

Syntactic Atlas of the Dutch Dialects

Sjef Barbiers, Meertens Institute (KNAW) & Utrecht University





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- Meertens Institute (KNAW)
- Universities of Amsterdam, Antwerpen, Ghent & Leiden



Perspectives

theoretical perspective

- generative syntax
- language typology
- dialectology

empirical perspective

• dialect geography: Dutch speaking area in the Netherlands and Belgium



Different theoretical perspectives

Advantages

- Variation predicted by (generative) theory
- Variation to be expected on the basis of (typological) cross-linguistic generalizations
- Variation known to exist on the basis of dialectological and diachronic research



Different theoretical perspectives

Disadvantages

- Different views on the importance of a particular phenomenon
- Different views on which aspects should have priority in the description of a phenomenon
- Different views on what counts as an adequate "theoryneutral" description of the facts
- Manuals, papers, talks etc should be made accessible to a general linguistic audience



Empirical domains

- *Left-periphery of the clause* e.g., complementizer agreement, subject doubling, relative clauses, Wh-clauses
- *Right-periphery of the clause* e.g., verbal clusters, verb cluster interruption, IPP
- *Negation and quantification* e.g., negative particle, negative concord, scope, negative quantifiers
- *Pronominal reference* e.g., reflexives, reciprocals, weak and strong pronouns



Advantages

- Too much variation to cover everything
- In-depth investigation instead of broad and shallow
- Choice based on existing knowledge about variation, thus reduced risk of choosing a domain that shows no variation
- Domains that are theoretically interesting



Disadvantages

- Risk to miss interesting variation in another domain
- (If you believe that dialectal variation is rapidly disappearing:) Missing the last chance to record dialectal variation



Project stages

- 1. Inventorization (2000)
- 2. Postal pilot (2000)
- 3. Fieldwork (2001-2002)
- 4. Telephone interviews (2003)
- 5. Data processing, storage, retrieval and visualization (2003-2004)



Stage 1: Inventorization

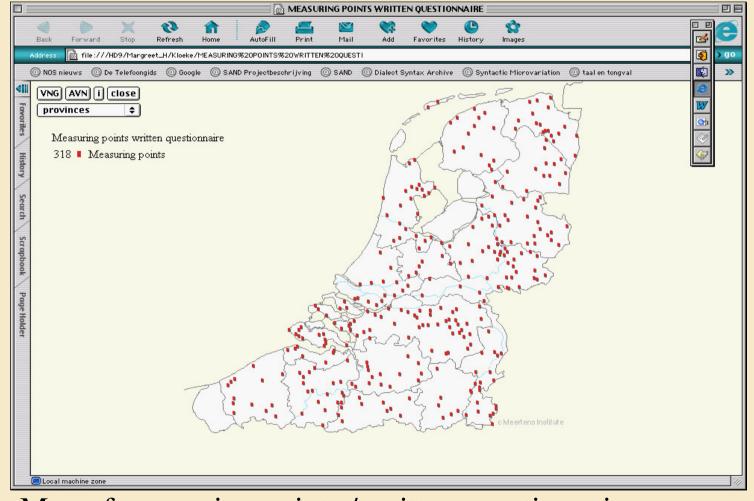
- SAND bibliography: 1300 titles
- Interviews with (dialect speaking) linguists



Stage II: Postal pilot (1)

• 321 measuring points (368 informants), reasonably even distribution over language area

Stage II: Postal pilot (2)



Map of measuring points / written questionnaire



Stage II: Postal pilot (3)

- Not controlled for social variables
- 393 test sentences
- Goals:
 - inventory of syntactic variables
 - first impression of distribution of variables
 - try out of different question types

EXAMPLE:

Stage II: Postal pilot (5)

Advantages

- Number of sentences that can be tested is larger
- Allows testing of sentences with a higher complexity
- Opportunity to test different methods of elicitation
- Yields data that the data from the oral interviews can be compared with
- Makes oral interviews more efficient: regionalized and multi-stage questions
- Less time and people consuming than oral interviews

Stage II: Postal pilot (6)

Disadvantages

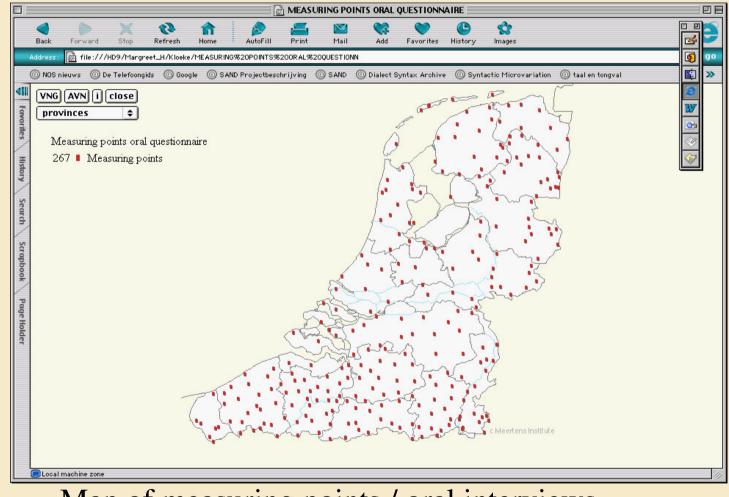
- Validity of the data not always clear, e.g. a sentence may be rejected on phonological or lexical grounds
- Informants have to invent their own orthography. Syntactically relevant sounds may be omitted
- Written mode may trigger more formal, hence less dialectal behavior
- Impossible to observe and immediately respond to answers and reactions of informants



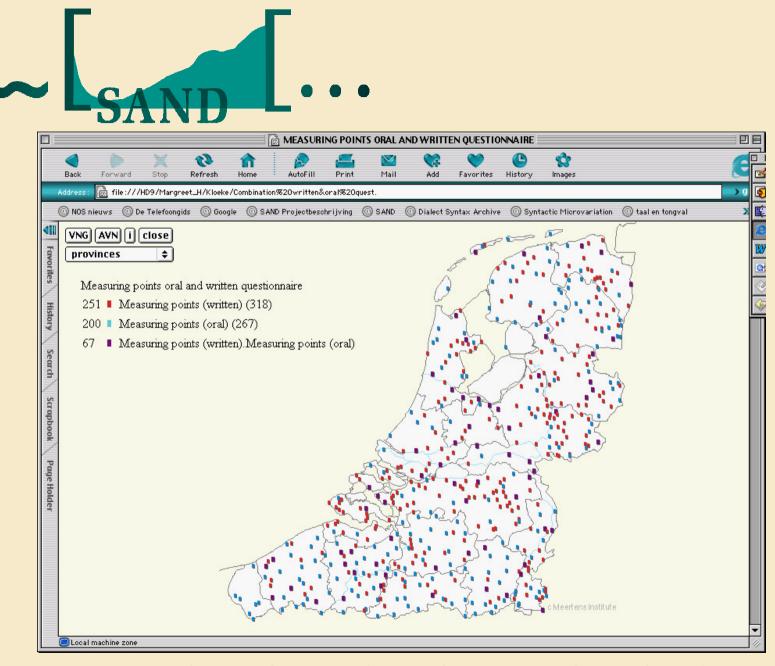
Stage III: Fieldwork (1)

