DISPLACED MORPHOLOGY IN DUTCH: VARIATION IN NON-FINITE VERB CLUSTERS

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Introduction

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(1) a. Ik vind dat iedereen **moet$_1$** **kunnen$_2$** **zwemmen$_3$**. (✓123)
I find that everyone must.INF can.INF swim.INF
'I think everyone should be able to swim.'

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b. Ik vind dat iedereen **MUST$_1$** **SWIM$_3$** **CAN$_2$**. (✓132)
c. Ik vind dat iedereen **SWIM$_3$** **MUST$_1$** **CAN$_2$**. (✓312)
d. Ik vind dat iedereen **SWIM$_3$** **CAN$_2$** **MUST$_1$**. (✓321)
e. *Ik vind dat iedereen **CAN$_2$** **SWIM$_3$** **MUST$_1$**. (*231)
f. *Ik vind dat iedereen **CAN$_2$** **MUST$_1$** **SWIM$_3$**. (*213)

(Barbiers et al. 2008)

Note: no semantic effect

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On V2: (3) Ze zal vandaag niet veel boodschappen hoeven$_1$ ***te*** gaan$_2$ doen$_3$.
she will today not many groceries have.to.INF to go.INF do.INF
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she will today not many groceries have.to.INF to go.INF do.INF
'She won't have to do a lot of groceries today.'

On V3: (4) Ze zal morgen lang op de bus moeten$_1$ zitten$_2$ ***te*** wachten$_3$.
she will tomorrow long on the bus must.INF sit.INF to wait.INF
'She will have to wait for the bus for a long time tomorrow.'

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In German, the infinitival marker *zu* 'to' can sometimes appear on a different verb than is required by selection in non-descending cluster orders (Salzmann 2013, 2016):

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(5) a. … ohne das Buch lesen$_3$ gekönnt$_2$ ***zu*** haben$_1$. *321 order*
without the book read.INF can.PTCP to have.INF

b. … ohne das Buch haben$_1$ lesen$_3$ ***zu*** können$_2$. *132 order*
without the book have.INF read.INF to can.INF
'…without having been able to read the book.'

(Salzmann 2016: 406)

→ In both examples, the complementizer *ohne* selects a *zu*-infinitive: *zu haben*. In (5b), *zu* doesn't appear on V1 *haben*, but on V2 *können*

Introduction

Starting point of this talk: hypothesis that the placement of *te* in non-finite three-verb clusters can also vary in different varieties of Dutch

(6) Ze zegt veel boodschappen <***te***> hebben$_1$ <***te***> moeten$_2$ <***te***> doen$_3$.
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Topic of this talk: **variation in *te*-placement** in Dutch non-finite three-verb clusters in 123-order

Outline

Methodology

2. Results
   - 2.1 *Te*-drop
   - 2.2 *Te*-raising
   - 2.3 *Te*-lowering
   - 2.4 Correlation *te*-raising and *te*-lowering

3. Analysis
   - 3.1 Prerequisites for the analysis
   - 3.2 Analysis of *te*-drop
   - 3.3 Analysis of *te*-raising
   - 3.4 Towards an analysis *te*-lowering

4. Conclusion

1. Methodology

1.1 Design

Three types of clusters

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Cluster type I. ***te*-V1-V2-V3**

- selection requirements dictate that *te* should appear on V1

Anne zegt op haar comfortabele stoel ***te*** **willen$_1$** **blijven$_2$** **zitten$_3$**.
Anne says on her comfortable chair to want.INF remain.INF sit.INF
'Anne says she wants to remain seated on her comfortable chair.'

1.1 Design

<u>Cluster type II.</u> V1-*te*-V2-V3

- selection requirements dictate that *te* should appear on V2

Koen zal vanwege de winterstop vandaag niet **hoeven**$_1$ ***te*** **gaan**$_2$ **voetballen**$_3$
Koen will because.of the winter.break today not need.to.INF to go.INF play.football.INF
'Due to the winter break, Koen doesn't need to go play football today.'

