Microvariation and parameter hierarchies

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1 Introduction

- CENTRAL DATA: ten dialect phenomena in 267 dialects of Dutch
- METHODOLOGICAL GOAL: develop a quantitative-qualitative methodology for studying and analyzing syntactic microvariation patterns
- EMPIRICAL GOAL: describe and categorize variation patterns in Dutch dialects
- THEORETICAL GOAL: analyze the variation patterns, identify the relevant parameters (and their interactions), and establish the parameter hierarchies they are part of

2 The data: ten dialect phenomena

complementizer agreement (CA)

$\text{O-n}\ Bart\ en\ Lieske\ in\ t\ \text{paradijs}\ levn$

if-pl Bart and Lieske in the paradise live

‘If Bart and Lieske are living in paradise, …’

(Gistel)

critic doubling (CD)

$da-\text{ze}\ zaaile\ lachen.$

that-they$_{\text{CLITIC}}$ they$_{\text{STRONG}}$ laugh

‘that they are laughing.’

(Wambeek)

short do replies (SDR)

$A: IJ\ zal\ nie\ komen.\ B: IJ\ doet.$

he will not come he does

‘A: He won’t come. B: Yes, he will.’

(Berlare)

negative critic (NEG)

$K\ en\ goa\ nie\ noar\ schole.$

I neg go not to school

‘I’m not going to school.’

(Tielt)

(Barbiers et al. 2006)
clitics on yes and no (CYN)

(5) A: Wilde *nog* koffie, Jan? B: *Ja-k.*
    want.you PART coffee Jan Yes-I
    ‘A: Do you want some more coffee, Jan? B: Yes.’ (Malderen)

t ‘it’ as there-expletive (EXPL-T)

(6) *Ten* *goa* niemand *nie* dansn.
    it NEG goes no.one not dance
    ‘There will be no dancing.’ (Brugge)

if as a comparative complementizer (CMPR-IF)

(7) Zie peist *daj* *eer* ga thuis *zijn* *of* *ik.*
    she thinks that.you sooner go home be if I
    ‘She thinks you’ll be home sooner than me.’ (Oostkerke)

the obligatory use of expletive there in embedded clauses and inverted main clauses (ER.OBL)

(8) *dat* *(er)* in *de* fabrieke *nen* jongen werkte
    that there in the factory a boy worked
    ‘that a boy worked in the factory’ (Lapscheure, Haegeman (1986:3))

determiner+demonstrative in NP-ellipsis (THE+THAT)

(9) *De* *die* zou *k* ik *wilen* op eetn.
    the those would I CLUTIC ISTRONG want up eat
    ‘I would like to eat those.’ (Merelbeke)

go get in imperatives (GO-GET)

(10) *Gon* haalt *die* bestelling *ne* keer!
    go INF get INF that order a time
    ‘Go get that order!’ (Ghent)

our goal for today: analyze the geographical patterns displayed in these mini-maps and determine to what extent they are indicative of grammatical differences between dialects or dialect areas
3 Statistical analysis of the aggregate data

starting point: use exploratory statistical methods to discern patterns and generalizations in the raw data and use formal (generative) linguistics to interpret and analyze those patterns and generalizations (see van Craenenbroeck (2014) for related work on verb clusters)

main technique used in this paper: Correspondence Analysis: a technique for exploring and visualizing categorical data, “useful for identification of systematic relationships between variables and capturing the main tendencies” (Levshina (2015:369))

proceeds in 3 steps:

step #1: data table with the raw data:

<table>
<thead>
<tr>
<th></th>
<th>Brugge</th>
<th>Hulst</th>
<th>Dirksland</th>
<th>Ossendrecht</th>
<th>Diksmuide</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CD</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>SDR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>NEG</td>
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<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CYN</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>EXPL-T</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CMPR-IF</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ER.OBL</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>THE+THAT</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>GO-GET</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

step #2: this data table is converted into a distance matrix:

<table>
<thead>
<tr>
<th></th>
<th>CA</th>
<th>CD</th>
<th>SDR</th>
<th>CYN</th>
<th>NEG</th>
<th>EXPL-T</th>
<th>CMPR-IF</th>
<th>THE+THAT</th>
<th>ER.OBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD</td>
<td>1</td>
<td>11.40</td>
<td>7.28</td>
<td>4.58</td>
<td>6.16</td>
<td>4.24</td>
<td>5.56</td>
<td>4.47</td>
<td>6.00</td>
</tr>
<tr>
<td>SDR</td>
<td>10.14</td>
<td>11.40</td>
<td>4.69</td>
<td>5.91</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
</tr>
<tr>
<td>CYN</td>
<td>10.00</td>
<td>7.28</td>
<td>4.69</td>
<td>5.91</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
</tr>
<tr>
<td>NEG</td>
<td>10.63</td>
<td>4.58</td>
<td>4.69</td>
<td>5.91</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
</tr>
<tr>
<td>EXPL-T</td>
<td>10.04</td>
<td>8.30</td>
<td>6.70</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
<td>5.29</td>
</tr>
<tr>
<td>CMPR-IF</td>
<td>10.72</td>
<td>8.54</td>
<td>6.81</td>
<td>6.70</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
</tr>
<tr>
<td>THE+THAT</td>
<td>10.77</td>
<td>8.81</td>
<td>6.81</td>
<td>6.70</td>
<td>6.63</td>
<td>6.40</td>
<td>6.98</td>
<td>6.32</td>
<td>5.29</td>
</tr>
<tr>
<td>ER.OBL</td>
<td>10.34</td>
<td>8.06</td>
<td>4.74</td>
<td>5.38</td>
<td>6.00</td>
<td>4.00</td>
<td>4.69</td>
<td>7.44</td>
<td>7.68</td>
</tr>
<tr>
<td>GO-GET</td>
<td>10.72</td>
<td>8.30</td>
<td>4.89</td>
<td>5.91</td>
<td>6.32</td>
<td>5.29</td>
<td>5.09</td>
<td>7.68</td>
<td>5.29</td>
</tr>
</tbody>
</table>

step #3: the elements in the distance matrix (i.e. the ten phenomena) are represented as points in a lower-dimensional space (typically 2D or 3D), whereby geographical distance between points corresponds (as closely as possible) to distance recorded in the distance matrix:

→ the number of dimensions taken into consideration in the analysis represents a trade-off between keeping the number small enough to be interpreted/visualized, but large enough so as to not lose any vital information:
4 From statistics to linguistics: interpreting the results

4.1 First dimension: complementizer agreement

- the first dimension sets complementizer agreement (CA) apart from all other phenomena
- van Koppen (to appear) and references mentioned there: complementizer agreement is the overt reflex of unvalued $\phi$-features on C undergoing Agree with the subject
- supporting evidence: the $\phi$-feature specification of C(complementizer agreement) can be different from—and is hence independent from—that of T (Haegeman and Koppen (2012), van Koppen (2009)):

  (11) Ich dink de-s doow en ich ôs treffe. I think that-2SG you and I ourselves meet-PL 'I think that you and I will meet.'

(12) the AgrC-parameter: C [does/does not] have unvalued $\phi$-features.

4.2 Second dimension: split DP vs. split CP

- the second dimension bundles clitic doubling (CD) and combinations of determiner+demonstrative (THE+THAT) and contrasts them with a cluster consisting of the use of ‘t ‘it’ as an expletive (EXPL-T), the use of of ‘if’ as comparative complementizer (CMPR-IF), the obligatory use of an expletive in embedded clauses and inverted main clauses (ER.OBL), the use of go get in imperatives (GO-GET), short do replies (SDR), and—to a lesser extent—clitics on ‘yes’ and ‘no’ (CYN) and the negative clitic (NEG)
- complementizer agreement (CA) no longer plays a role

hypothesis: CD and THE+THAT are signs of dialects having a split DP-domain, while EXPL-T, CMPR-IF, ER.OBL, GO-GET, SDR, CYN, and NEG are indicative of a split CP-domain