267 oral interviews
 (average length 1h 45 min)

Stage III: Fieldwork (2)



Map of measuring points / oral interviews



measuring points oral + written questionnaire (2)

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Methodology

- Informants controlled for social variables
 - » 55-70 years old
 - » born and raised in location of interview
 - » parents born and raised in location of interview
 - » no longer than 7 years from home
 - » no higher education
 - » active dialect user in at least one social domain
- Both interviewer and informant are native speakers of the relevant dialect (to avoid accomodation); field worker as supervisor
- Regionalized and multi-stage questions



Methodological problem

• Uniformity of methodology, given different traditions in different frameworks



Stage III: Elicitation tasks

Masked (relative) grammaticality judgements

- (i) Ik vind dat iedereen moet kunnen zwemmen.
 I think that everyone must can.INF swim.INF
 'I think that everybody should be able to swim.'
- (ii) Ik vind dat iedereen moet zwemmen kunnen.
- (iii) Ik vind dat iedereen zwemmen kunnen moet.

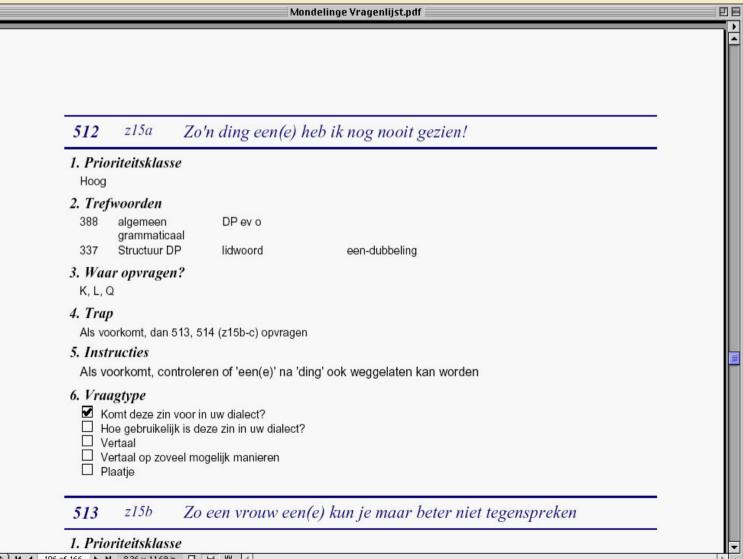
O Translation tasks

(iv) Als we sober leven, leven we gelukkig.If we austerely live, live we happily'If we live austerely, we will be living happily.'

Cloze tests

(v) Jan wast John washes

Stage III: Fieldwork (6)



↓ ↓ 106 of 166 ▶ ₩ 8.26 × 11.69 in □ 吕 出 ...



Stage III: Fieldwork (7)

Advantages

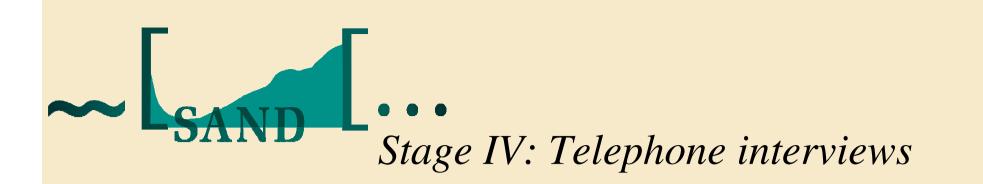
- More natural communicative setting
- Spoken data
- Possibility to observe and respond to answers and reactions of informants
- Greater validity of the data; less accomodation



Stage III: Fieldwork (8)

Disadvantages

- More time and people and money consuming than written interviews
- Sentences that require longer reflection are more difficult to test



- Testing sentences that did not yield a (relevant) answer
- Checking the reliability of certain answers
- Additional test sentences to get complete paradigms



- i. Data processing and enrichment
 - Digitalization
 - Transcription
 - POS Tagging
- ii. Data storage
- iii. Data retrieval
- iv. Data visualization

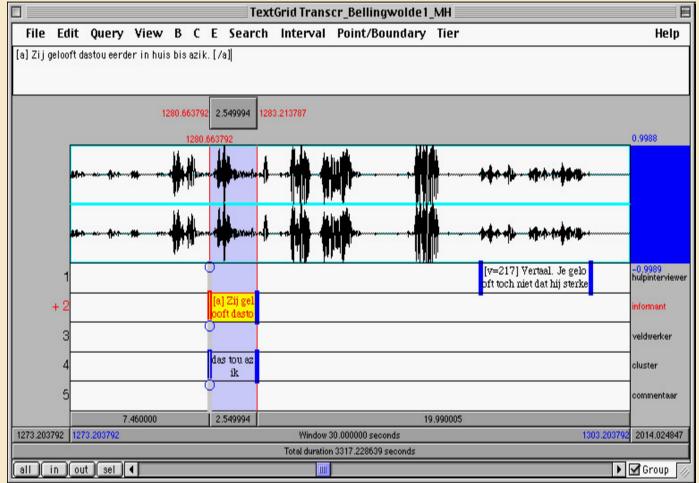


Data processing

- Recordings read into computer without conversion (system used: Sadie DAW. Sample frequency: 44.1 kHZ, 16 bits)
- Digital recordings (DAT recorder /minidisk)
- Transcription with PRAAT (Boersma, University of Amsterdam)



Transcription (1)



Transcription in PRAAT (Boersma)



Transcription (2)

Issues

- Phonetic transcription requires too many resources
- Orthographic transcription obscures all kinds of relevant (morpho-)syntactic properties
- There are no orthographic conventions for most of the dialects
- Morpheme and word boundaries are often unclear (e.g. in clitic clusters)



