



# Locus and Limits of Syntactic Microvariation

Sjef Barbiers

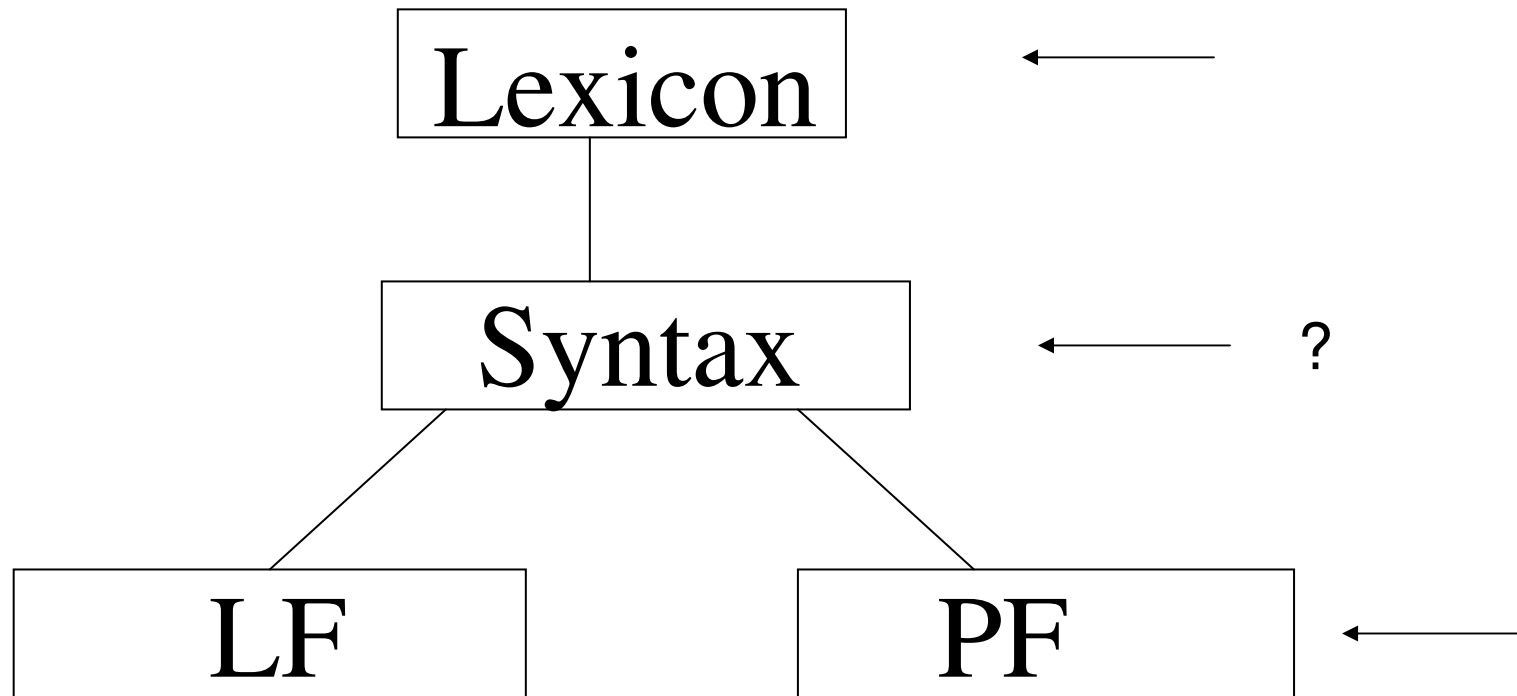
Meertens Institute and Utrecht University

**PhD Training course Gudbrandsdalen, Norway 2-6 June 2009**

# Minimalist hypotheses

1. Syntactic variation does not exist
2. Apparent syntactic variation reducible to:
  - Lexicon (morphosyntactic feature specification)
  - Phonological Form (spell-out options)
3. No optionality (optionality violates economy)
4. No parameters

# Locus of variation in the grammar



# Goal

- Testing the Minimalist hypotheses against data from the Syntactic Atlas of the Dutch Dialects (SAND)
- About 120 syntactic variables in 267 dialects of Dutch spoken in The Netherlands, Belgium and Northern France
- On-line database + cartographic software:  
DynaSAND: <http://www.meertens.nl.sand/>

# Preview of conclusions 1: Locus

1. Syntactic variation reducible to the lexicon
  - Case study 1: ONE insertion
2. Lexical variation limited by syntax
  - Case study 2: Reflexive systems
3. Syntactic variation reducible to PF
  - Case study 3: Complementizer drop
4. True syntactic variation
  - Case study 4: WH-chains

## Preview of conclusions 2: Limits

1. Universal principles determine variation space (in interaction with language specific morphosyntactic properties)
2. Optionality arises when the system generates syntactically and semantically equivalent options of equal cost
3. Dialects pick their choice from the available options but do not necessarily exploit all of them  
=> Distinction between **impossible** and **unrealized** options (language-external source of variation)

# Reduction to the lexicon: ONE insertion

(1) You are a strange \*(one).