4.2.1 Split DP

(13) da-ze zaaile lachen. that-they$^{\text{CLITIC}}$ they$^{\text{STRONG}}$ laugh ‘that they are laughing.’ (CD)

(14) De die zou k ik wiln op eetn. the those would I$^{\text{CLITIC}}$ I$^{\text{STRONG}}$ want up eat ‘I would like to eat those.’ (THE+THAT)
van Craenenbroeck and van Koppen (2008)’s analysis of clitic doubling:

- **step one**: according to the tests in Déchaine and Wiltschko (2002) strong pronouns in doubling dialects are pro-DPs, while subject clitics are pro-\(\phi\)Ps

\[
\begin{align*}
\text{(15) strong subject pronoun} & \quad \text{(16) subject clitic} \\
\text{DP} & \quad \text{DP} \\
D & \quad D \\
\phi & \quad \phi \\
NP & \quad NP \\
N & \quad N
\end{align*}
\]

- **step two**: a clitic-doubled subject is base-generated as a big DP (see also Belletti (2000), Uriagereka (1995), Laenzlinger (1998), Grohmann (2000), Polletto (2008), Kayne (2005)); more specifically, clitics are the result of \(\phi\)-movement into the extended left periphery of the DP (see Szabolcsi (1994), Aboh (2004), Giusti (1996) among others)

\[
\begin{align*}
\text{there has to be an additional layer above DP to host the movement of the clitic (call it FP) in order to avoid an anti-locality violation (Abels (2003)):}
\end{align*}
\]

\[
\begin{align*}
\text{(17)} & \quad \text{(18)} \quad \text{(19)} \\
\text{FP} & \quad \text{a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dieje} \quad \text{a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dien} \\
\quad \text{CLITIC} \quad \text{the that} \quad \text{the that} \quad \text{the those} \quad \text{the that} \quad \text{the that} \quad \text{the that} \\
\quad \text{F'} \quad \text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \quad \text{‘that one’} \quad \text{‘that one’} \\
\quad \text{DP} \quad \text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \quad \text{‘that one’} \quad \text{‘that one’} \\
\quad \text{\(\phi\)P} \quad \text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \quad \text{‘that one’} \quad \text{‘that one’} \\
\quad \text{NP} \quad \text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \quad \text{‘that one’} \quad \text{‘that one’} \\
\quad \text{N} \quad \text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \quad \text{‘that one’} \quad \text{‘that one’} \\
\end{align*}
\]

- **step three**: when the resulting structure is handed over to PF, the moved \(\phi\)P is spelled out as a subject clitic, and the DP as a strong pronoun

THE+THAT: Barbiers et al. (2016) argue for a similar big DP+movement-analysis

- **step one**: the definite article in THE+THAT pronominalizes \(\phi\)P, i.e. the part of the DP-structure hosting the noun, numerals, and adjectives:

\[
\begin{align*}
\text{(18) \ a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dien} \quad \text{a. } \text{de } \text{dieje} \\
\text{the that} \quad \text{the that} \quad \text{the those} \\
\text{‘that one’} \quad \text{‘that grandfather’} \quad \text{‘those two red are on the table’} \\
\end{align*}
\]

- **step two**: \(\phi\)P moves into the left periphery of the DP; anti-locality again requires that the left periphery of DP be complex.
Supporting evidence from possessive structures:

1. dialects with a negative setting for the D-parameter lack THE+THAT because they lack the additional DP-layer (no landing site for the definite article)

2. these dialects (as well as the dialects with a positive setting for the D-parameter) do have THE+POSS(ESSOR) (Corver and van Koppen (2010), and see Grohmann and Haegeman (2003), Haegeman (2004) for related proposals)