Transcription (3)

Choices

- Compromise between orthographic and literal transcription
- Literal transcription of function words including (potential) inflection
- Standardization of lexical dialect words (advantageous for automatic lemmatization and POS tagging)
- Clusters are transcribed unsegmented and segmented



POS Tagging (1)

- Automatic pretagging
 - memory-based probabilistic tagger (Van den Bosch, University of Tilburg)
- Manual correction and completion
- Extended tag set (EAGLES standard)



POS Tagging (2)

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Tagging (Kunst)



POS Tagging (3)

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• stage 4.3 Tagging-2 (Kunst)



POS Tagging (4)

Issues

- EAGLES Standard does not make sufficient distinctions
- Automatic taggers require sufficiently large training set for each dialect
- Fine grained POS tagging desirable but very time (people, money) consuming and tedious (if done manually)
- Incorporation of function and word order information necessary if syntactic annotation is not feasible



Data storage, retrieval and visualization

Dynamic Atlas (DynaSAND)

- database
- search engine
- cartographic tool



DynaSAND

Issues

- Freeware / open source
- Flexibility: relational database Database: MySQL
- Accessibility: on-line Web interface: PHP
- Compatibility with other databases (common search engine)
- Cartographic tool: SVG



SAND Results



Results

- **DynaSAND**: On-line Dynamic Atlas (2006)
- Syntactic Atlas of the Dutch Dialects, Volume 1; 2005
- Syntactic Atlas of the Dutch Dialects, Volume 2; 2008





On-line research tool

DatabaseSearch engineCartographic tool



DynaSAND

Database

Postal pilot

Fieldwork

Telephone interviews

156,000 Q-A-pairs368 informants393 testzinnen

45.000 Q-A-pairs (= 425 hours of speech
= 1.200.000 words in transcription)
607 informants in 267 locations in The
Netherlands, Belgium and France

26.000 Q-A-pairs252 informants/locations105 test sentences



DynaSAND

Search engine

Searching with locations, test sentences, (combinations of) words, strings, tags

Cartografic software

Generating maps to visualize geographic distribution of and potential correlations between syntactic variables



SAND Vol. I

Barbiers, S., H. Bennis, G. De Vogelaer, M. Devos, M. van der Ham SAND Vol. 1 (Amsterdam University Press, 2005) 145 maps + book (80 p.); English & Dutch

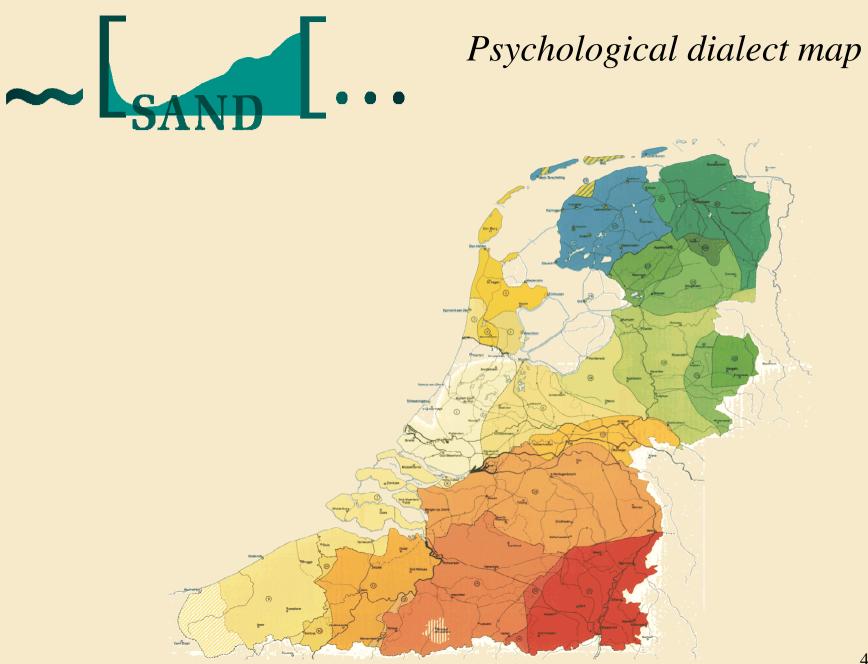
Ch. 1: Complementizers and complementizer agreementCh. 2: Subject pronounsCh. 3: Subject doubling and clitisation to *yes/no*Ch. 4: Reflexive and reciprocal pronounsCh. 5: Fronting



SAND Vol. II

Barbiers, S., J. Van der Auwera, H. Bennis, Eefje Boef, G. De Vogelaer,, M. van der Ham
SAND Vol. 2 (Amsterdam University Press, 2008; 87 maps, 78 pages)

Ch. 1: Verb clustersCh. 2: Verb cluster: interruption and morphosyntaxCh. 3: Auxiliaries and verb positionsCh. 4: Negation and quantification





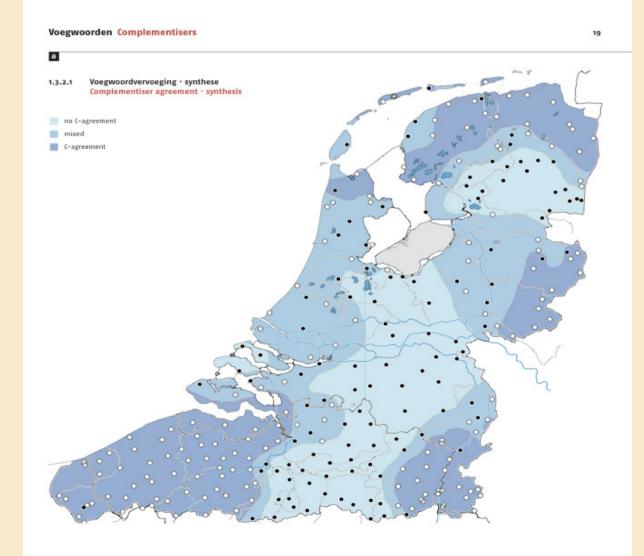
(1)	Ik vind	da-st		tu	het	niet	zien	mag-st	-
	I think	that.2s	ING	you	it	not	see	may.2s	ING
	'In my opinion you are not allowed to see it.' (Gronings)								
(2)	As-e	me	sober		leev-e		[]		
	if.1PL	we	auster	ely	live.1P	L	[]		
	'If we live a			(South-Hollandic)					
(3)	We peize	me	da-n		ze	niet	ZO	slim	zij -n .
. ,	we think		that-31	ЪГ	they	not	SO	smart	are
'We think that they are not so smart.'							(East-Flemish)		

Koppen, M. van (2005). *One probe, two goals. Aspects of Agreement in Dutch Dialects.* Leiden, LOT Dissertation 105.

