

# Restructuring non-finite verb clusters in Dutch

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# In a nutshell

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- ▶ Dutch verb clusters are cases of functional restructuring (Cinque 2001; IJbema 2001; Wurmbrand 2001)
- ▶ *Te*-raising is an instance of clitic climbing

# Outline

1. The data
2. Prerequisites for the analysis
3. The analysis
4. Conclusion and outlook

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*Example:*

- (1) Koen zal niet [**hoeven**<sub>1</sub> **te** gaan<sub>2</sub> voetballen<sub>3</sub>].  
Koen will not need.INF to go.INF play.football.INF.  
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- ▶ Dutch speakers allow *te* also to appear on V1 (*te*-raising)

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*Example:*

- (2) Koen zal niet [*te hoeven*<sub>1</sub> *gaan*<sub>2</sub> *voetballen*<sub>3</sub>].  
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# The data

Three types of clusters in 123-order:

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

- (3) Anne **zegt** hier [**te** **willen**<sub>1</sub> **blijven**<sub>2</sub> **zitten**<sub>3</sub>].  
Anne says here to want.INF remain.INF sit.INF.  
'Anne says that she wants to remain seated here.'

- ▶ The finite verb *zegt* 'says' in verb second position selects a *te*-infinitive: *te* should appear on V1

# The data

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

- (4) Koen zal niet [**hoeven**<sub>1</sub> *te* gaan<sub>2</sub> voetballen<sub>3</sub>].  
Koen will not need.INF to go.INF play.football.INF.  
'Koen won't have to go and play football.'
- ▶ V1 *hoeven* 'need to' selects a *te*-infinitive: *te* should appear on V2

# The data

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

- (5) Peter zal lang [**moeten**<sub>1</sub> **zitten**<sub>2</sub> ***te*** **wachten**<sub>3</sub>].  
Peter will long must.INF sit.INF to wait.INF.  
'Peter will have to wait for a long time.'

- ▶ V2 *zitten* 'sit' selects a *te*-infinitive: *te* should appear on V3

# The data

- ▶ Large-scale questionnaire study, 459 native Dutch speakers participated

<b>Type of cluster</b>	<b><i>Te</i> in situ</b>	<b><i>Te</i>-raising</b>
I. <i>te</i> -V1-V2-V3	459	-
II. V1- <i>te</i> -V2-V3	378	185
III. V1-V2- <i>te</i> -V3	172	48

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- ▶ *Implicational relation*: if speakers allow *te*-raising, they also allow *te* in situ

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- ▶ I assume *te* to be merged in T (Bennis and Hoekstra 1989; Rutten 1991; IJbema 2001)

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- (6) *Gisteren moest* ik nog *volgende week*  
*Yesterday must.PAST* I still *next week*  
*optreden* en nu zijn de plannen alweer een week  
*perform* and now are the plans again a week  
opgeschoven.  
delayed.  
'Yesterday, it was still planned that I would perform next week, and now the plans have been delayed with another week.'

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There I.would.want go.INF.there with Maria.  
'I would like to go there with Maria.'
- b. <\**Ci*> **detesterei** andar <*ci*> con Maria.  
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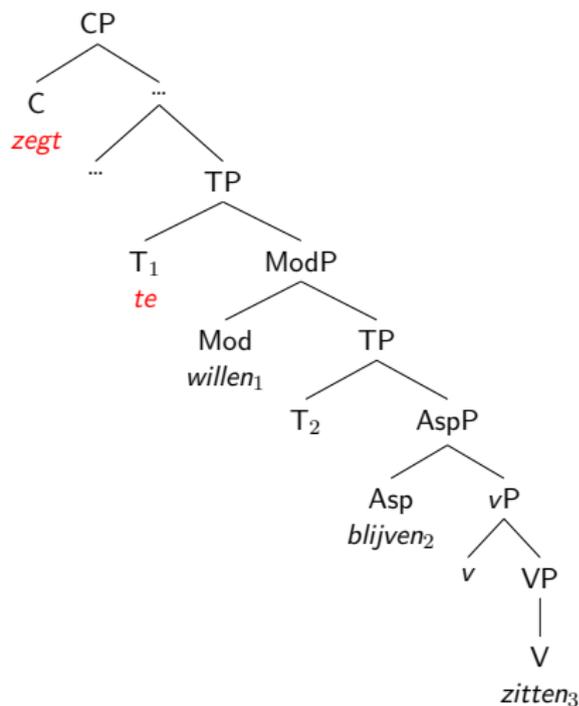
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- ▶ *Recall*: implicational relation: if *te*-raising, then also *te* in situ
- ▶ Similarly here: if clitic climbing, also clitic in situ

# The analysis: Position of *te* in cluster type I.

The structure of cluster type I, V1-*te*-V2-V3:

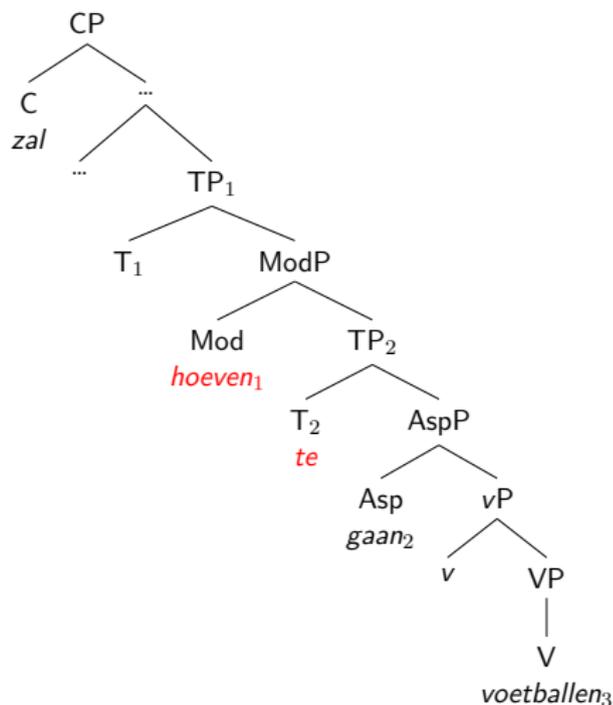
(8)



## The analysis: Position of *te* in cluster type II.

The structure of **cluster type II**, V1-*te*-V2-V3:

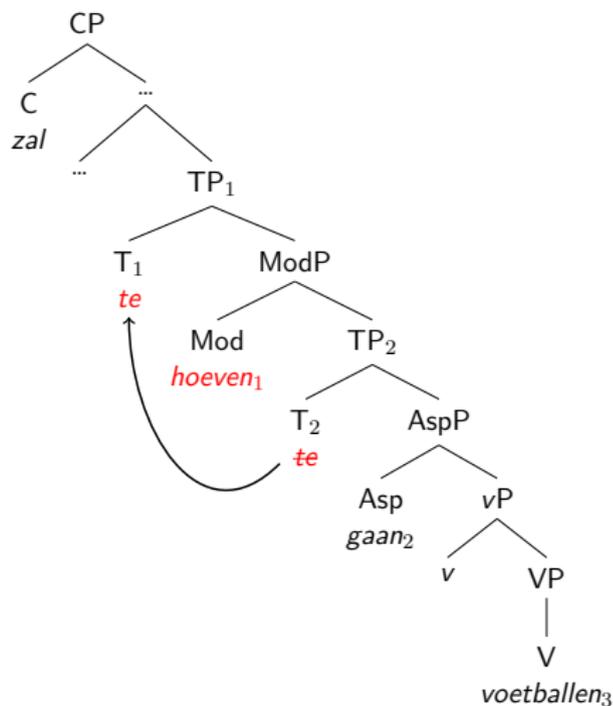
(9)



## The analysis: Position of *te* in cluster type II.

*Te*-raising in cluster type II, V1-*te*-V2-V3:

(10)



## The analysis: Position of *te* in cluster type III.

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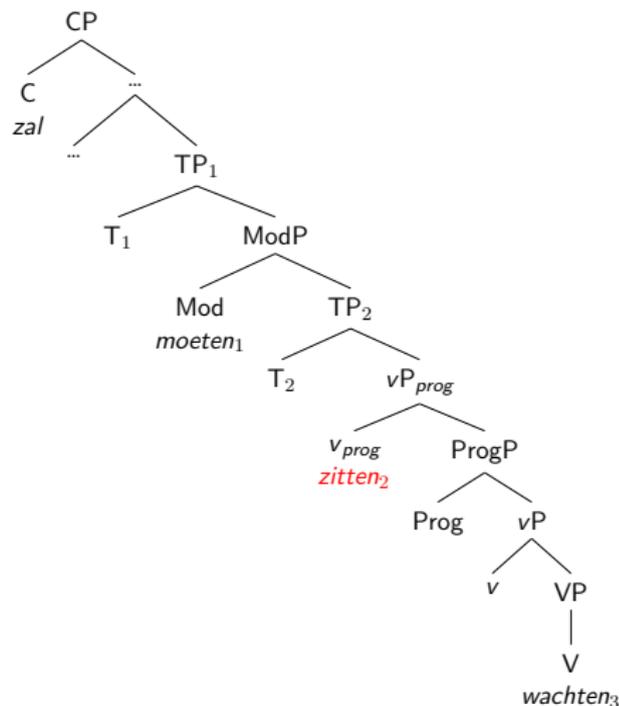
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- ▶ I follow Harwood (2013) in assuming there to be a  $vP_{prog}$  above ProgP
- ▶ In the structure of **cluster type III**, **V1-V2-*te*-V3**, V2 *zitten* 'sit' is merged in  $v_{prog}$