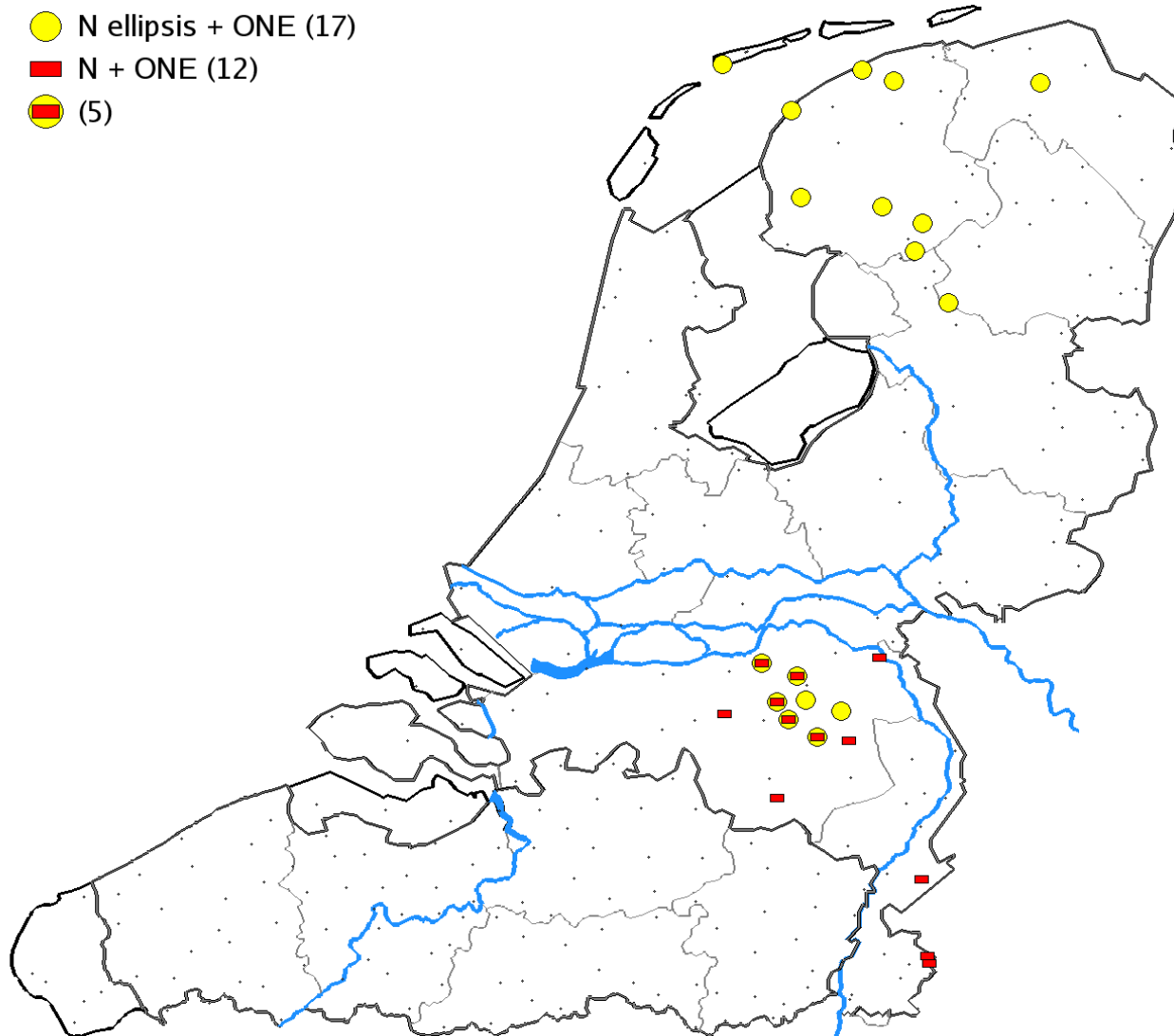
(2) Jij bent een rare (één).  
you are a strange one

(3) Je bent een raar kind (één).  
you are a strange kid one  
'You are a very strange kid!'

(4) Een raar kind ben je ~~een raar kind~~ één.  
a strange kid are you a strange kid one  
'You are a very strange kid!'