3. however, only dialects with a positive setting of the D-parameter allow doubling in THE+POSS:

\[
\begin{align*}
\text{DP} & \Rightarrow \text{THE} \\
\text{Poss} & \Rightarrow \text{THE} \\
\text{Poss'} & \Rightarrow \text{THE} \\
\end{align*}
\]
4.2.2 Split CP

(26) A: *IJ* zal nie komen. B: *IJ* doet.  
he will not come he does  
‘A: He won’t come. B: Yes, he will.’ (SDR)

(27) A: Wilde *nog* koffie, Jan? B: *Ja-k.*  
want you PART coffee Jan Yes-I  
‘A: Do you want some more coffee, Jan? B: Yes.’ (CYN)

SDR: van Craenenbroeck (2010): short do replies only occur in non-embedded contradictory polar replies to declarative clauses → they involve TP-ellipsis licensed by a left peripheral polarity head:

Mary sees Pierre not gladly she does  
‘A: Mary doesn’t love Pierre. B: Yes, she does.’

(29)
```
CP
   C
      zv	PolP
         PolP
        ze Pol
      +⇒ ELLIPYSIS
doet
```

• supporting evidence: short do replies are only compatible with high left-peripheral adverbs:

(30) A: Jef *zeit* da *gou* veel geldj etj. B: *K’en* duu (*pertang* / *nie*  
Jef says that you much money have NEG do however not  
anymore  
‘A: Jef says you have a lot of money. B: I don’t, however/*anymore.’

CYN: van Craenenbroeck (2010): the occurrence of clitics on ‘yes’ and ‘no’ are derived from short do replies: they involve further (higher) ellipsis of an already truncated structure (see Haegeman and Weir (2015) for a different analysis—which also makes use of a split CP-domain—of CYN in the West Flemish dialect of Lapscheure)

• supporting evidence: there-expletives in short do replies and yes/no+clitics:

(31) a. Dui *stui* ne vantj inn of:  
there stands a man in the garden  
‘There’s a man standing in the garden.’

b. [*Dui / T] en duut. // Jui [* d’r / t].  
there /it NEG does. yes there /t  
‘No, there isn’t. //Yes.’

(32) the C-parameter (FIRST VERSION)  
The CP-domain {does/does not} project a separate PolP.

note: the negative clitic *en* (NEG, cf. (33)) also fits this pattern: as argued by van Craenenbroeck (2010), it too occupies a high Pol-head in the left periphery

(33) *K* en *goa* nie noar *schole.*  
I NEG go not to school  
‘I’m not going to school.’ (NEG)

EXPL-T: only occurs in subject initial main clauses in the relevant dialects; in all other positions the locative expletive *er/daar* ‘there’ is used:

• Dialects with EXPL-T (Haegeman (1986), Grange and Haegeman (1989), L. Haegeman p.c.)

it are yesterday three students come  
‘Three students came yesterday.’
b. *Zyn t gisteren drie studenten gekomen?
   are it yesterday three students come
   intended: ‘Did three students come yesterday?’
c. *dan t gisteren drie studenten gekommen zyn.
   that.pl it yesterday three students come are
   intended: ‘that three students came yesterday.’

• Dialects without EXPL-T

(35)

a. D'r staan twee venten in den
   there stand two men in the garden
   ‘There are two men standing in the garden.’
b. Staan d'r twee venten in den?
   stand there two men in the garden
   ‘Are there two men standing in the garden?’
c. dat er twee venten in den staan.
   that there two men in the garden stand
   ‘that there are two men standing in the garden.’

van Craenenbroeck (2011): EXPL-T is the result of an additional CP-layer:

• EXPL-T is a main clause complementizer/particle much like Breton bez or
  Welsh fe: (i) these are also disallowed in embedded clauses and inverted main
  clauses; (ii) they also do not trigger agreement on the verb

(36)

Bez' er glv.
PRT 3s does rain
‘It rains.’
   (Breton, Jouitteau (2008))

(37)