1.1 Design

<u>Cluster type III.</u> V1-V2-*te*-V3

- selection requirements dictate that *te* should appear on V3

Peter	zal	vanwege	de	nieuwe	dienstregeling	binnenkort	nog	langer
Peter	will.FIN	because.of	the	new	schedule	soon	even	longer

op	de	trein	**moeten$_1$**	**zitten$_2$**	***te***	**wachten$_3$**.
on	the	train	must.INF	sit.INF	to	wait.INF

'Because of the new schedule, Peter will soon have to wait even longer for the train.'

1.1 Design

7 different versions of all cluster types

1. te-V1-V2-V3
2. V1-te-V2-V3
3. V1-V2-te-V3
4. V1-V2-V3
5. te-V1-te-V2-V3
6. te-V1-V2-te-V3
7. V1-te-V2-te-V3

28 test items, 32 filler items, 5 practice items

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1.2 Task & Participants

Task

- Grammaticality judgment task, using a 5-point Likert scale
- Online written questionnaire, test items presented in randomized order

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Participants

- 459 included speakers (Mean age: 56 (*SD* 12.5); 250 female)

1.2 Task & Participants

Map 1. Locations of the included participants

2. Results

2. RESULTS

Map 2. Difference map
linguistic differences mapped onto geographical space

2.1 Results: *TE*-drop

2.1 *TE*-DROP

***Te*-drop**: *te* does not appear in the cluster, whereas selection requirements dictate it should

2.1 *Te*-drop

	Te cannot be dropped	*Te*-drop is optional	*Te* needs to be dropped	All versions of the test item are rejected
te-V1-V2-V3	451	8	0	0
V1-*te*-V2-V3	190	189	19	62
V1-V2-*te*-V3	20	152	223	64

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2.1 *TE*-DROP

<u>The results show the following pattern</u>: the lower the verb *te* should appear on, the more optional it becomes (even to the point of it being necessarily absent)

V1 ---------- **V2** ---------- **V3**

te needs to be present ---------- ***te*** needs to be absent

2.2 Results: *TE*-raising

2.2 *Te*-raising

***Te*-raising**: *te* appears on a higher verb in the verb cluster than selection requirements dictate it should appear on

2.2 *TE*-RAISING

Theoretical options for *te*-raising per cluster type

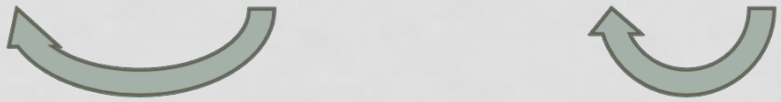
Cluster type I *te*-V1-V2-V3: no *te*-raising possible; *te* is already in the highest position of the cluster

Cluster type II V1-*te*-V2-V3: one *te*-raising option:

te V1 ~~*te*~~ V2 V3

Cluster type III V1-V2-*te*-V3: two *te*-raising options:

te V1 V2 ~~*te*~~ V3 or V1 *te* V2 ~~*te*~~ V3



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***Te*-raising results:**

- V1-*te*-V2-V3 cluster: 185 speakers allow *te*-raising
- V1-V2-*te*-V3 cluster: 25 speakers allow *te*-raising to V2; 21 speakers allow *te*-raising to V1

2.2 *TE*-RAISING

***Te*-raising results:**

- V1-*te*-V2-V3 cluster: 185 speakers allow *te*-raising
- V1-V2-*te*-V3 cluster: 25 speakers allow *te*-raising to V2; 21 speakers allow *te*-raising to V1
- For *te*-raising, the following implicational relation holds:

  IF *te*-raising THEN ALSO *te* in situ

2.3 Results: *TE*-lowering

2.3 *Te*-lowering

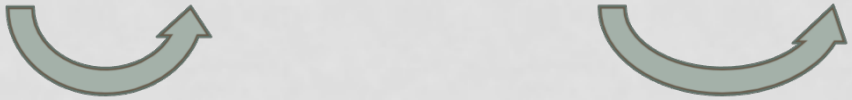
***Te*-lowering**: *te* appears on a lower verb in the verb cluster than selection requirements dictate it should appear on

2.3 *TE*-LOWERING

Theoretical options for *te*-lowering per cluster type

Cluster type I *te*-V1-V2-V3: two *te*-lowering options:

~~*te*~~ V1 *te* V2 V3 or ~~*te*~~ V1 V2 *te* V3



Cluster type II V1-*te*-V2-V3: one *te*-lowering option:

V1 ~~*te*~~ V2 *te* V3

Cluster type III V1-V2-*te*-V3: no *te*-lowering possible; *te* is already in the lowest position of the cluster

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<u>*Te*-lowering results:</u>

- *te*-V1-V2-V3 cluster: 59 speakers allow *te*-lowering to V2; 17 speakers allow *te*-lowering to V1

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- *te*-V1-V2-V3 cluster: 59 speakers allow *te*-lowering to V2; 17 speakers allow *te*-lowering to V1
- V1-*te*-V2-V3 cluster: 40 speakers allow *te*-lowering

2.3 *TE*-LOWERING

***Te*-lowering results:**

- *te*-V1-V2-V3 cluster: 59 speakers allow *te*-lowering to V2; 17 speakers allow *te*-lowering to V1
- V1-*te*-V2-V3 cluster: 40 speakers allow *te*-lowering
- The following implicational relation holds:

  IF *te*-lowering THEN ALSO *te* in situ

2.4 Correlation *Te*-lowering and te-raising

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Are *te*-raising and *te*-lowering correlated; are they two instances of the **same mechanism or not**?

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Are *te*-raising and *te*-lowering correlated; are they two instances of the **same mechanism or not**?

→ **No**: not all speakers who accept *te*-raising also accept *te*-lowering or vice versa.

2.4 Correlation *te*-lowering and te-raising

In other words, it is not the case that speakers who allow (A) also allow (B), nor that speakers who allow (B) also allow (A).

(A) ~~*te*~~ V1 *te* V2 V3

(B) *te* V1 ~~*t*~~e V2 V3

2.4 Correlation *Te*-lowering and te-raising

In other words, it is not the case that speakers who allow (A) also allow (B), nor that speakers who allow (B) also allow (A).

(A) ~~*te*~~ V1 *te* V2 V3

(B) *te* V1 ~~*t*~~e V2 V3

→ Two different mechanisms

→ In addition, (B) is much more common than (A)

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II. *Te*-raising is not the same mechanism as *te*-lowering. The former is much more frequent than the latter.

3. Analysis

Three main findings:

I. The deeper the *te*-verb is embedded, the more optional *te* becomes (even up to the point of it being necessarily absent)

II. *Te*-raising is not the same mechanism as *te*-lowering. The former is much more frequent than the latter

III. Both mechanism are optional/secondary. The following implicational relation holds:

IF *te*-raising/*te*-lowering THEN ALSO *te* in situ

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- **non-finite three-verb clusters are cases of *functional restructuring*** (Cinque 2001; in line with Wurmbrand 2001, 2004, 2016; IJbema 2001), in which V1 and V2 occupy a position in the functional sequence (Fseq) of lexical V3

3. Analysis

I will argue that:

- **non-finite three-verb clusters are cases of *functional restructuring*** (Cinque 2001; in line with Wurmbrand 2001, 2004, 2016; IJbema 2001), in which V1 and V2 occupy a position in the functional sequence (Fseq) of lexical V3

- The lexical/functional verb dichotomy is too sharp, and that **there are also 'quasi-functional' verbs** (Cardinaletti & Shlonsky 2004)