# Distribution of ONE insertion

- N ellipsis + ONE (17)
- N + ONE (12)
- (5)





# Noun + ONE insertion

- If a dialect has Noun + ONE insertion, it has gender inflection on ONE

## (5) Standard Dutch

één	zo	'n	deugniet
one	such	a	knave

## (6) Brabantish

zo	'n-en	duigeniet	een-e
such	a <sub>non-neut</sub>	knave	one <sub>non-neut</sub>

# Derivation Noun + ONE insertion

(7) Base order

één zo 'n deugniet

one such a knave

(= Dutch: *één* 'one' not specified for gender; *deugniet* 'knave' inherently non-neuter )

(8) Derived order (Brabantish)

[zo 'n-en deugniet] één-e [~~zo 'n-en~~ ~~deugniet~~]

such a<sub>non-neut</sub> knave one<sub>non-neut</sub> such a<sub>non-neut</sub> knave

(9) Condition: gender agreement between ONE and moved constituent.

# Derivation Noun ellipsis + ONE insertion

(10) Base order (Dutch)

'n één raar-e  
a one strange<sub>non-neut</sub>

(11) Derived order (northern dialects)

'n raar-en één ~~raar-en~~  
a strange<sub>indef.sing</sub> one strange<sub>indef.sing</sub>

(12) Condition: [indef, sing] agreement between ONE and moved constituent.

# Lexical variation limited by syntax

## Strong reflexives

(13) Toon bekeek REFL

Toon looked-at REFL

(14) Attested forms

zichzelf (sig-self)

hemzelf (him-self)

zijnzelf (his-self)

zijn eigen (his own)

# Lexical variation limited by syntax

## Weak reflexives

(15) Jan herinnert REFL dat verhaal

John remembers REFL that story

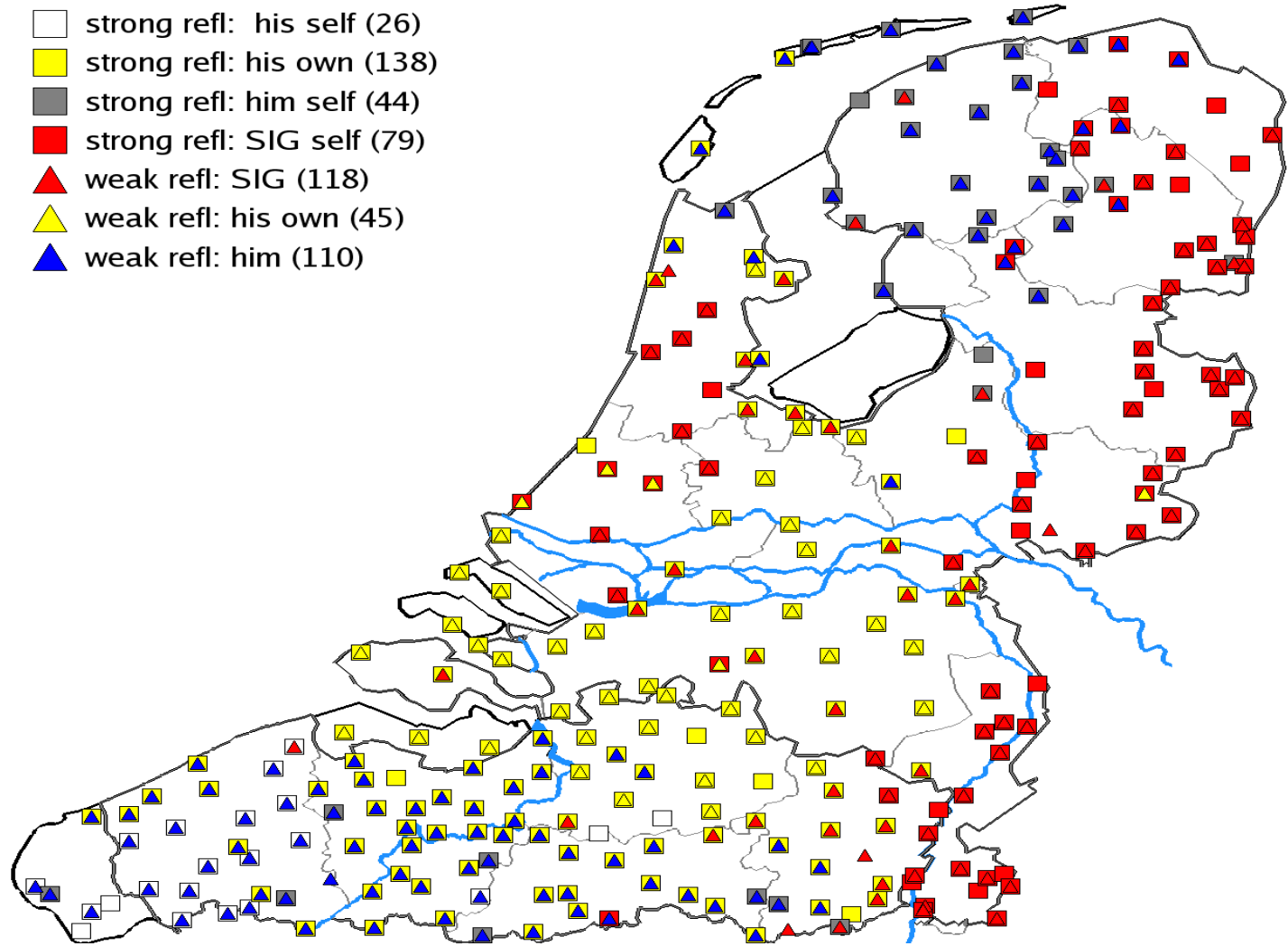
(16) Attested forms

zich (sig)

hem (him)

zijn eigen (his own)