De Vogelaer, G. (2005). *Persoonsmarkering in de dialecten in het Nederlandse taalgebied*. Dissertation Ghent. 48



Complementizer agreement



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Subject doubling

(4) Ge gelooft gulder niet dat hij sterker is als ge gulder.
you.W believe you.S not that he stronger is than you.W you.S
'You don't believe that he is stronger than you.' (West- & East Flemish)

(5) 'K zal 'k 't ik krijgen. I.w will I.w it I.s get 'I will get it'

(West- & East-Flemish)

De Vogelaer, G. (2005). *Persoonsmarkering in de dialecten in het Nederlandse taalgebied*. Dissertation Ghent.

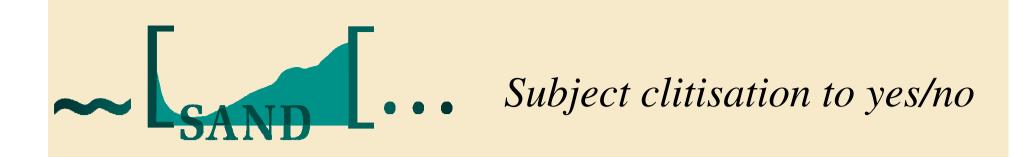


Subject doubling

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Subjectverdubbeling Subject doubling

а 3.1.3.4.1 Subjectverdubbeling 2 meervoud Subject doubling 2 plural As-ge gulder gezond leeft, leef-de gulder langer. if-you_{PLUR,WEAK}-you_{PLUR,STRONG} healthily live live-you_{PLUR,WEAK}-you_{PLUR,STRONG} longer 'If you live healthily you will live longer.' Ge gelooft gulder zeker niet dat hij sterker is as-ge gulder. youpwer,weak believe youpwer,strange certainly not that he stronger is than-youpwer,weak- youstrange 'You do not seem to believe that he is stronger than you.' V_{FIN} 99 V_{IIN} ____ 62 **C**_ 54 CCOMPAR ___ 14

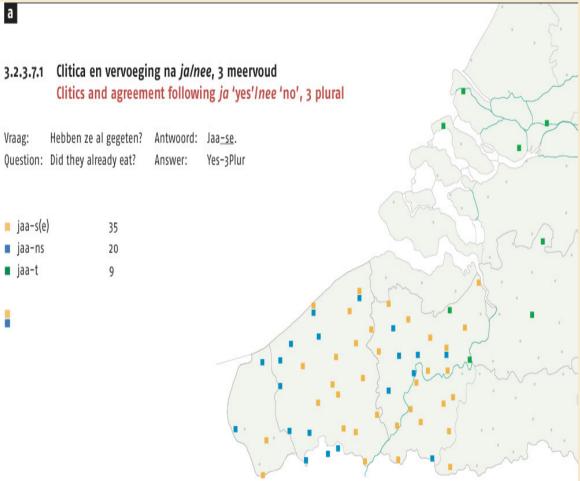


(6) Q: Hebben ze al gegeten? have they already eaten
A: Jaa(-n)-ze yes(.PLUR).they

Van Craenenbroeck, J. (2004). *Ellipsis in Dutch dialects*. Leiden, LOT Dissertation 96.



Clitics on yes/no

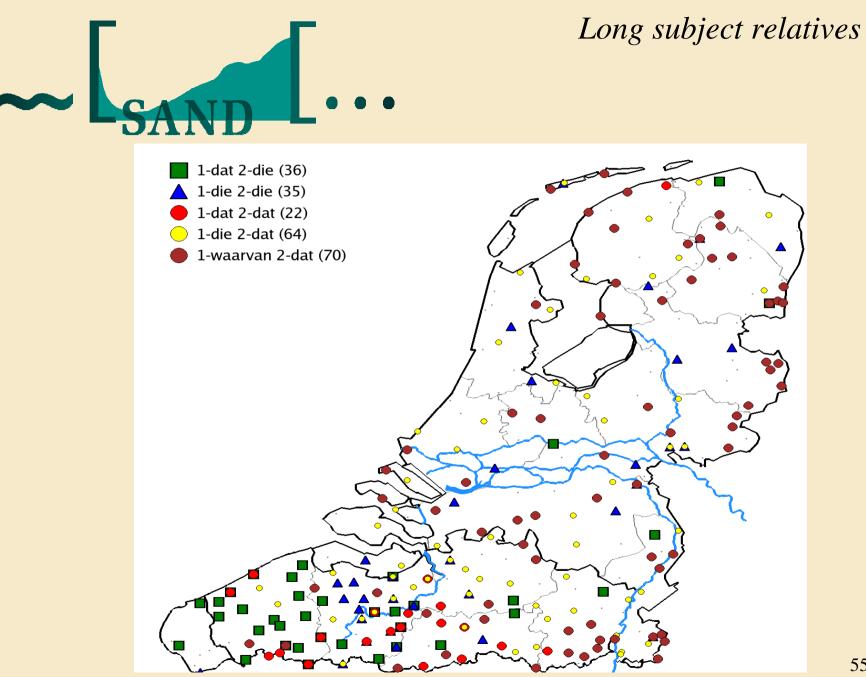


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(7) Dit is de man 1-die ik denk 2-dat het verhaal verteld heeft this is the man 1-who I think 2-that the story told has 'This the man who I think has told the story.'