3.1 Prerequisites for the analysis

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Functional restructuring (mono-clausal approach): a restructuring verb is a functional head (Cinque 2001, 2003, 2004), which combines with the restructuring infinitive; the restructuring infinitive is the main predicate of the clause

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Cinque (2001) argues that the modal, aspectual and motion verbs that appear in restructuring constructions correspond to the functional heads in (7)

(7) $Mood_{Speech\ Act} > Mood_{Evaluative} > Mood_{Evidential.} > Mod_{Epistemic} > T(Past) > T(Future) > Mood_{Irrealis} > Mod_{Necessity} > Mod_{Possibility} > Asp_{Habitual} > Asp_{Repetitive(I)} > Asp_{Frequentative(I)} > Asp_{Celerative(I)} > Mod_{Volitional} > Mod_{Obligation} > Mod_{Ability/Permission} > Asp_{Celerative(I)} > T(Anterior) > Asp_{Terminative} > Asp_{Continuative} > Asp_{Perfect} > Asp_{Retrospective} > Asp_{Proximative} > Asp_{Durative} > Asp_{Generic/progressive} > Asp_{Prospective} > Asp_{SgCompletive(I)} > Asp_{PlCompletive} > Voice\ Asp_{Celerative(II)} > Asp_{SgCompletive(II)} > Asp_{Repetitive(II)} > Asp_{Frequentative(II)} > Asp_{SgCompletive(II)}$

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Restructuring effects I: certain phenomena such as clitic climbing, which are normally clause-bound, appear to be able to span two clauses when the matrix verb is a modal, an aspectual or a motion verb, and the complement is non-finite (Cinque 2001).

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(8) **<Lo>** volevo [vedere **<lo>** subito]. *matrix verb = modal*
him I.wanted see.INF him immediately
'I wanted to see him immediately.'

(9) <***Lo>** detesto [vedere **<lo>** in quello stato]. *matrix verb = lexical*
him I.detest see.INF him in that state
'I hate to see him in that state.'

3.1 Prerequisites for the analysis

Restructuring effects II: auxiliary switch. A modal verb such as *volere* 'want' which selects the auxiliary *avere* 'have', appears with the auxiliary *essere* 'be', when the lexical verb normally selects this auxiliary (10) (Cardinaletti & Shlonsky 2004). This is impossible in non-restructuring contexts (11).

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Restructuring effects II: auxiliary switch. A modal verb such as *volere* 'want' which selects the auxiliary *avere* 'have', appears with the auxiliary *essere* 'be', when the lexical verb normally selects this auxiliary (10) (Cardinaletti & Shlonsky 2004). This is impossible in non-restructuring contexts (11).

(10) <Ci> **sarei** voluto andare con Maria.
there I.would-be wanted go.INF. with Maria
'I would have liked to go there with Maria.'

(11) **Avrei** /***Sarei** detestato andarci con Maria.
I.would-have/I.would-be detested go.INF.there with Maria
'I would have hated to go there with Maria.'

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Empirical support for analyzing Dutch non-finite clusters as functional restructuring:

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I. Auxiliary switch in Dutch non-finite verb clusters, in analogy to auxiliary switch in Italian

II. Degraded inflection of the modal/aspectual verb: IPP in Dutch and lack of infinival *–e* in Italian

3.1 Prerequisites for the analysis

Auxiliary switch

Dutch non-finite verb clusters involving a modal or aspectual verb (i.e. restructuring verb) show auxiliary switch (Van der Horst 1998; 2008; Haeselyn et al. 1997; Draye & Van der Horst 2006; Coussé & Van de Velde 2014; Van Eynde et al. 2016 amongst others)

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(12) Hij *is/heeft dat gewild.
He is/has that wanted.
'He has wanted that.'

(13) Dat hij geen VLD-voorzitter is willen worden.
that he no VLD-chairman is wanted become
'That he didn't want to become a VLD chairman.'