# Distribution of reflexive systems



# Types of reflexive systems

WEAK

STRONG

area

zich	(sig)	zich-zelf	(sig self)	<i>east, central</i>
hem	(him)	hem-zelf	(him self)	<i>north</i>
hem	(him)	zijn-zelf	(his self)	<i>southwest</i>
hem	(him)	zijn eigen	(his own)	<i>south</i>
zijn eigen	(his own)	zijn eigen	(his own)	<i>central</i>

Missing system

hem	(him)	hem eigen	(him own)
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# Agreement as a condition on reflexives

Hypothesis: Reflexives are possessive nominal groups

(Helke 1970, Pica 1987, Safir 1996, Postma 1997, a.o.)

	[ <sub>DP</sub>	Spec	[ <sub>D</sub>	Poss. head	[ <sub>NP</sub>	Body part head]]]
a.		hem		ze		lf
		him		his		body
b.		zich		ze		lf
c.		z'n		eigen		∅
		his		own		
d.		z'n		ze		lf
e.		*hem		eigen		
		him		own		
f.		de man		z'n/*d'r		lijf
		the man		his/her		body



# Syntactic variation reducible to PF

(17) Vertel    niet    wie    of    dat    ze    geroepen    hebben.  
tell        not     who    if     that    they called    have  
'Don't tell them who they have called.'

(18)        [<sub>CP</sub>    spec    C    [<sub>CP</sub>    C    [...  
(i)            wie     of            dat  
(ii)           wie     of  
(iii)          wie                    dat  
(iv)          wie  
              who    if            that

# Distribution of doubly filled COMP

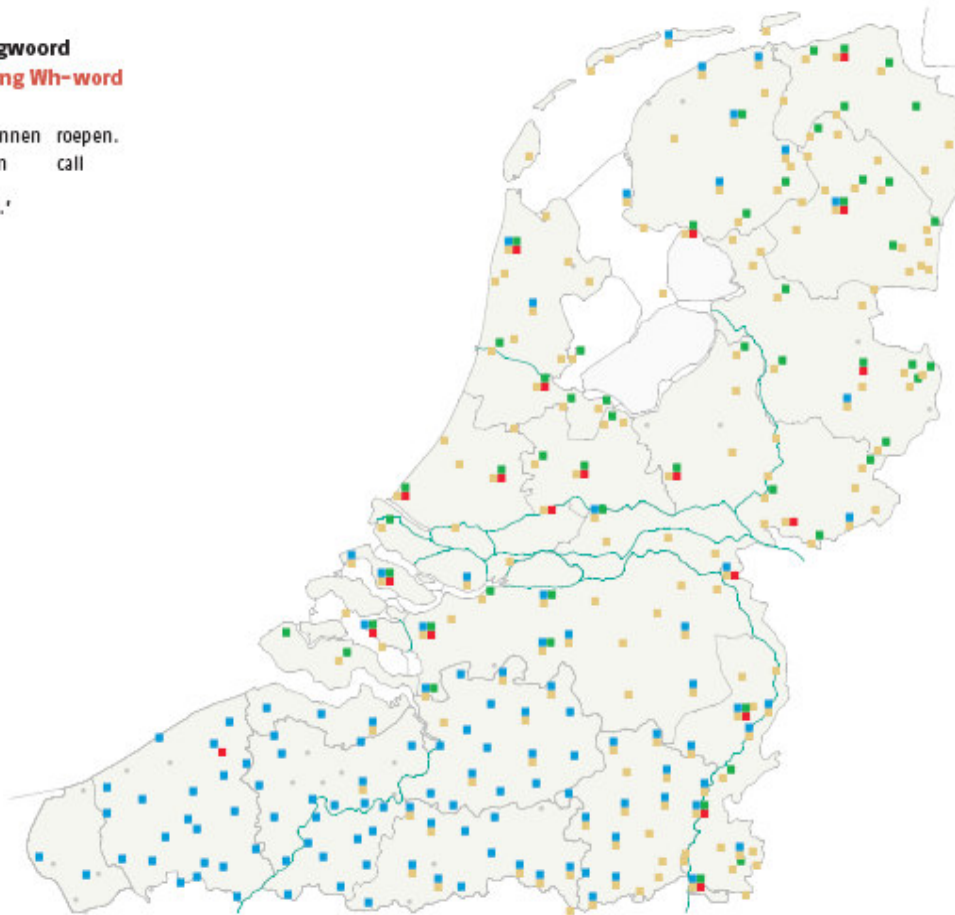
a

## 1.3.1.5 Finit(e) voegwoord(en) na vraagwoord Finite complementiser(s) following Wh-word

Vertel maar niet wie (of) (dat) ze had kunnen roepen.  
tell just not who (if) (that) she had can call

'You better don't tell her who she could have called.'