Reflexive microvariation

Strong reflexives: forms

- a. Toon bekeek REFLToon looked-at REFL
- b. Eduard kent REFL Edward knows REFL

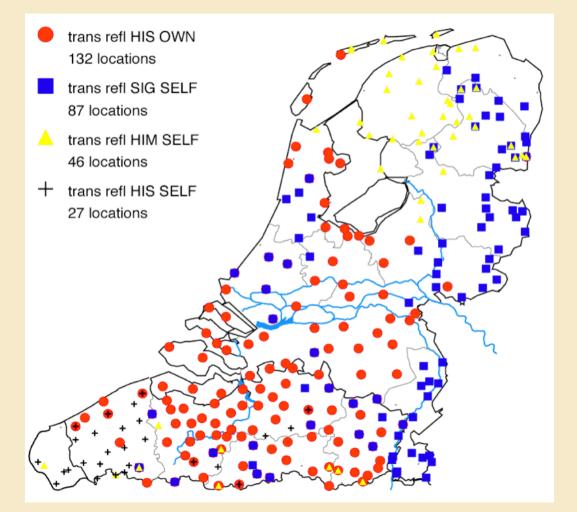
forms:

zichzelf	(sig-self)
hemzelf	(him-self)
zijnzelf	(his-self)
zijn eigen	(his own)

Strong reflexives: distribution

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Jan herinnert REFL dat verhaal

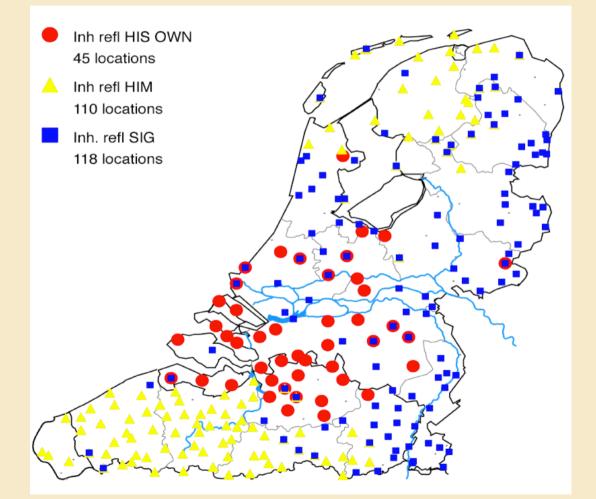
John remembers REFL that story

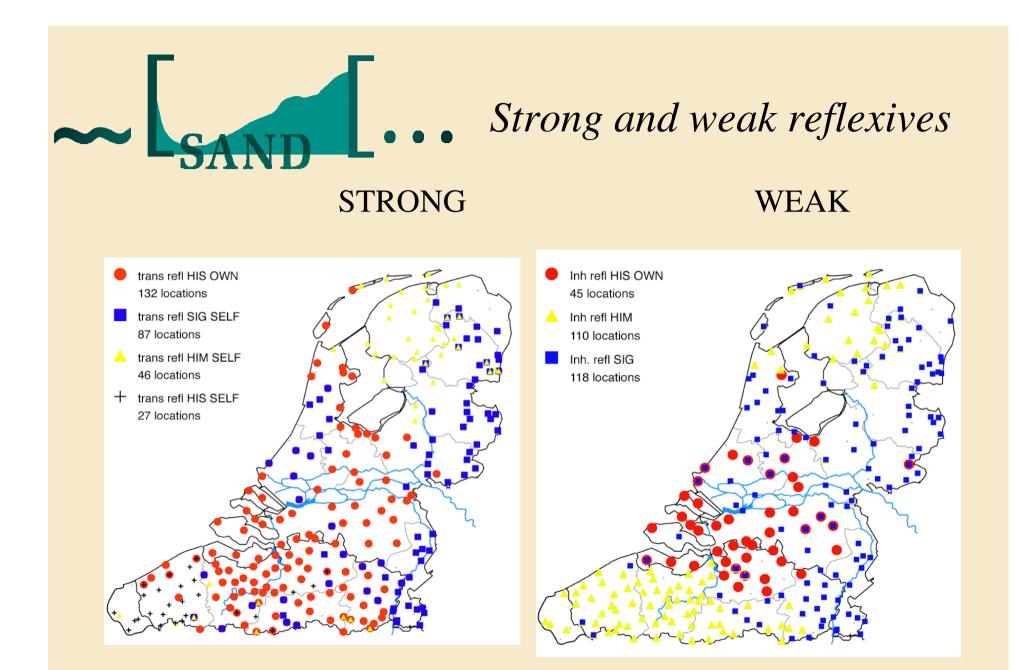
forms:

zich	(sig)
hem	(him)
zijn eigen	(his own)