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The structure of cluster type III, V1-V2-*te*-V3:

(12)



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- ▶ There is no T position below V2 *zitten* 'sit', which selects the *te*-infinitive
- ▶ The structure of **cluster type III, V1-V2-*te*-V3**, thus predicts that speakers do not allow *te* to occur in this cluster

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- ▶ *Recall*: low frequencies for both *te* in situ (172) and *te*-raising (48) in **cluster type III, V1-V2-*te*-V3**

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- ▶ The high frequency of *te*-drop follows from the structure of the cluster: there is no T position below V2 *zitten* 'sit' for *te* to be merged in

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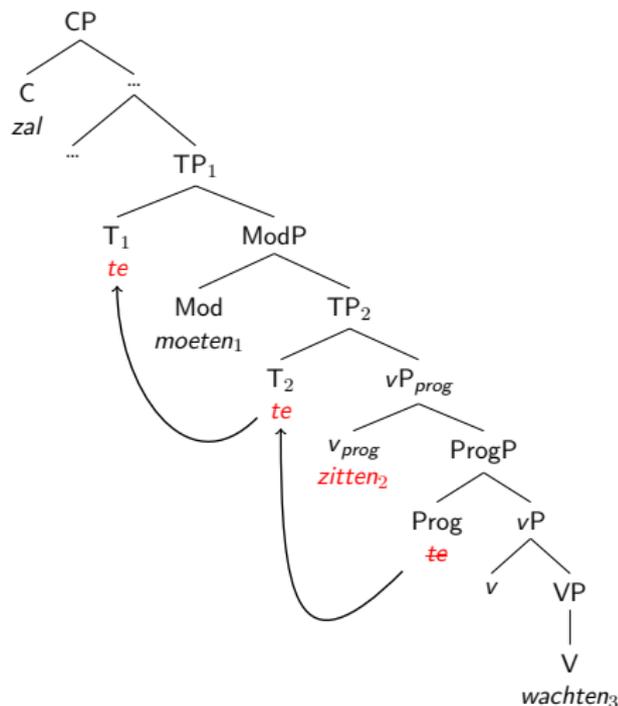
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- ▶ For the group of speakers (172) who do allow *te* in **cluster type III, V1-V2-*te*-V3**, I propose that they can spell out Prog as *te*
- ▶ These speakers have reanalysed *te* as a progressive marker

## The analysis: Position of *te* in cluster type III.

*Te*-raising to V2 or V1 in cluster type III, V1-V2-*te*-V3:

(14)



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- ▶ In certain varieties of Italian clitic doubling occurs instead of clitic climbing in restructuring contexts (Cardinaletti and Shlonsky 2004)
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- ▶ **Extension of the analysis:** doubling
- ▶ Clitic doubling is attested in restructuring contexts in certain varieties of Italian (Cardinaletti and Shlonsky 2004)
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- ▶ If speakers allow doubling, they also allow *te*-raising, i.e. in *te*-doubling, both copies of *te* are spelled out

## Conclusion and outlook

- ▶ Full paper: [www.bit.ly/Pots-te-raising](http://www.bit.ly/Pots-te-raising)
- ▶ [www.crissp.be/activities](http://www.crissp.be/activities)
- ▶ [cora.pots@kuleuven.be](mailto:cora.pots@kuleuven.be)

# References

- Aelbrecht, L. (2009). *You have the right to remain silent: The syntactic licensing of ellipsis*. PhD thesis, Catholic University of Brussels.
- Bennis, H. and Hoekstra, T. (1989). *Generatieve grammatica*. Foris, Dordrecht.
- Cardinaletti, A. and Shlonsky, U. (2004). Clitic positions and restructuring in Italian. *Linguistic Inquiry*, 35:519–557.
- Cinque, G. (2001). “Restructuring” and the order of aspectual and root modal heads. In Cinque, G. and Salvi, G., editors, *Current studies in Italian syntax: Essays offered to Lorenzo Renzi*, pages 137–155. Elsevier, Amsterdam.
- Harwood, W. (2013). *Being progressive is just a phase: Dividing the functional hierarchy*. PhD thesis, Ghent University.
- IJbema, A. (2001). *Grammaticalization and Infinitival Complements in Dutch*. PhD thesis, Leiden University.
- Rutten, J. (1991). *Infinitival complements and auxiliaries*. PhD thesis, University of Amsterdam.
- Wurmbrand, S. (2001). *Infinitives: Restructuring and clause structure*. Mouton de Gruyter.