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# Modelling diasystemic inflexion: Verb morphology in the *Croissant linguistique*

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## 1 Introduction

Our paper explores how tools developed for the formal modelling of individual inflexional systems may be fruitfully applied to the description of inflexion in a dialect continuum or DIASYSTEM. We take as our case study the area of central France termed the CROISSANT LINGUISTIQUE (literally, ‘Linguistic Crescent’; Tourtoulon & Bringuier 1876, Brun-Trigaud 1990), usually characterized as a transitional zone between northern Gallo-Romance (Oïl) varieties and southern Gallo-Romance (Occitan) varieties.

For each of six survey points within the Croissant area, and a seventh, Occitan, survey point as a comparator, we analyse the inflexional morphology of the verb, using two principal formalizations: PARADIGM FUNCTION MORPHOLOGY (Stump 2001, 2016, Stump & Finkel 2013, Bonami & Stump 2016) and STEM SPACES (Bonami & Boyé 2002, 2003, 2014, Boyé 2011). By these means, we obtain schemas highlighting the key principles of paradigm organization in each individual variety. Comparison of the schemas reveals structural continuities and discontinuities within the Croissant dialect continuum itself, and between the Croissant dialect continuum and neighbouring varieties.

## 2 Data

Seven localities, shown in Figure 1, were chosen to represent the study area: Dompierre-les-Eglises (Haute-Vienne), Cellefrouin (Charente), Bonnat (Creuse), Luchapt (Vienne), La Châtre-Langlin (Indre), Naves (Allier) and Châteauponsac (Haute-Vienne).

For each locality, a fieldwork questionnaire was used to elicit inflexional paradigms for 22 verb lexemes, the cognates of French *chanter* ‘sing’, *lier* ‘bind’, *couver* ‘incubate’, *acheter* ‘buy’, *aller* ‘go’, *blanchir* ‘whiten’, *couvrir* ‘cover’, *partir* ‘leave’, *vendre* ‘sell’, *avoir* ‘have’, *être* ‘be’, *pouvoir* ‘be able’, *vouloir* ‘want’, *savoir* ‘know’, *devoir* ‘have to’, *faire* ‘do’, *venir* ‘come’, *tenir* ‘hold’, *dire* ‘say’, *croire* ‘believe’, *prendre* ‘take’ and *voir* ‘see’. These lexemes were selected to illustrate the range of conjugational types expected to be present in central Gallo-Romance.

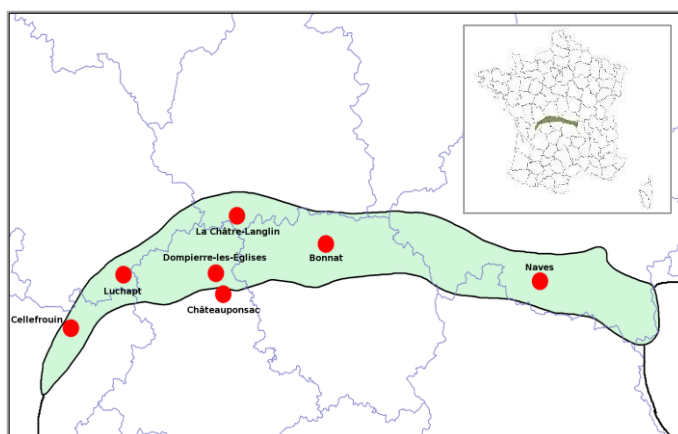


Figure 1. Survey points within the Croissant.  
(Inset: Croissant area within France).

For the purposes of the analysis, non-finite forms were excluded from consideration, as the morphological behaviour of these items is liable to show idiosyncratic divergence from that of finite forms (see e.g. Bach & Esher 2013).

### 3 Analysis

#### 3.1 Method

We identified stems, exponents associated with TAM values, and exponents associated with person/number values, and the paradigmatic distribution of each of these items. Based on this analysis, we formulated stem selection rules and realizational rules within the PFM framework. We then proceeded to model our results for the paradigmatic distribution of stem material, using stem spaces and stem dependency relations.