Weak reflexives: distribution





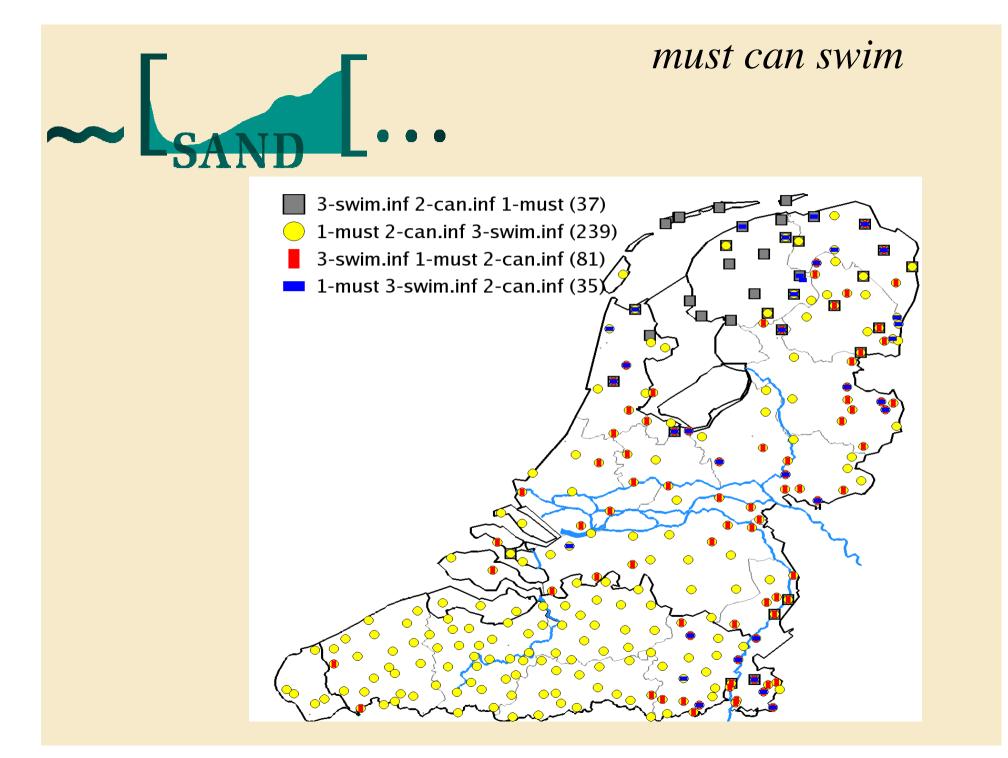


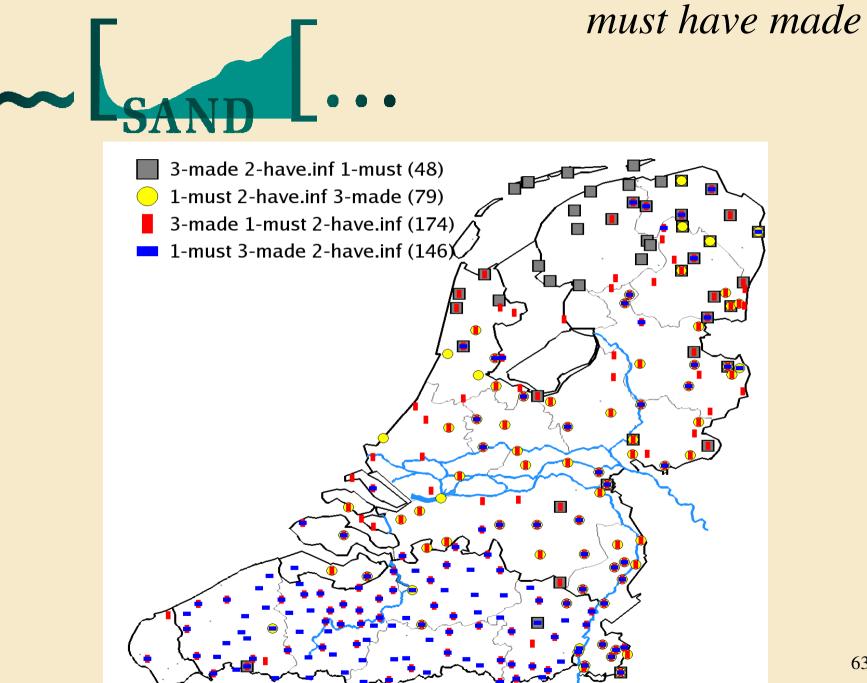
Verb clusters

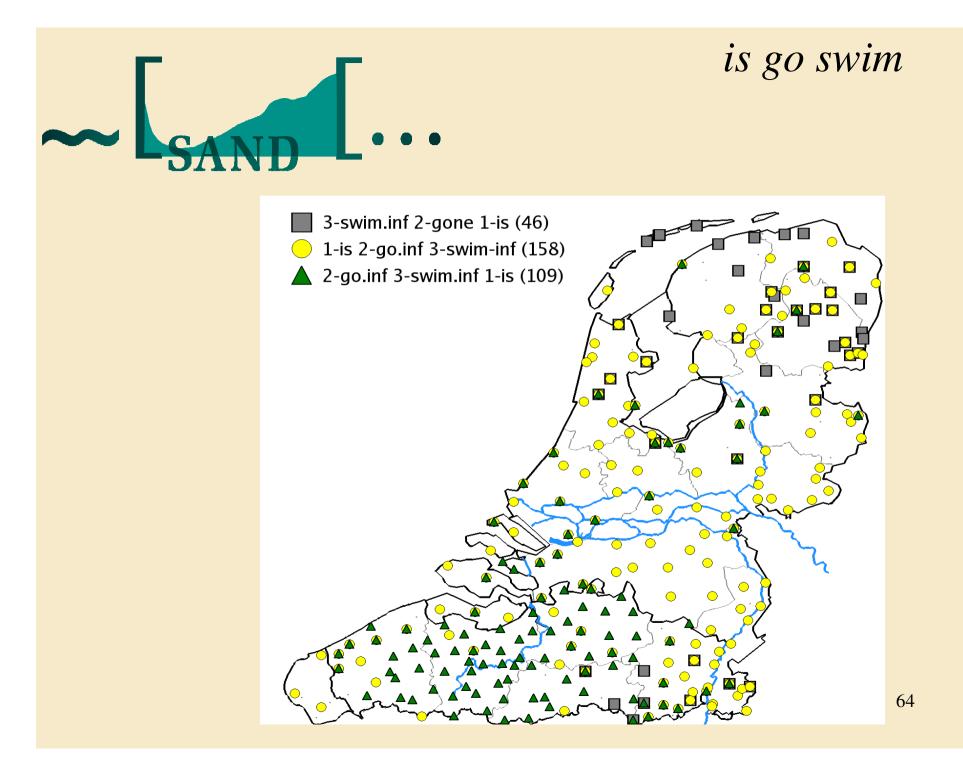
(8) modal - modal - main verb
Ik vind dat iedereen moet kunnen zwemmen.
I think that everyonemust can.INF swim.INF
'I think that everybody should be able to swim.'

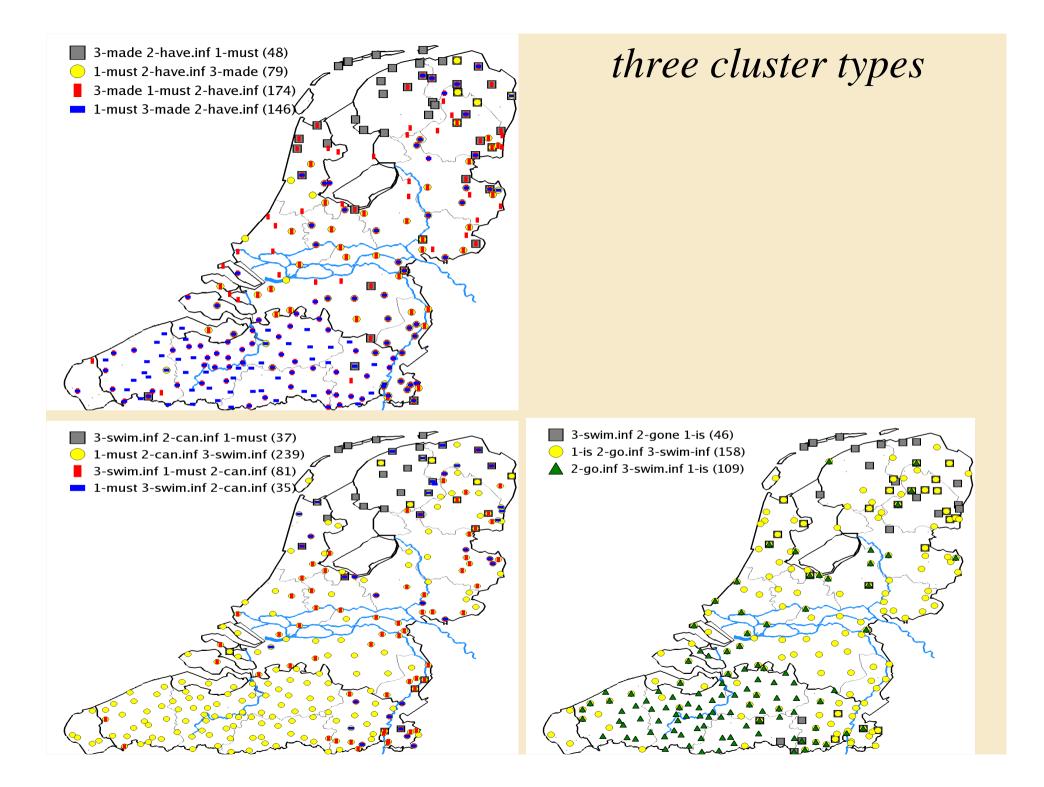
(9) modal - perf. auxiliary - main verb dat hij voor drie uur de wagen moet hebben gemaakt. that he before three o'clock the car must have.INF repaired.PART 'that he should have repaired the car before three o'clock'