■ Wie $\beta$	173
■ Wie DAT	118
■ Wie OF	54
■ Wie of DAT	20



# Non-pronunciation under recoverability

(18)	[ <sub>CP</sub>	spec	C	[ <sub>CP</sub>	C	[...]
(i)		wie	of		dat	
(ii)		wie	of		∅	
(iii)		wie	∅		dat	
(iv)		wie	∅		∅	

- (19) a. Ik weet \*(dat) Jan komt.  
I know that John comes
- b. Ik weet \*(of) Jan komt.  
I know if John comes
- c. Ik weet of (dat) Jan komt.  
I know if that John comes
- d. of: [Q, fin, subord] dat: [fin, subord]

# True syntactic variation

- |     |            |       |     |            |    |        |       |
|-----|------------|-------|-----|------------|----|--------|-------|
| (1) | <b>Wie</b> | denk  | je  | dat        | ik | gezien | heb?  |
|     | who        | think | you | that       | I  | seen   | have  |
| (2) | <b>Wat</b> | denk  | je  | <b>wie</b> | ik | gezien | heb?  |
|     | what       | think | you | who        | I  | seen   | have  |
| (3) | <b>Wie</b> | denk  | je  | <b>wie</b> | ik | gezien | heb?  |
|     | who        | think | you | who        | I  | seen   | have? |
| (4) | <b>Wie</b> | denk  | je  | <b>die</b> | ik | gezien | heb?  |
|     | who        | think | you | REL        | I  | seen   | have  |
| (5) | <b>Wat</b> | denk  | je  | <b>die</b> | ik | gezien | heb?  |
|     | what       | think | you | REL        | I  | seen   | have  |

‘Who do you think I saw?’

# Possible and impossible chains

## Possible

*wat - wie*  
what - who

*wie - wie*  
who - who

*wie - die*  
who - REL

*wat - die*  
what - REL

## Impossible

\**wie - wat*  
who - what

\**die - wie*  
REL - who

\**die - wat*  
REL - what

# Possible and impossible chains

## **Generalization**

In a syntactic movement chain, a higher chain link cannot be more specified than a lower chain link (Barbiers, Koenenman and Lekakou 2007).

Generalization follows from copy theory + inclusiveness condition (material can be lost during copying but not gained)

# Possible and impossible chains

(6) Ze heeft zij daar niets mee te maken  
she<sub>WEAK</sub> has she<sub>STRONG</sub> there nothing with to do  
'She has got nothing to do with it.'

(7) \*Zij heeft ze ...  
she<sub>STRONG</sub> has she<sub>WEAK</sub>

*zij* [3, sing, fem, focus]

*ze* [3, sing, fem]

*ze* is a partial copy of *zij*

# Possible and impossible chains

Problems with partial copying of feature bundles

- (i) Syntactic operation at the subword level
- (ii) Feature bundle should have a hierarchical structure to understand which features can be copied together and which cannot

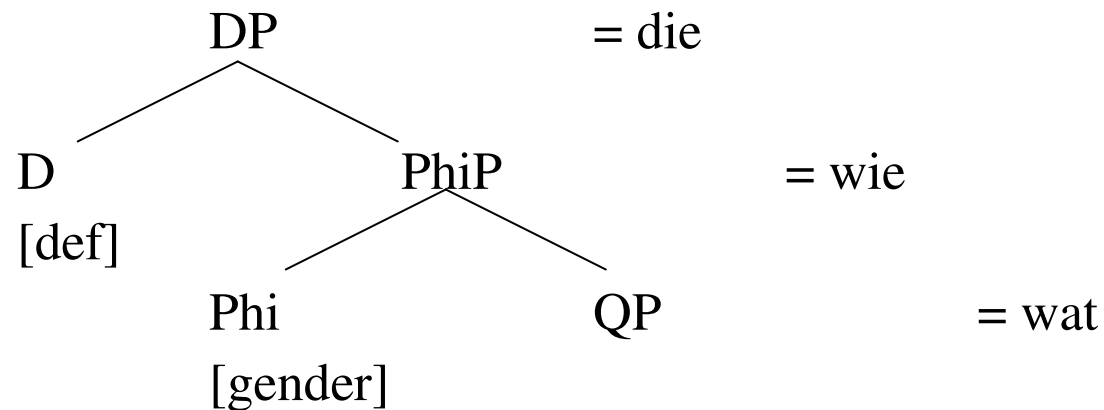


# Possible and impossible chains

Alternative: Phrasal structure of pronouns (e.g. Déchaine and Wiltschko 2002)