(Van Eynde et al 2016: 20)

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Degraded inflection on the modal/aspectual verb

Both in Dutch and in Italian, modal/aspectual verbs shows degraded inflection in a functional restructuring contexts:

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Both in Dutch and in Italian, modal/aspectual verbs shows degraded inflection in a functional restructuring contexts:

Italian infinitival *–e* inflection:

(14) Ci vorrei poter(*e) andare con Maria. Italian
there I.would-want be-able.INF go.INF with Maria
'I would like to be able to go there with Maria.'
(Cardinaletti & Shlonsky 2004: 529)

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Degraded inflection on the modal/aspectual verb

In Dutch, modals in non-restructuring contexts (i.e. used as lexical verb) (15) appear embedded under an auxiliary in their regular participle form, but in restructuring contexts they appear without the *ge-* prefix (16) (see Zwart 2007)

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Degraded inflection on the modal/aspectual verb

In Dutch, modals in non-restructuring contexts (i.e. used as lexical verb) (15) appear embedded under an auxiliary in their regular participle form, but in restructuring contexts they appear without the *ge-* prefix (16) (see Zwart 2007)

(15) Hij heeft haar ge-zien.
He has her GE-seen
'He has seen her.'

(16) Dat hij haar heeft (*ge-)zien lopen.
that he her has GE- seen walk.INF
'That he has seen her walk by.'

3.2 Analysis of *TE*-drop

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I assume that *te* is generated in T (in line with Bennis & Hoekstra 1989; Den Besten & Broekhuis 1989; Rutten 1991 amongst others)

3.2 Analysis of *te*-drop

Evidence for *te* being generated in T:

Verbs like 'leren' *to learn* and 'helpen' *to help* can select either a bare infinitive or a *te*-infinitive. Only when they select a *te*-infinitive can the matrix verb and the complement both be modified by conflicting temporal adverbs:

(17) a. *Vandaag leer ik hem morgen werken.
Today learn.FIN I him tomorrow work.INF

b. Vandaag leer ik hem morgen ***te*** werken.
Today learn.FIN I him tomorrow to work.INF
'Today I learn him he should work tomorrow.'

3.2 Analysis of *te*-drop

Cluster type I *te*-V1-V2-V3

Anne **zegt** op haar comfortabele stoel *te* **willen**$_1$ **blijven**$_2$ **zitten**$_3$.
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(18) $Mood_{Speech\ Act} > Mood_{Evaluative} > Mood_{Evidential.} > Mod_{Epistemic} > T(Past) >$ **T(Future)** ***te*** $> Mood_{Irrealis} > Mod_{Necessity} > Mod_{Possibility} > Asp_{Habitual} >$ $Asp_{Repetitive(I)} > Asp_{Frequentative(I)} > Asp_{Celerative(I)} >$ **$Mod_{Volitional}$** ***willen*** $>$ $Mod_{Obligation} > Mod_{Ability/Permission} > Asp_{Celerative(I)} > T(Anterior) > Asp_{Terminative} >$ $Asp_{Continuative} > Asp_{Perfect} > Asp_{Retrospective} > Asp_{Proximative} >$ **$Asp_{Durative}$** ***blijven*** $>$ $Asp_{Generic/progressive} > Asp_{Prospective} > Asp_{SgCompletive(I)} > Asp_{PlCompletive} >$ Voice $Asp_{Celerative(II)} > Asp_{SgCompletive(II)} > Asp_{Repetitive(II)} > Asp_{Frequentative(II)} >$ $Asp_{SgCompletive(II)} \ldots$ **V^0** ***zitten***

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Cluster type II V1-*te*-V2-V3

'Koen zal vanwege de winterstop vandaag niet **hoeven** ***te*** **gaan voetballen**'
Koen will because.of the winter.break today not need.to.INF to go.INF play.football.INF
'Due to the winter break, Koen doesn't need to go play football today.'

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Koen will because.of the winter.break today not need.to.INF to go.INF play.football.INF
'Due to the winter break, Koen doesn't need to go play football today.'