(10) perf. auxiliary - aspectual - main verb
Vertel niet wie hij had kunnen roepen
tell not who he had can.INF call.INF
'Don't say who he could have called.'











Verb clusters

Missing orders

- * can.INF must.FIN swim.INF (2-1-3)
 * have.INF must.FIN repaired.PART (2-1-3)
 * go.INF is. FIN swim.INF (2-1-3)
- * can.INF swim.INF must.FIN (2-3-1) * have.INF - repaired.PART - must.FIN (2-3-1) $\sqrt{\text{go.INF}}$ - swim.INF - is.FIN (2-3-1)
- $\sqrt{\text{swim.INF} \text{must.FIN} \text{can.INF}}$ (3-1-2) $\sqrt{\text{repaired.PART} - \text{must.FIN} - \text{have.INF}}$ (3-1-2) * swim.INF - is.FIN - go.INF (3-1-2)



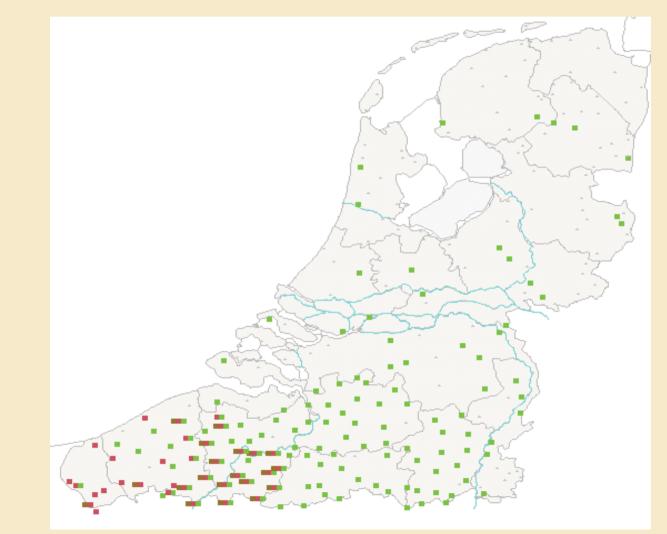
Negative particles and negative concord

(11) 'K en e niemand nie gezien I NEG have nobody not seen 'I have not seen anybody.'

Zeijlstra, H. (2004). *Sentential negation and negative concord*. Amsterdam, LOT Dissertation 101



Negative particle and negative concord





Prospects

- Variation in Inflection (Variflex)
- Determinants of Dialectal Variation
- European Dialect Syntax (EDISYN)
- International Cooperation



Issues

- Standardization of methodology
- Standardization of POS tagging
- Standardization of data storage, retrieval and visualization
- Empirical coherence of dialect syntax research EDISYN: European Dialect Syntax

EDISYN

European Dialect Syntax Sjef Barbiers Meertens Institute and Utrecht University

EDISYN

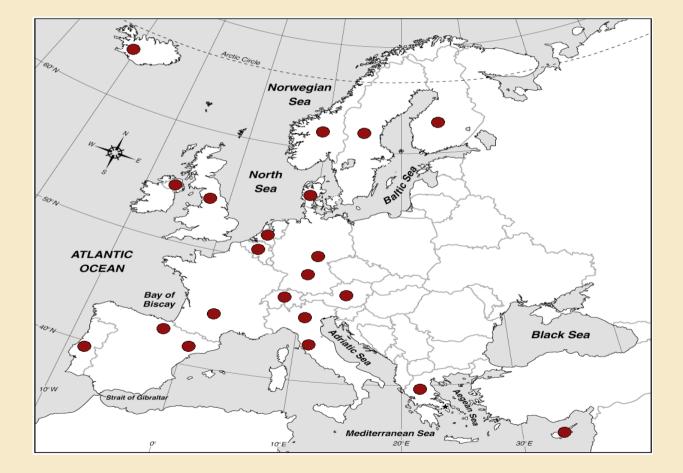
Background

- Syntactic Microvariation (Amsterdam, August 2000; SAND)
- Dialect Syntax in the West Germania (Freiburg, November 2001; FRED)
- European Dialect Syntax (ESF) (Padova, September 2003; ASIS)
- Grand Meeting Scandiasyn
 (Leikanger, August 2005; Scandiasyn/NORMS)
- Syntactic Doubling in European Dialects (Amsterdam, March 2006)

EDISYN Goals

- Network of European dialect syntacticians that use similar standards w.r.t
 - methodology of data collection
 - data storage and annotation
 - data retrieval
 - cartography
- Description and analysis of syntactic doubling phenomena

Current network



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Building a European network

Network participants

- ASIS (Poletto et al.; Manzini et al.; Italian dialects)
- SCANDIASYN (Vangsnes et al., Scandinavian dialects)
- NORMS (Svenonius et al., Scandinavian dialects)
- FRED (Kortmann, English dialects)
- CORDIASYN (Martins et al., Portuguese dialects)

 Alemannic (Bayer, Brandnerl), Bavarian (Weiß), Catalan dialects (Rigau), Spanish dialects (Fernandez), French dialect