Proposal: *wat* ‘what’ is partial copy of *wie* ‘who’ and *wie* is partial copy of *die* REL PRON:

*wie* = *wat* + gender; *die* = *wie* + definiteness



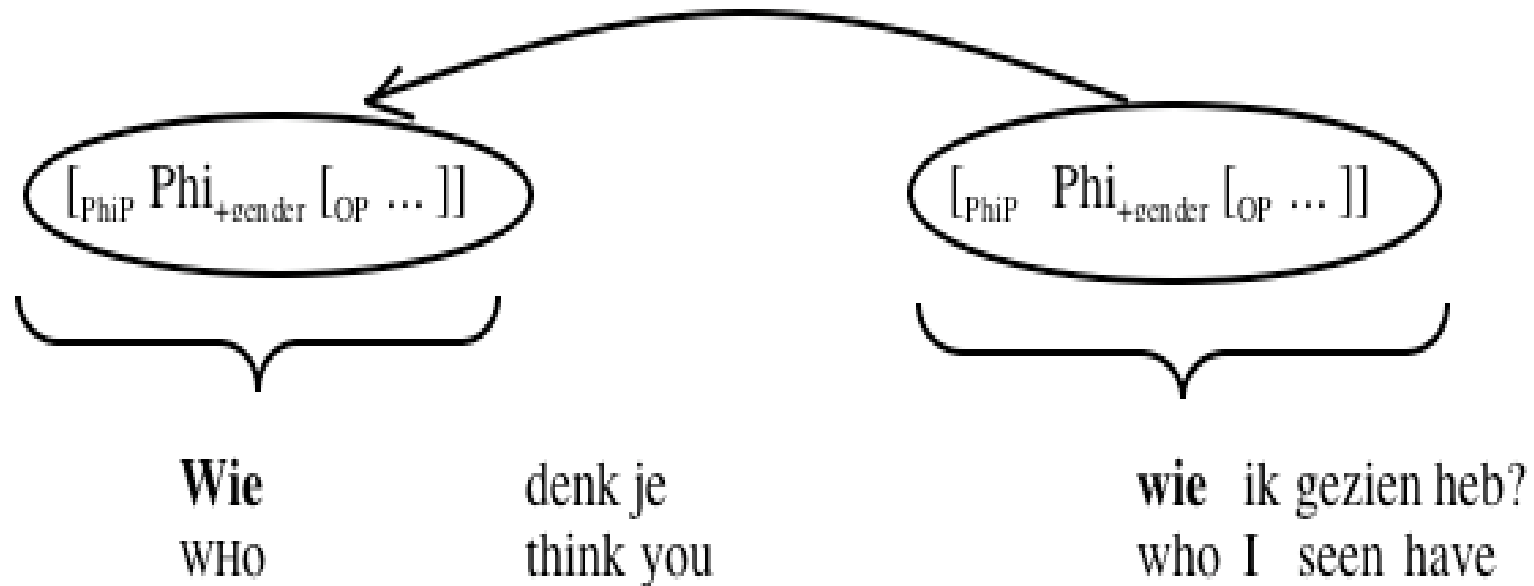
# Possible and impossible chains

## Parallel

- (8) **Wat** denk je **wie** ik gezien heb?  
what think you who I seen have  
'Who do you think I saw?'
- (9) **Wat** denk je **wat voor persoon** ik gezien heb?  
what think you what for person I seen have  
'What kind of person do you think I saw?'