(19) $Mood_{Speech\ Act} > Mood_{Evaluative} > Mood_{Evidential.} > Mod_{Epistemic} > T(Past) >$ **T(Future)** > **$Mood_{Irrealis}$** $> Mod_{Necessity}$ ***hoeven*** $> Mod_{Possibility} > Asp_{Habitual} > Asp_{Repetitive(I)} > Asp_{Frequentative(I)} > Asp_{Celerative(I)} > Mod_{Volitional} > Mod_{Obligation} > Mod_{Ability/Permission} > Asp_{Celerative(I)} > T(Anterior) > Asp_{Terminative} > Asp_{Continuative} > Asp_{Perfect} > Asp_{Retrospective} > Asp_{Proximative} > Asp_{Durative} > Asp_{Generic/progressive} >$ **$Asp_{Prospective}$** ***gaan*** $> Asp_{SgCompletive(I)} > Asp_{PlCompletive} > Voice\ Asp_{Celerative(II)} > Asp_{SgCompletive(II)} > Asp_{Repetitive(II)} > Asp_{Frequentative(II)} > Asp_{SgCompletive(II)}$ ….
V^0 ***voetballen***

3.2 Analysis of *te*-drop

Cluster type III V1-V2-*te*-V3

‘Peter	zal	vanwege	de	nieuwe	dienstregeling	binnenkort	nog	langer
Peter	will.FIN	because.of	the	new	schedule	soon	even	longer

op	de	trein	**moeten**	**zitten**	*te*	**wachten**′
on	the	train	must.INF	sit.INF	to	wait.INF

‘Because of the new schedule, Peter will soon have to wait even longer for the train.’

3.2 ANALYSIS OF *TE*-DROP

Cluster type III V1-V2-*te*-V3

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'Because of the new schedule, Peter will soon have to wait even longer for the train.'

(20) $Mood_{Speech\ Act} > Mood_{Evaluative} > Mood_{Evidential.} > \mathbf{Mod_{Epistemic}} > T(Past) > T(Future) > Mood_{Irrealis} > Mod_{Necessity} > Mod_{Possibility} > Asp_{Habitual} > Asp_{Repetitive(I)} > Asp_{Frequentative(I)} > Asp_{Celerative(I)} > Mod_{Volitional} > Mod_{Obligation}$ ***moeten*** $> Mod_{Ability/Permission} > Asp_{Celerative(I)} > T(Anterior) > Asp_{Terminative} > Asp_{Continuative} > Asp_{Perfect} > Asp_{Retrospective} > Asp_{Proximative} > Asp_{Durative} > \mathbf{Asp_{Generic/progressive}}$ ***zitten*** $> Asp_{Prospective} > Asp_{SgCompletive(I)} > Asp_{PlCompletive} > Voice\ Asp_{Celerative(II)} > Asp_{SgCompletive(II)} > Asp_{Repetitive(II)} > Asp_{Frequentative(II)} > Asp_{SgCompletive(II)}$ ….

$\mathbf{V^0}$ ***wachten***

3.2 Analysis of *te*-drop

Recall: *te*-drop was only attested in V1-*te*-V2-V3 and V1-V2-*te*-V3 clusters

	***Te* cannot be dropped**	***Te*-drop is optional**	***Te* needs to be dropped**	**All versions of the test item are rejected**
te-V1-V2-V3	451	8	0	0
V1-*te*-V2-V3	190	189	19	62
V1-V2-*te*-V3	20	152	223	64

Table 1. Frequency overview *te*-drop in all three types of clusters

3.2 Analysis of *te*-drop

Cardinaletti & Shlonsky (2004): functional/lexical verb dichotomy is too sharp

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→there are also 'quasi-functional' verbs, having less structure than lexical verbs but more than functional verbs

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(21) ***Li*** *sono/ho voluti far**(e)** andare a prendere a Maria.
Them I.am/I.have wanted make go to fetch a Maria
'I wanted to make Maria go and fetch them.'