Fe glywes i'r cloc.
PRT heard.sgs the clock
‘I heard the clock.’
   (Welsh, Jouitteau (2008))

• assumption: in expletive-initial main clauses the C-domain needs to be
  overtly realized in all dialect regions (= the V2-requirement)

• analysis: in dialects without EXPL-T the regular there-expletive can move to
  specCP to accomplish this (39), but in dialects with EXPL-T there is an addi-
  tional CP-layer which prevents this movement (38). As a result, the C-domain
  is realized by spelling out C as EXPL-T:

(38)

\begin{tikzpicture}
  \node (C) {C'};
  \node (CP) [above of=C] {CP};
  \node (EXPL-T) [below of=C, xshift=-3cm] {EXPL-T};
  \node (FP) [below of=EXPL-T] {FP};
  \node (F) [below of=FP] {F};
  \node (TP) [below of=F] {TP};
  \node (T) [below of=TP] {T'};
  \draw[->] (C) -- (FP);
  \draw[->] (FP) -- (F);
  \draw[->] (F) -- (TP);
  \draw[->] (TP) -- (T);
  \draw[->] (C) -- (EXPL-T);
\end{tikzpicture}

(39)

\begin{tikzpicture}
  \node (C) {C'};
  \node (CP) [above of=C] {CP};
  \node (EXPL-T) [below of=C, xshift=-3cm] {EXPL-T};
  \node (FP) [below of=EXPL-T] {FP};
  \node (F) [below of=FP] {F};
  \node (TP) [below of=F] {TP};
  \node (T) [below of=TP] {T'};
  \draw[->] (C) -- (FP);
  \draw[->] (FP) -- (F);
  \draw[->] (F) -- (TP);
  \draw[->] (TP) -- (T);
  \draw[->] (C) -- (EXPL-T);
\end{tikzpicture}

ER.OBL:

(40) dat *(er) in de fabrieke nen jongen werkte
    that there in the factory a boy worked
    ‘that a boy worked in the factory’ (Lapscheure, Haegeman (1986))

• proposal: we want to treat this as an ECP-style effect: in dialects with a split
  CP, the subject position is insufficiently local to C and as a result cannot re-
  main empty
GO-GET:
- infinitival GO and infinitival COME appear within the left periphery of imperative clauses.

(42) \( \text{Gon haalt die bestelling ne keer!} \)
    \[ \text{gon-INF get\text{\_}IMP that order a time} \]
    \[ \text{‘Go get that order!’} \quad \text{(GO-GET)} \]

(43) \( \text{Komen eet maar al gauw want ‘t is gereed!} \)
    \[ \text{come\text{\_}INF eat\text{\_}IMP PART PART fast because it is ready} \]
    \[ \text{‘Come and eat quickly, because it is ready!’} \quad \text{(COME-EAT)} \]

- they appear to be functional, grammaticalized items rather than ‘real’ lexical verbs (see Abney (1987), Hopper and Traugott (1993), Benjamin (2010), Waltereit and Detges (2007), van Craenenbroeck and van Koppen (2013)):
  1. functional items form a closed class
     → GO and COME are the only verbs that can be used in this way
     → GO also displays functional behavior as a motional auxiliary and in verb doubling (Haegeman 1990)
     → some dialects even have a dedicated verb (meaning go) in these examples:

(44) \( \text{Teure roept e keer ui broere.} \)
    \[ \text{go call a time your brother} \]
    \[ \text{‘Go call your brother.} \quad \text{(Waregem)} \]

2. functional items can be morphologically defective
   → GO and COME appear only in their infinitival form

3. functional items are phonologically reduced
   → GO is phonologically reduced with respect to normal infinitive GO (L. Haegeman p.c.):

(45) \( \text{Gon/Goan kykt hoe loate dat eth is.} \)
    \[ \text{go\text{\_}reduced/go\text{\_}full look how late that it is} \]
    \[ \text{‘Go see what the time is.’} \]