# Possible and impossible chains

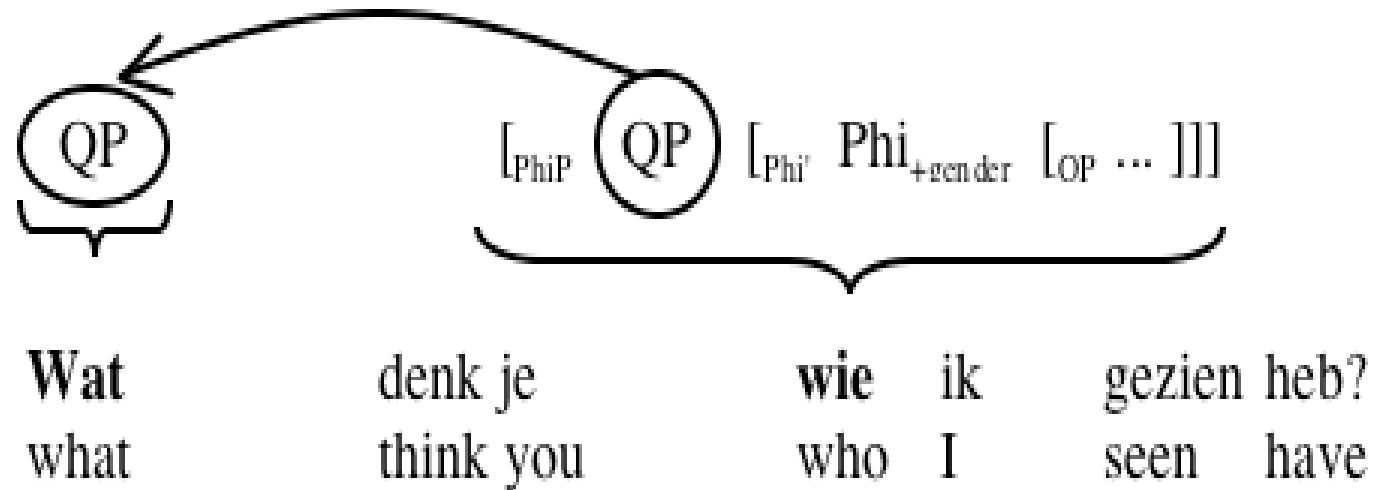
FULL COPYING: *wie* – *wie*



# Possible and impossible chains

*wat - wie* vs. \**wie - wat*  
*what - who*                      *who - what*

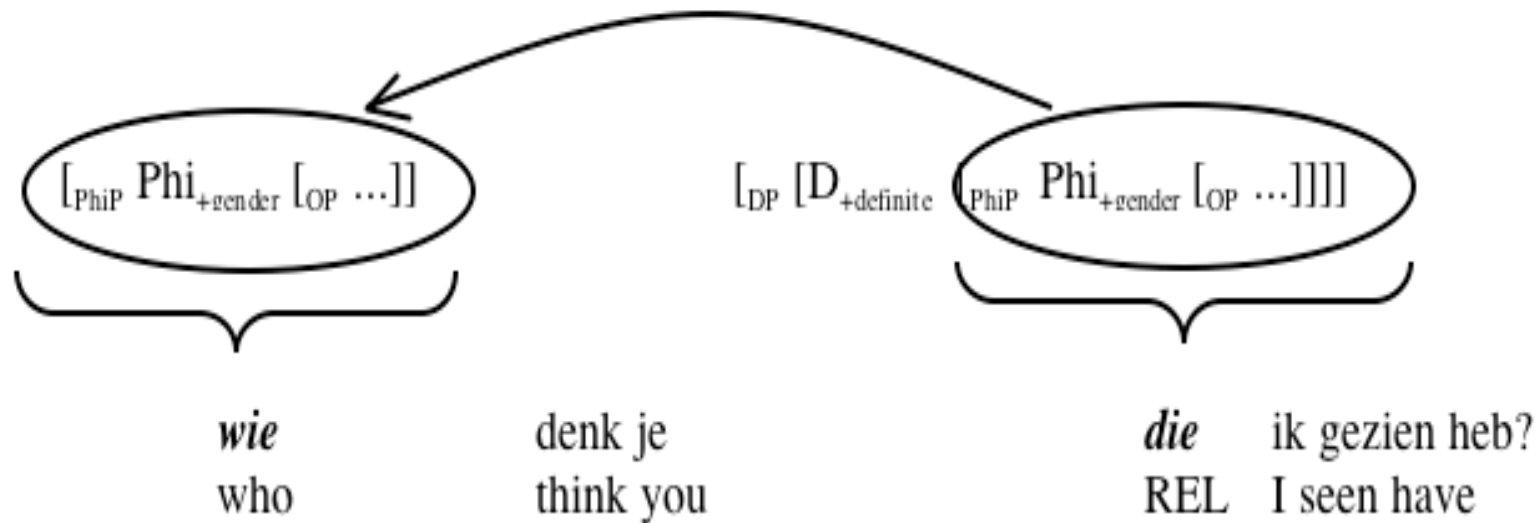
PARTIAL COPYING: *wat - wie*



# Possible and impossible chains

*wie* - *die* vs. \**die* - *wie*  
 who - REL REL - who

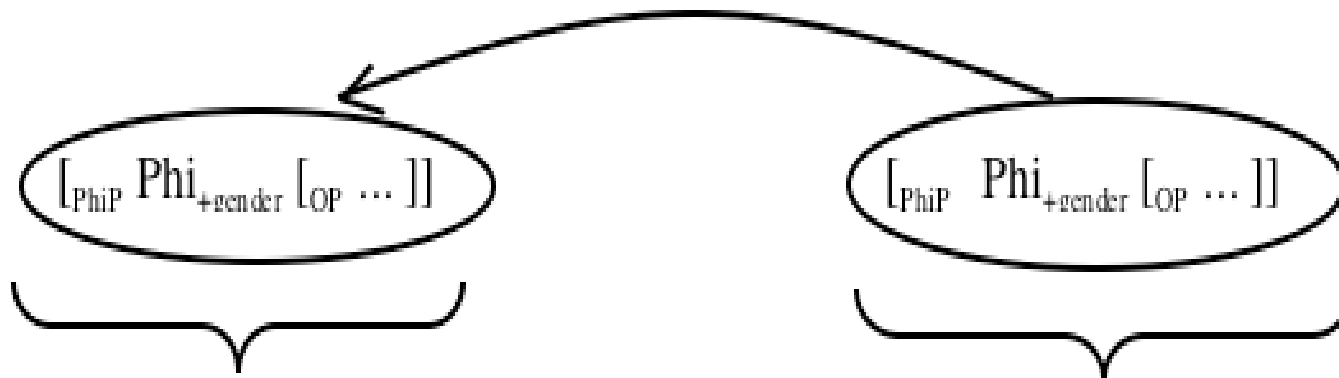
PARTIAL COPYING: *wie* - *die*



# Possible and impossible chains

PF account (partial deletion/spell out) wrongly predicts (e.g.) *wie* - *wat* ‘who - what’ to be possible

FULL COPYING



Spell out PhiP: *wie*  
who

Spell out QP: *wat*  
what

# Impossible and unrealized chains

- (i) Options: *wie - wie, wat - wie, wie - die, wat - die*
- (ii) No detectable differences in features.
- (iii) Speakers allowing one or more of these options all have the same derivation and obey the same restrictions: *Copy a subconstituent that can fulfill the relevant requirements.*  
This rule defines the **variation space**.
- (iii) The derivations are equivalent both in terms of semantics and in terms of economy
- (iv) By convention, speakers/dialects may pick one or more of these options.  
This determines the **actual use**.

# Limits of syntactic variation

- (i) Agreement as a condition on movement
- (ii) Agreement as a condition on head-spec
- (iii) Recoverability as a condition on non-pronunciation
- (iv) Inclusiveness as a condition on (partial) copying



# Loci of syntactic variation

- (i) Morphosyntactic feature specification
- (ii) Lexical choice (numeration)
- (iii) Optional pronunciation
- (iv) Optionally partial copying

# Syntactic optionality

- Syntactic system allows more than one option. This is only possible if the options are syntactically and semantically equivalent and equally costly.
- Distinction between impossible and unrealized structures.  
Impossible structures violate general principles; unrealized structures are possible structures not exploited in a particular dialect

# Impossible and unrealized words

## Phonotactics

- Possible word
