A microparameter in a nanoparametric world

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INTRODUCTION

Dealing with raw dialect data can be very daunting. Consider the following mini-maps:

Depicted here is the distribution in Belgium and the Netherlands of complementizer agreement (CA, see (1)), clitic doubling (CD, (1)), short *do* replies (SDR, (2)), the negative clitic *en* (NEG, (2)), and clitics on 'yes' and 'no' (CYN, (3)) (all data from Barbiers (2006)).

(1) *da-**n** **ze** **zunder** morgen goan.*
that.PL they$_{\text{CLITIC}}$ they$_{\text{STRONG}}$ tomorrow go
'that they are going tomorrow.' **CA + CD**

(2) *A: Ie slaapt. B: **Ie en doet**.*
he sleeps he NEG does
'A: He's sleeping. B: No, he isn't.' **SDR + NEG**

(3) *A: Wil je nog koffie? B: **Jaa-k**.*
want you PART coffee Yes-I
'A: Do you want some more coffee? B: Yes.' **CYN**

While it is intuitively clear that there is a certain degree of resemblance between the distribution of these phenomena—all of them show a concentration in the lower-left (i.e. West Flemish) area—how to make that intuition precise is far from clear. This paper provides a three-step approach that converts the geographical data into a parametric account. The surprising conclusion of our analysis is that Baker (2008)'s distinction between parameters formulated over individual functional items (his microparameters) and those formulated over "the general principles that shape natural languages" (macroparameters) can be recreated at the level of microvariation.

STEP ONE: STATISTICAL ANALYSIS OF THE AGGREGATE DATA

Following the Reverse Dialectometry approach of van Craenenbroeck (2014) we first provide a statistical analysis of all the data points shown in the mini-maps. In particular, for each of the five phenomena, we look at 267 dialect locations and see if they occur there or not. In a next step, we compare the five phenomena with respect to how similar or dissimilar their distribution is. Thirdly, we reduce the dimensionality of our data set, so that we can plot and visualize the patterns in the data. That plot is shown in figure 1. The plot shows three things: (a) there is a first dimension (the *x*-axis) which sets apart CA from the other phenomena, (b) there is a second dimension (the *y*-axis) which sets apart CD from the other phenomena, and (c) NEG, CYN, and SDR are highly similar and are not differentiated by the analysis. This is the input for step two of our analysis.

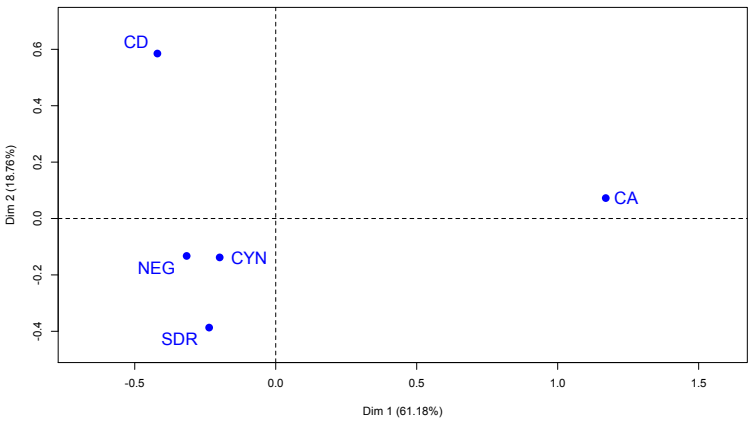

Figure 1: 2D-plot of the data in the mini-maps

STEP TWO: THREE PARAMETERS

Based on figure 1 and the existing theoretical literature on these phenomena, we propose the following three syntactic parameters:

(4) **AgrC-parameter:** *Dialects {have/do not have} unvalued ϕ-features on C*

This parameter accounts for the presence or absence of CA. We argue that CA is the overt reflex of unvalued ϕ-features on C undergoing Agree with the subject (van Koppen, to appear).

(5) **D-parameter:** *Pronominal D has: (i) an Edge Feature (EF) or (ii) no EF*

This parameter accounts for the presence or absence of CD. We assume the pronominal structure proposed by Déchaine and Wiltschko (2002) and follow van Craenenbroeck and van Koppen (2008)'s analysis of clitic doubling: a clitic-doubled subject starts life as a big DP (Uriagereka (1995); Poletto (2008)) and clitic doubling is the result of ϕP-movement to specDP. This movement is triggered by an EF on pronominal D.

(6) **PolP-parameter:** *Dialects {have/do not have} a PolP in the clausal left periphery.*

This parameter accounts for the presence or absence of NEG, SDR, and CYN. We argue that the negative clitic *en* occupies a high left peripheral Polarity head (van Craenenbroeck, 2010). Dialects with *en* have this head, whereas the other dialects do not. We follow van Craenenbroeck (2010)'s analysis of SDRs as involving TP-ellipsis licensed by this same Pol-head, as well as his analysis of CYN as a further ellipsis of SDRs.

STEP THREE: DISTRIBUTION OF PARAMETER VALUE COMBINATIONS

At first sight, the parameters in (4)–(6) are microparameters in Baker (2008)'s sense. Moreover, they are logically independent, and so we would expect the eight possible parameters value combinations to be distributed more or less evenly across dialects. As the table in figure 2 shows, however, this is far from true: 86% of the dialects (the green-colored cells) have the same value for the D- and the PolP-parameter. Following Baker (2008) we take this bimodal distribution to signal that we are dealing with an underlying bigger parameter of which D and PolP are mere epiphenomena. To scale down Baker (2008)'s terminology: while (4) is a nanoparameter (determined by a specific feature value on an individual functional head), (5) and (6) should be taken together into a microparameter, which transcends individual heads. We propose to formulate it as a parametrization of Cinque and Rizzi (2009)'s "one feature one head"-principle. Languages that have a positive setting for this principle have an extended left periphery, both in the nominal (cf. (5)) and in the clausal (cf. (6)) domain, while languages with a negative setting lack such functional space in both domains.

	+AGRC		–AGRC	
	+POLP	–POLP	+POLP	–POLP
–D$_{[EF]}$	9 (3%)	77 (28%)	3 (0.01%)	65 (24%)
+D$_{[EF]}$	68 (25%)	1 (0.003%)	25 (9%)	19 (7%)

Figure 2: Distribution of the 8 parameter value combinations across 267 Dutch dialects

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