(46) \( \text{K peinzen dan k morgen moeten no Gent} \)
    \[ \text{I think that I tomorrow must to Gent} \]
    \[ \text{*gon/goan.} \]
    \[ \text{go\text{\_}reduced/go\text{\_}full} \]
    \[ \text{‘I think I have to go to Gent tomorrow.’} \]

\textbf{analysis:} the dialects that allow grammaticalization of GO and COME into clause-initial functional elements have an additional CP-layer to host them
**CMPR-IF:** dialects with CMPR-IF differ from dialects without CMPR-IF in that they have an unique form for the conditional complementizer:

<table>
<thead>
<tr>
<th></th>
<th>West-Flemish</th>
<th>East-Flemish</th>
<th>(other) Southern Dutch</th>
<th>Northern Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>conditional</td>
<td>o/a</td>
<td>os/as</td>
<td>as</td>
<td>als</td>
</tr>
<tr>
<td>comparative</td>
<td>of</td>
<td>of</td>
<td>as</td>
<td>als</td>
</tr>
</tbody>
</table>

→ this might indicate that the CMPR-IF dialects have two separate C-layers to express conditional and comparative information, whereas the other dialects bundle both features on one single head.

(49) CondP

(50) Cond/CompP

Cond

CompP

Comp of

Cond/Comp als

Summary

the C-parameter (FINAL VERSION)

CP [does/does not] have an extended left periphery.

→ recall, though, that CYN and NEG didn’t cluster neatly with the rest of the split CP-phenomena:

→ their special status is further confirmed if we look at association rules between the C-related phenomena [Spruit 2008, Piatetsky-Shapiro 1991].

→ all arrows point towards either CYN, NEG, or SDR: IF a dialect has one or more of the split C-phenomena, THEN it also always has one of the polarity-related phenomena.

→ we take this to mean that polarity acts as a cue for the language learner that she is acquiring a split C-dialect.
4.3 Third dimension: CD vs. THE+THAT

- the third dimension sharply contrasts CD with THE+THAT

→ we need to discern between three scenarios:

1. dialects that have both CD and THE+THAT → positive setting for the D-parameter
2. dialects that have THE+THAT but no CD: almost all located in Zeeland → we will argue that they have a negative setting for the D-parameter and only apparent THE+THAT
3. dialects that have CD but no THE+THAT: no clear geographic region → we will suggest that these dialects have a positive setting for the D-parameter and that the absence of THE+THAT is an artefact of the question(naire) that was used

scenario #2: THE+THAT but no CD

- Barbiers et al. (2016) argue that THE+THAT in Zeeland does not represent a genuine, productive case of demonstrative doubling, but rather a lexicalized substantive pronoun that merely has the surface appearance of demonstrative doubling:

North Brabant demonstrative doubling

(52) a. den / dien / dizzen opa
the.MASC that.MASC this.MASC grandfather
‘the/that/this grandfather’
b. de / die / dees tante
the.FEM that.FEM this.FEM aunt
‘the/that/this aunt’

(53) a. den dien / den dizzen
the.MASC that.MASC this.MASC
[speaking of grandfathers:] ‘that/this one’
b. de die / de dees
the.FEM that.FEM this.FEM
[speaking of aunts:] ‘that/this one’

→ both the determiner and the demonstrative in THE+THAT-doubling display completely regular agreement that is also attested in non-elliptical contexts
Zeeland demonstrative doubling

(54) a. de / die / deze opa
   the that this grandfather
   'the/that/this grandfather'

   b. de / die / deze tante
   the that this aunt
   'the/that/this aunt'

(55) a. den diejen / ?? den dizzen
   the.MASC that.MASC the.MASC this.MASC
   [speaking of grandfathers:] 'that/??this one'

   b. den diejen / ?? den dizzen
   the.MASC that.MASC the.MASC this.MASC
   [speaking of aunts:] 'that/??this one'

→ both the determiner and the demonstrative in THE+THAT-doubling display
an archaic and fixed type of agreement otherwise unattested in the nominal
paradigm + only distal demonstratives can partake in this pattern