  - Actual word *bluff*
  - Unrealized word *vuff*
- Impossible word *bmuff*

# Potential problems

- The notion of unrealized syntactic structure presupposes conventionalization and storage
- Syntactic structures are infinite hence not stored

# But:

- Inventory of words of a language is infinite too
- Unclear where word stops and syntax starts
- What used to be considered words are now analyzed as syntactic structures, e.g. Hale and Keyser (1993) for verbs and Déchaine and Wiltschko (2002) for pronouns
- Storage and generative grammar do not necessarily conflict

# Sketch of a model

- Linguistic memory keeps track of structures occurring at all levels of the mental grammar
- Structures in Linguistic memory obey requirements imposed by mental grammar

# Future research

## How to recognize unrealized structures?

- (i) Informants uncertain about their judgments
- (ii) Unclear geographic distribution
- (iii) Satiation/learnable
- (iv) Show up and disappear in child language
- (v) Survive in certain registers (e.g. periphrastic DO)

## Research

- (i) Magnitude estimation
- (ii) Dialectsyntax
- (iii) Psycholinguistic and neurolinguistic comparison of unrealized and impossible structures
- (iv) First language acquisition

This talk is based on:

Barbiers, S. (2005). Variation in the morphosyntax of ONE. *Journal of Comparative Germanic Linguistics* 8, 159-183.

Barbiers, S. and H. Bennis (2003). Reflexives in Dialects of Dutch. In J. Koster and H. van Riemsdijk (ed.) *Germania et alia. Linguistic Webschrift for Hans den Besten*. <http://www.let.rug.nl/~koster/DenBesten/>

Barbiers, S., O. Koeneman, M. Lekakou (in press). Syntactic Doubling and the structure of chains. *Proceedings of WCCFL 2007*, Somerville, Cascadilla Press.

Barbiers, S., H. Bennis, G. De Vogelaer, M. Devos. M. van der Ham (2005). *Syntactic Atlas of the Dutch Dialects, Volume 1*. Amsterdam, Amsterdam University Press.

Barbiers, S. (in press). Locus and Limits of Syntactic Microvariation. Special Issue of *Lingua*, J. Nerbonne (guest editor).