Ruriko Kawashima, and Hisatsugu Kitahara. 1998. *A derivational approach to syntactic relations.* New York: Oxford University Press.

Filkweert, M. 1994. Wat hoor ik-te jou zeggen?'. MA-thesis, Utrecht University.

Haegeman, Liliane. 2000. Remnant movement and OV-order. In *The derivation of VO and OV,* Peter Svenonius, ed., 69-96. Amsterdam: John Benjamins.

Halle, Morris and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger,* Ken Hale and Samuel J. Keyser, eds., 111-176. Cambridge: MIT Press.

Hallman, Peter. 2000. Verb-final as a subcase of verb-second. *Proceedings of NELS* 30, 287-298.

van der Horst, J. and K. van der Horst. 1999. *Geschiedenis van het Nederlands in de twintigste eeuw.* The Hague/Antwerp: Sdu/Standaard.

IJbema, Aniek. 2002. *Grammaticalization and infinitival complements in Dutch.* Dissertation, Leiden University.

Jaspers, Dany. 1998. Categories and recursion. *Interface* 12, 81-112.

Jespersen, Otto. 1917. *Negation in English and other languages.* Kopenhagen: A.F. Høst.

Kayne, Richard S. 1994. *The antisymmetry of syntax.* Cambridge: MIT Press.

Koopman, Hilda and Anna Szabolcsi. 2000. *Verbal complexes.* Cambridge: MIT Press.

Koster, Jan. 1999. The word orders of English and Dutch: collective vs. individual checking. *Groninger Arbeiten zur germanistischen Linguistik* 43, 1-42.

Nagaraja, K.S. 1997. Word order in Khasi. In *Languages of tribal and indigenous peoples of India: the ethnic space,* A. Abbi, ed., 347-359. Delhi: Motilal Banarsidass.

Nilsen, Øystein. 2003. *Eliminating positions.* Dissertation, Utrecht University.

Parker, S. 1999. On the behavior of definite articles in Chamicuro. *Language* 75:552–562.

Toyoshima, Takashi. 1997. Derivational CED. *Proceedings of WCCFL* 15, 505-519.

Troike, Robert C. 1981. Subject-object concord in Coahuilteco. *Language* 57: 658-673.

Zwart, Jan-Wouter. 1993. *Dutch syntax: a minimalist approach.* Dissertation, University of Groningen.

Zwart, Jan-Wouter. 1997. *Morphosyntax of verb movement: a minimalist approach to the syntax of Dutch.* Dordrecht: Kluwer Academic Publishers.

Zwart, Jan-Wouter. 2001. Syntactic and phonological verb movement. *Syntax* 4, 34-62.

Zwart, Jan-Wouter. 2002. Issues relating to a derivational theory of binding. In *Derivation and explanation in the Minimalist Program,* Samuel D. Epstein and T. Daniel Seely, eds., 269-304. Malden: Blackwell Publishing.

Zwart, Jan-Wouter. 2003a. Agreement and remnant movement in the domain of West-Germanic verb movement. In *Germania et alia: a linguistic Webschrift for Hans den Besten,* Jan Koster and Henk van Riemsdijk, eds. Groningen: Department of Linguistics. http://www.let.rug.nl/~koster/DenBesten/contents.html

Zwart, Jan-Wouter. 2003b. What's in a name? Syntactic and asyntactic accentuation in Dutch. In *Grammatik i fokus / Grammar in focus: Festschrift for Christer Platzack 18 november 2003,* Lars-Olof Delsing, Cecilia Falk, Gunlög Josefsson, and Halldór A. Sigurðsson, eds., Vol. II, 395-401. Lund: Department of Scandinavian Languages.

Zwart, Jan-Wouter. 2003-2004. Een dynamische structuur van de Nederlandse zin. *Tabu* 33, 55-71 and 151-172.

Zwart, Jan-Wouter. 2004. Local agreement. To appear in *Agreement systems,* Cédric Boeckx, ed. Amsterdam: John Benjamins.

Zwart, Jan-Wouter. 2005. Verb second as a function of Merge. In *The function of function words and functional categories,* Marcel den Dikken and Christina M. Tortora, eds., 11-40. Amsterdam: John Benjamins.

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