The two points in Belgian Limburg

• these have a different pronominal paradigm than the other dialects with
THE+THAT: they use de, dich instead of ge, gij

• Postma ([2011]: dich is a complex pronoun containing the clitic d → if a clitic
is already part of the strong pronoun, it cannot be clitic doubled any further

→ these dialects have a positive setting for the D-parameter, but an independ-
ent factor is blocking clitic doubling

scenario #3: CD but no THE+THAT

• Corver and van Koppen ([2015]: THE+THAT only shows up in contrastive el-
liptical contexts; in non-contrastive ones the demonstrative is not doubled

(56) Ik ging vaker bij deze tante logeren dan bij *?( de) die.
   I went more often with this aunt stay than with the that
   'I used to stay with this aunt more often than with that one.'

(57) [Speaking of an aunt:] (* De) die is altijd heel aardig.
   the that is always very nice
   'She is always very nice.'

• the question that was used to test for THE+THAT in the SAND-project is not
necessarily contrastive:

(58) De die zou ik niet durven opeten.
   the those would I not dare eat
   'I wouldn’t dare to eat those.'

• conjecture: the lack of THE+THAT in certain Brabant locations is not due to
a negative setting of the D-parameter, but an artefact of the data collection

• supporting evidence: earlier dialect questionnaires do show THE+THAT in
the entire CD-area:
5 Parameter interactions and parameter hierarchies

note: the three parameters introduced above seem to be of two different types: the AgrC-parameter is about the presence/absence of a specific unvalued feature on a specific functional head, while the other two pertain to the distribution of formal features across phasal peripheries.

→ both types can be implemented in terms of parameter hierarchies (Biberauer et al. 2014; Biberauer and Roberts 2015).

AgrC-parameter: represents a choice point at some (relatively low) point in the null argument hierarchy of Biberauer et al. (2014):

(59)

Are ϕ-features present on probes?

No

Radical pro-drop

Yes

Are ϕ-features present on all probes?

No

Pronominal arguments

Yes

Are ϕ-features fully specified on some probes?

No

Non-pro-drop

Yes

Are ϕ-features fully specified on T?

Yes

Consistent null subject

No

…

supporting evidence: some types of COMP-agreement license null subjects:

(60) *Et geberde doest fot giest.*

it happened when 25G away went

‘It happened when you went away.’ (Lies)

D/C-parameters: we propose these parameters constitute choice points in a single parameter hierarchy regulating the grammaticalization of A′-features on phase heads and their surrounding projections.

→ we implement the variation as a parametrization of Feature Inheritance (Chomsky 2007; cf. also Ouali (2008), van Craenenbroeck and van Koppen (2007), Miyagawa (2010), Jiménez-Fernández and Miyagawa (2014)).

(61)

Are A′-features grammaticalized on phase heads (C, v, D)?

No

D/C-less languages cf. Bošković (2012)

Yes

Are these features subject to Feature Inheritance?

No

Consistently poor left periphery

Yes

Consistently rich left periphery

No

Mixed effects of left-peripheral richness
with this as background we can now explore the interaction between the three parameters:

- +AgrC
- +split C
- +split D

East & West Flanders
(N=59)

Nieuwmoer, Sint Lenaarts, Moerdijk
(N=3)

Borgloon
(N=1)

Drenthe, Utrecht
(N=67)

- +AgrC
- +split C
- –split D

Flemish Brabant & Antwerp
(N=23)

North Brabant
(N=21)

Holland, Limburg, Friesland, Groningen
(N=83)

- +AgrC
- –split C
- –split D

North Brabant
(N=21)

Flemish Brabant & Antwerp
(N=23)

Eastern Flanders
(N=59)

Nieuwmoer, Sint Lenaarts, Moerdijk
(N=3)

Holland, Limburg, Friesland, Groningen
(N=83)