(Sauzet, Sportiche, Dagnac), Balkan Slavic (Tomic), Swiss German (Glaser), Basque dialects (Fernandez et al., Etxeparre et al.), Greek dialects (Ralli), English dialects (Buchstaller, Corrigan & Holmberg), Russian and Balkan dialects (Sobolev, Rusakova), Armenian (Khurshudian), Estonian (Lindstrom)

EDISYN team

Sjef Barbiers (project leader) Marika Lekakou (postdoc) Eefje Boef (PhD) Franca Wesseling (research assistant) Jan Pieter Kunst (software developer) (all Meertens Institute) Olaf Koeneman (U of Amsterdam)

EDISYN <u>www.dialectsyntax.org</u>

- Dialect syntax research manual
 - Cornips & Poletto (2005, to appear) on Methodology
 - Barbiers, Cornips & Kunst (to appear) on the SAND corpus
- Distributed network of dialect syntax databases with common search engine and cartography
- Microvariation in Syntactic Doubling (Bingley: Emerald; 2008)
- Monography on Syntactic Doubling
- Workshops:
 - Spring 2010 (Basque Country)

Syntactic doubling

(1) Subject pronoun doubling and subject agreement doubling

Ze peiz-nda-nzeziender rijker zij-nWestFlemishthey think-3plthat-3pl they.Wthey.S richer are-3pl'They think that they are richer.'

(2) Wh-word doubling

Wel denkstwel ik in destad ontmoet heb.Drentswho think-2plwho Iin thecity methave'Who do you think I met in the city?'

(3) Auxiliary doubling

K-em da gezegd gehad I-have that said-PART had-PART 'I have said that.'

Brabants

Syntactic doubling

(4) Verb doubling / "do-support Doe het brood eve do the bread particle 'Please cut the bread.'	snije.	Zeeuws
(5) Participial morphology doub	oling (PPI)	
Zol hee dat edane would he that done-PART 'Could he have done that?'	hemmn ekund have could-PART	Gelders
(6) Infinitival morphology doubling (IPP)		
Hij had moet- en <i>majority of dialects</i>	werk- en	Dutch &
	work-INF	
'He should have worked'		79

Syntactic doubling

(7) Negative concord 't **En** danst-ij **niemand nie** Eastit NEGdances-it nobody not 'Nobody is dancing.' (8) Focus particle doubling (PPI) Maar één wedstrijd heb ik maar gezien Colloquial Dutch only one game have I only seen 'I have seen only one game.' (9) Indefinite determiner doubling 80 Zo '**n** ding éé**n** ha ik ze leve nie gezie

EDISYN

Limburgian

EDISYN Doubling in Europe: pronouns

- Subject doubling
- Clitic doubling/duplication
- Wh word doubling: short & long
- Relative pronoun doubling
- Possessor doubling
- Locative pronoun doubling
- Resumption

EDISYN Doubling in Europe: extended VP (i)

- Agreement
- TMA doubling (including English double modals)
- Infinitival marker doubling
- Participial morphology doubling
- Infinitival morphology doubling (IPP)

EDISYN Doubling in Europe: extended VP

- Auxiliary doubling: BE, HAVE, GO, LET
- Periphrastic DO
- Lexical verb doubling
- Double complementizers
- Complementizer agreement
- Doubly filled Comp

EDISYN Doubling in Europe: quantifiers

- Focus particle doubling
- Negative Concord
- Floating quantifier doubling
- Determiner doubling ((in-)definite)

Doubling in Europe: other

Preposition doubling

- Comparative and superlative doubling
- Double conjunctions
- Demonstrative reinforcement

Main Issues

- 1. Difference between standard languages and dialects (?)
- 2. Theory of (micro)variation
- 3. Syntactic structure
- 4. Semantic / pragmatic functions of doubling
- 5. Geography

EDISYN Theoretical interest of doubling

- More doubling in dialects than in standard languages?
 - If so, why?
- Only functional material?
- Economy (Chomsky 1995)
- Compositionality (Frege 1923)
- Theta-criterion (Chomsky 1981)
- Semantic import?

Analyses of doubling-I

- Multiple spell out of chain links (e.g. Nunes 2004)
 e.g. Wh-doubling, periphrastic DO, subject doubling
 - (i) Who do you think who I met who

- (Almost) missing: lexical doubling
- Theory of morphological reanalysis?
- What counts as identical and what not?
- With distinct doubles: why is the first always underspecified? (cf. Barbiers 2006)

Multiple spell out

- 1. Do these spell-out options correlate with other properties/features of the language systems involved?
- 2. If not, how to account for cross-linguistic differences? Distinction between ungrammatical structures and unrealized structures?
- 3. (Why) do dialects show a tendency to spell out more than one position?
 - Economy

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- Normative pressure (avoidance of redundancy)

Analyses of doubling-II

- One constituent hypothesis (e.g. Uriagareka 1995, Belletti 2003, Kayne 1994) e.g. subject doubling, resumptive pronouns
 - (i) In non-splitting varieties: Do we find these big XPs?
 - (ii) Theory of subextraction
 - (iii) Should absolute identity of doubles not be excluded, given that every part checks a different feature?
 - (iv) Economy of split checking?

Analyses of doubling-III

- Spell out of Spec Head checking configuration (e.g. Rizzi 1991, Haegeman 1995; Wh/Foc/Neg criterion)
 e.g. doubly filled Comp, negative concord
 (iv) I don't know who if John met.
- Spell out of agreement at a distance / covert checking (e.g. Sportiche 1998); split constituent hypothesis
 e.g. verb subject agreement, clitic doubling

Analyses of doubling-IV

- Morphological visibility (Baker 1996): Arguments must be morphologically realized on predicate
 e.g. agreement on V + empty pronoun + full DP
- Semantic/pragmatic import
 - focus
 - affirmation / negation
 - emphasis
 - specificity (dislocation configurations)
 - empathy (Nuyts 1995; subject doubling)

Analyses of doubling-V

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• Doubling to provide a second argument

e.g. focus particle doubling (Bayer 1996, Kayne 2000, Barbiers 2003) dat hij [maar [_{PP} op één man]] maar [_{TP} boos <u>[maar [_{PP} op één man]]</u> is] that he [only at one man] only angry [only at one man] is

 Doubling to reduce dyadic to monadic predicate (Barbiers 1995, 2000) Atom of interpretation: pred (X,Y) Monadic predication if X = Y,
 i.e. if Y agrees with X; Y is a copy of X; Y is a pronoun coreferential with X.

CONCLUSION