#### 3.2 Exponents of person/number

A salient property of several inflexional systems in the Croissant area is the uniformity of personal desinences (see e.g. Table 1). For a given TAM category, the series of personal desinences identified showed no variation across lexemes. For a given person/number value, variation across TAM categories is extremely limited: in the singular, the westernmost survey points show a two-way contrast and more central survey points show a three-way contrast, while in the plural no contrast was found. The Croissant systems additionally present a high incidence of SYNCRETISM (Baerman et al. 2005, Baerman 2007) between personal desinences. Some patterns of syncretism are shared with neighbouring Occitan varieties, but not all: notably, the syncretism of second person singular and second person plural, characteristic of north-western Occitan varieties (see e.g. Lavalade 1987), is absent from the Croissant. We hypothesize that the extent of syncretism with respect to person and number values, and the widespread absence of distinctive desinences in singular forms, is linked to the obligatory nature of subject pronouns in varieties of the Croissant.

	IPF.SBJV	PRT	FUT	COND	PRS.IND	IPF.IND	PRS.SBJV		$\alpha$	$\beta$	$\gamma$
1SG	—	—	e	—	—	—	—	1SG	e	—	—
2SG	a	a	a	a	—	a	—	2SG	a	a	—
3SG	—	—	—	—	—	—	—	3SG	—	—	—
1PL	ẽ	ẽ	ẽ	ẽ	ẽ	ẽ	ẽ	1PL	ẽ	ẽ	ẽ
2PL	e	e	e	e	e	e	e	2PL	e	e	e
3PL	ẽ	ẽ	ẽ	ẽ	ẽ	ẽ	ẽ	3PL	ẽ	ẽ	ẽ

Table 1. Personal desinences in the variety of Bonnat: full and schematic series.

The uniformity of personal desinences across lexemes argues for the inflexional class system in these varieties being based principally or solely on stem distribution (as proposed by Stump & Finkel 2013 for French; compare also Martinet 1958, Dubois 1958) and we therefore propose a classification in these terms.

#### 3.3 Stem distributions

Comparison of the stem spaces obtained reveals a tendency for the distribution of root allomorphy in the varieties of the Croissant to diverge in two principal dimensions from the distributions attested in other Romance languages, such as French (Table 2). Firstly,

inherited patterns of interpredictability between individual TAM categories are split along category lines (future differentiated from conditional; preterite differentiated from imperfect subjunctive). Secondly, where there is differentiation between cells belonging to the same TAM category, such differentiation is aligned with the morphosyntactic opposition of singular and plural. In the varieties of the Croissant, the distribution of root allomorphy is thus becoming increasingly systematized as an exponent of TAM and number.

The stem space analysis also brings internal variation within the Croissant area into focus: for example, singular/plural differentiation within a given TAM category is more extensive in northern than southern or central survey points; differentiation of future and conditional is established in most varieties, but confined to the plural in varieties such as that of Luchapt, and absent from some central survey points.

French	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	3					2
IPF.IND	1					
PRT	11					
IPF.SBJV						
PRS.SBJV	7		8		7	
FUT	10					
COND						
IMP	–	5	–	6		

Luchapt	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	3			2		
IPF.IND	1		4			
PRT	–					
IPF.SBJV	9					
PRS.SBJV	5			6		
FUT	7					
COND					8	

Table 2. Stem space for finite forms in French (Boyé 2011:42) and in the variety of Luchapt.

The combination of the stem spaces themselves, and the dependency relations which we identify between stems in individual varieties, thus provide a practical means of comparing the distribution of inflexional exponents across our survey points. Based on these analyses, we identify salient features of the inflexional systems constituting the dialect continuum: shared features and points of contrast among the varieties of the Croissant and the areas adjoining it.

## 4 Conclusions

The formal descriptors of inflexional systems which we draw on in this study were, in general, developed as models of individual systems. Yet, as argued by Stump & Finkel (2013), such descriptors are of empirical value for the typological and comparative study of speech varieties. Our study of inflexion in the Croissant dialect continuum offers a practical illustration in support of Stump & Finkel's view, also demonstrating the applicability of such formal descriptors to minority languages for which more limited data are available.

Our approach departs from traditional dialectological practice in that we are concerned primarily with the distribution of inflexional exponents (i.e. the structure of the inflexional paradigm itself) as opposed to the phonological realization of those exponents (compare Weinreich 1954 for a similar approach to phonological contrasts in a dialect continuum). For this reason, we select measures developed expressly in order to formalize the description of inflexional systems *qua* systems. The study results illustrate how such formalization facilitates transparent and objective comparisons between the different varieties, allowing points of similarity and divergence between linguistic varieties to be readily identified, and

providing a genuinely morphological perspective on the internal structure of the dialect continuum.

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