- –AgrC
- +split C
- +split D

Borgloon
(N=1)

Drenthe, Utrecht
(N=67)

- –AgrC
- +split C
- –split D

Flemish Brabant & Antwerp
(N=23)

North Brabant
(N=21)

Holland, Limburg, Friesland, Groningen
(N=83)

- –AgrC
- –split C
- –split D

North Brabant
(N=21)

Flemish Brabant & Antwerp
(N=23)

Eastern Flanders
(N=59)

Nieuwmoer, Sint Lenaarts, Moerdijk
(N=3)

Holland, Limburg, Friesland, Groningen
(N=83)

note:

- five of the eight logically possible parameter combinations are well attested, both in terms of the number of locations and in terms of those locations forming a coherent geographical region
- the remaining three are nearly completely absent:
  1. [+AgrC, +split C, –split D]: 3 locations, no geographical pattern
  2. [+AgrC, –split C, –split D]: 3 locations, on the border between Flanders and North Brabant
  3. [–AgrC, +split C, –split D]: 1 location
- the scarcity of [+AgrC, –split C, –split D] seems to be due to the border between [+AgrC] and [–AgrC] and the one between [+split C] and [–split C] coinciding in the Flemish-North Brabant transition area
- the other two missing parameter combinations might indicate an implica-tional relation between the split D- and the split C-parameter: a positive value for the latter implies a positive value for the former → there might be more structure at the bottom of the hierarchy in [61]
6 Beyond Dutch: split C and split D in Afrikaans

- all other things being equal we would expect the properties discussed above to cluster together in other languages as well
- a promising case study in this respect might be Afrikaans:

1. it appears to have SDR (Th. Biberauer p.c.):

   he sleeps he does
   ‘A: He’s sleeping. B: Indeed!’

2. it spells out a high left-peripheral Pol-head as clause-final nie (NEG) (Biberauer 2008)

   (63) Ek het nie verstaan nie.
   I have not understood not
   ‘I didn’t understand.’

3. it seems to have the GO-GET construction (Vanbelleghem 2014, 17), citing Stadler (1992:92–93))

   (64) Gaan laai dit by die huise af.
   go load this by the house off
   ‘Go and unload this by the house.’

4. the expletive daar ‘there’ is obligatory in presentational structures (Biberauer 2010)

   (65) dat *(daar) in die dorp ’n internetkafe is.
   that *there in the village an internet.cafe is
   ‘...that there’s an internet cafe in the village.’

5. while Afrikaans doesn’t have CMPR-IF, it does show evidence of an extended left periphery in comparatives, through the use of wat ‘what’ to the right of the comparative complementizer (Donaldson 1993:309):

   (66) Ek het vanaand veel minder geëet as wat ek
gisteravond geëet het.
I have tonight much less eaten as what I
‘I ate much less tonight than last night.’

6. however, Afrikaans doesn’t have CYN or EXPL-T (maybe because it doesn’t have clitics?)

总结: the initial evidence for assuming a split C in Afrikaans seems fairly convincing

- for split D on the other hand, the evidence is much less clear: Afrikaans does not have CD (possibly due to the absence of clitics), nor does it possess THE+THAT, but it can double demonstratives by a locative adverb (Leu 2008):

   (67) Ek het hier die huis gebou.
   I have here this house built
   ‘I built this house.’

- to the extent that Afrikaans has a negative setting for the split D-parameter, it suggests that the implicational relation between [+split C] and [+split D] found in Dutch dialects is accidental; clearly, more research is needed

7 Summary and conclusions

- a quantitative correlation between variation patterns can be translated into a qualitative analysis in terms of grammatical parameters
- the ten dialect phenomena (CA, THE+THAT, CD, CYN, SDR, NEG, CMPR-IF, GO-GET, ER.OBL, and EXPL-T) reduce to three parameters: CA-parameter, split C-parameter, split D-parameter
- the C/D-parameters form part of the same parameter hierarchy, whereas the CA-parameter is part of a different one