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'I wanted to make Maria go and fetch them.'
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→ As can also be seen in (21), the infinitive-final *–e* on the quasi-functional verb is optional

3.2 Analysis of *te*-drop

Cardinaletti & Shlonsky (2004: 546) propose the following typology:

	Functional verbs	Quasi-functional verbs	Lexical verbs
Biclausal structure	-	-	+
Blocks clitic climbing	-	-	+
Determines auxiliary selection	-	+	+
Infinitive-final [e]	-	-/+	+

Table 2. Typology of Italian functional, quasi-functional and lexical verbs

3.2 Analysis of *te*-drop

Optionality of *te* with 'hoeven' in the V1-*te*-V2-V3 cluster and progressive 'zitten' in the V1-V2-*te*-V3 structure:

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(i) *Hoeven* 'need to' and progressive *zitten* 'to sit' are quasi-functional verbs, which can host a *te* in their complement but are not full lexical verbs (have modal/aspectual semantics; show degraded inflection (IPP effect))

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(ii) Diachronically, these verbs are losing their ability to select a *te*-infinitive (Van Pottelberge 2002; Van de Velde 2014, to appear)

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3.2 ANALYSIS OF *TE*-DROP

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3) *Hoeven* 'need to' is functional = *te* needs to be dropped

→ Idem for progressive *zitten* 'to sit'

3.2 Analysis of *te*-drop

These predictions are born out:

	Te cannot be dropped	*Te*-drop is optional	*Te* needs to be dropped	All versions of the test item are rejected
te-V1-V2-V3	451	8	0	0
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Table 1. Frequency overview *te*-drop in all three types of clusters

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him I.wanted see.INF him immediately
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him I.wanted see.INF him immediately
'I wanted to see him immediately.'

V1-*te*-V2-V3 cluster type:

(23) … niet **<te>** hoeven **<te>** gaan voetballen *te-raising*
not to have.to.INF to go.INF play.football
'… not having to go play football.'

Implicational relation: IF *te*-raising THEN ALSO *te* in situ

3.3 Analysis of *te*-raising

V1-V2-*te*-V3 cluster type:

(24) … **<te>** moeten **<te>** zitten **<te>** wachten
to must.INF to sit.INF to wait.INF
'… having to wait.'

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to must.INF to sit.INF to wait.INF
'… having to wait.'

The implicational relation:
IF *te*-raising THEN ALSO *te* in situ

Te-raising in this cluster is less frequent because progressive *zitten* 'to sit' has already developed further into a functional verb than '*hoeven*' of the V1-*te*-V2-V3 cluster type (Van de Velde to appear)

3.3 Analysis of *te*-raising

Typology of Dutch verbs in non-finite verb clusters:

	Functional verbs	Quasi-functional verbs	Lexical verbs
Biclausal structure	-	-	+
Blocks *te*-raising	-	-	+
Blocks *te*-drop	-	+	+
Determines auxiliary selection*	-	+	+
Full inflection (no IPP effect)	-	-	+

Table 3. Typology of Dutch verbs in non-finite verb clusters

*Preliminary: systematic investigation in future research

3.4 Towards an analysis of *te*-lowering

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Recall: *te*-lowering

- finite verb in verb second position selects a *te*-infinitive, i.e. *te* should appear on V1
- A subgroup of speakers accept *te*-lowering onto V2, or even V3

Anne zegt op haar comfortabele stoel <*te*> willen$_1$ <*te*> blijven$_2$ <*te*> zitten$_3$.
Anne says.FIN on her comfortable chair to want.INF to remain.INF to sit.INF
'Anne says she wants to remain seated on her comfortable chair.'

3.4 Towards an analysis of *te*-lowering

***Te*-lowering shows interesting similarities to Germanic parasitic participles** (Den Dikken & Hoekstra 1997; Wiklund 2005, 2007; Vogel 2009; Wurmbrand 2010, 2012)

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Parasitic participles: participles selected by a modal, which can normally only combine with an infinitival complement

(25) Hy soe it **dien$_3$**/ **dwaan$_3$** wollen$_2$ ha$_1$ *Frisian*
he would it do.PART do.INF want.PART have.INF
'He would have liked to do it.'

(Den Dikken & Hoekstra 1997: 1058)

3.4 TOWARDS AN ANALYSIS OF *TE*-LOWERING

Parasitic participles exhibit the following properties:

	Parasitic participles	
Only in functional restructuring contexts	+	
Need appropriate licensing head	+ (an auxiliary)	
Optional	+	
Semantics is vacuous	+	

Table 4. Properties of parasitic participles and *te*-lowering

3.4 TOWARDS AN ANALYSIS OF *TE*-LOWERING

Properties of parasitic participles and *te*-lowering:

	Parasitic participles	*Te*-lowering
Only in functional restructuring contexts	+	+
Need appropriate licensing head	+ (an auxiliary)	+ (a higher verb selecting a *te*-infinitive)
Optional	+	+
Semantics is vacuous	+	+

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- Reverse Agree, downwards valuation;
- the licensing head V1 – a perfective auxiliary- Agrees with a *u*T feature on both V2 and V3, valuing it as *u*T:Perfective;
- both V2 and V3 are spelled out as a participle;
- Only possible in restructuring contexts because no other projections intervene

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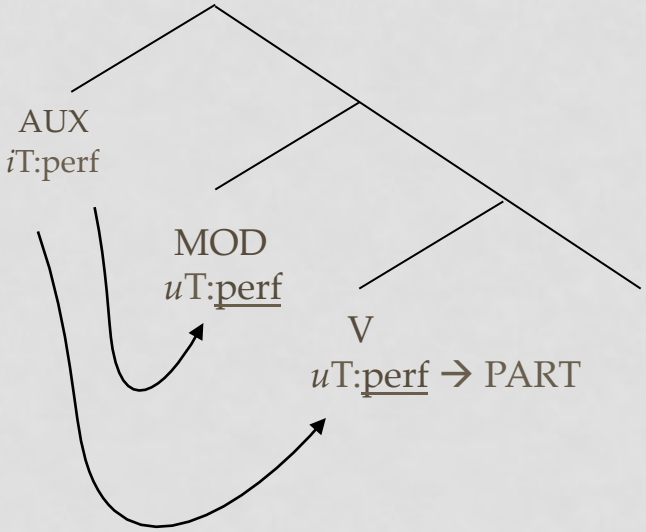

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Prediction: *te* in a *te*-V1-V2-V3 cluster should be able to occur on more than one of the non-finite verbs in the cluster (Multiple Agree)

→Data show that *te*-doubling is indeed possible: in the te-V1-V2-V3 cluster type:

Test item:	Attested
te-V1-*te*-V2-V3	✓
te-V1-V2-*te*-V3	✓
V1-*te*-V2-*te*-V3	✓

Table. 5 *te*-doubling in the *te*-V1-V2-V3 cluster type

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Table. 5 *te*-doubling in the *te*-V1-V2-V3 cluster type

→ *Te*-tripling not tested in this study: topic for future research

4. Conclusion

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New data on variation in *te*-placement Dutch non-finite verb clusters

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Analysis: Dutch non-finite verb clusters are cases of functional restructuring

- *Te*-drop depends on the verb selecting the *te*-infinitive being a quasi-functional or functional verb;
- *Te*-raising is clitic climbing;
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Topics for future research:

- *Te*-tripling;
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- *Te*-drop, *te*-raising/lowering with other verbs which show regional variation: *beginnen* 'to begin', *durven* 'to dare', *proberen* 'to try' et cetera;
- Interaction of *te*-drop, *te*-raising/lowering and different cluster orders (132, 213, 231, 312, 321 orders)

THANK YOU

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