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Electronic maps and the dialectal borders of Catalan

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1. Introduction

During the twentieth century, Catalan dialectology has continued to pursue its main objective, namely to compile information on the phonetics, vocabulary and morphology of the dialects spoken in various localities inside the Catalan linguistic domain and to present the results in the form of maps. Together, the set of maps comprise a linguistic atlas that shows the existence of particular entities, the dialects, separated by borders: the isoglosses.

This descriptive aim was fulfilled by most atlases of the Catalan domain, which were published in the second half of the twentieth century. The first Catalan atlas of a general nature, the *Atles Lingüístic de Catalunya* (ALC) (1923-1964), was not finished until 1964. Unfortunately this atlas, compiled by Antoni Griera, is not entirely reliable. In the last few years two volumes (of a projected series of ten) of the *Atles Lingüístic del Domini Català* (ALDC) have appeared (cf. Veny and Pons 2001, 2004).

Both the general and the regional atlases, all of them only in book format, have been limited to a descriptive representation of the data, pointing out coincident and divergent aspects. In general, they do not offer an interpretation of the results. This is the case of the *Atles Lingüístic d'Andorra* (ALA), of Antoni Griera (1960), the *Atlas Lingüístic de la Terra des Pyrénées Orientales* (ALPO), of Enric Guiter (1966), the *Atles Lingüístic de la Terra Alta* (ALTA), of Pere Navarro (1996), and the *Atles Lingüístic de la Diòcesi de Tortosa* (ALDT), of Lluís Gimeno Betí (1997).

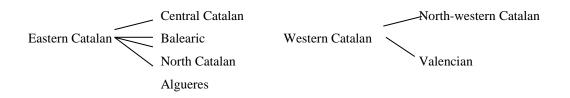
With the same descriptive objective, Catalan has also been recorded in other atlases of other languages which have included the complete Catalan territory or parts of it, such as the *Atlas Linguistique de la France* (ALF), of Jules Gilliéron (1902-1910), the unfinished *Atlas Lingüístico de la Península Ibérica* (ALPI), of Tomás Navarro Tomás (1962), or the *Atlas Linguistique des Pyrénées Orientales* (ALPO), of Enric Guiter (1966).

Although the first atlas was not published until the nineteen sixties, the discipline of dialectology in Catalonia dates back to the very beginning of the twentieth century. The pioneer was Antoni M. Alcover, a Majorcan priest, whose work was also essentially descriptive. At a time when the dialects were largely unknown, Alcover described their characteristic traits, recording phonetic, morphological and lexical aspects of the forms of Catalan in use. For a number of reasons, this information was never transferred to maps. Alcover's two biggest projects, centred on the lexicon and verb morphology and were published, respectively, as the *Diccionari català-valencià-balear* (cf. Perea 2004) and *La flexió verbal en els dialectes catalans* (cf. Alcover and Moll 1929-1933, and Perea 1999). Both studies start from the premise that the Catalan speaking area is divided into six dialects: Central Catalan, North-western Catalan, Valencian, Balearic, North Catalan (in France), and Algueres (in Sardinia, Italy).

Nonetheless, some scholars have advocated a macrodivision into two groups, Eastern Catalan and Western Catalan based on the pronunciation of certain vowels. The contention is that the division reflects the origin of the Catalan language, which,

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according to defenders of the theory, has always shown these two forms. The historical basis that the theory claims for itself is obviously very difficult to verify today. But applying this proposal, and leaving out subdialects, the result is the following:



This paper, an interpretative study of the data from *La flexió verbal en els dialectes catalans*, will challenge this division of Catalan into two main areas. We hold that an analysis of the verb morphology (both regular and irregular) in Catalan does not support this partition, because it blurs the borders between Eastern and Western areas. The electronic maps allow the redefinition of dialectal borders and underline the importance of transition areas.

2. The dialectal division of Catalan

In 1861, the Catalan philologist Manuel Milà i Fontanals (1861: 462-464) proposed the division of the Catalan territory into two broad areas, on the basis of phonetic criteria. He termed these areas "Eastern" and "Western". The main criterion he used was the pronunciation of unstressed vowels. In the western area the vowels *a*, *e*, *o* and *u* are pronounced more clearly ("con más limpieza", to quote Milà), and in the eastern area the vowels are neutralized; so unstressed *a* and *e* sound [\leftrightarrow] and unstressed *o* and *u* sound [u]: *mare* 'mother': Western Catalan: mar[e]; Eastern Catalan: mar[\leftrightarrow]; and *carro* 'cart'; Western Catalan: carr[o]; Eastern Catalan: carr[u]. Concerning the application of the process in the back vowels, *o* and *u*, in Majorca (with the exception of the town of Sóller), included in the Eastern area, people never pronounce unstressed *o* as an *u*; it keeps the sound *o*, as in the Western territory.

Another exception to Milà's phonetic rule is found in Algueres in Sardinia, geographically in the east. Here the front vowels do not present a reduction to schwa. Instead of $[\leftrightarrow]$, the result is the vowel *a*: *mare* 'mother': Western Catalan: mar[e]; Eastern Catalan: mar[\leftrightarrow]; Algueres: mar[a].

Some years later in 1906, the grammarian Pompeu Fabra added a historical reason in support of Milà's synchronic division, related to the behaviour of the stressed vowel ein Vulgar Latin. Fabra said that the results of the \check{I} , \check{E} were the present-day dialectal solutions [E], [\leftrightarrow] i [ϵ]. In fact, his proposal coincided with the claim that Catalan and its constitutive dialects (Eastern and Western) originated around the eleventh century.

In 1875 Milà changed his mind, because of the position of Balearic in the Eastern area. He held that this dialect formed a different group (at that time, little was known about Algueres). However, the division that he initially put forward has been almost unanimously accepted for the last hundred years.

Some other proposals of the division of Catalan have followed Milà (Griera 1931: 11-17, Badia i Margarit 1984, Moll 1991, and Veny 1991: 244-245) considering Eastern and Western Catalan as classes of dialects. Other studies, however, have divided the Catalan area into a variable number of dialects and subdialects. Certain dialects were also

classified as "eastern" and "western", but were understood as particular dialects and not as classes of dialects (cf. Coromines 1954: 87 map, and *Gran Enciclopèdia Catalana* 1973). However, none of these rival proposals had the support of the results of dialectal atlases.

A new possibility of dialectal classification not based on historical criteria was to consider them in terms of their geographical situation. For instance Barnils (1919) split the Catalan domain into "continental" and "insular" (though his work contains a number of errors). However, this division depends only on geographic location and not on linguistic factors.

In recent years several studies have questioned Milà's proposal. The criticisms have come from four main quarters:

a) The theory of linguistic areas. This theory proposes that there are archaic and innovative areas (cf. Blasco Ferrer 1984) and underlines the affinities between subdialects that belong to Western or Eastern Catalan (Algueres [Eastern] shares certain aspects with Valencian [Western], and also with Balearic and Rossellones). Algueres has not been widely studied, though, due to its geographic location, it has always been According to Blasco, Caria (1990: 33) discusses associated with the Eastern area. linguistic situation of this dialect is a reflection of its whether the traditional historical reality. For instance, some Algueres verb forms seem to come more from the than from Eastern Catalan, although the first inhabitants of Alguer, Valencian area century, after the Catalan conquest, came from the Eastern area. in the XVth

b) Phonetics and phonology (cf. Recasens 1990-1991). From this viewpoint, a consideration of phonological and phonetic affinities does not allow Balearic, Rossellones, and Central Catalan to be placed in the same dialectal group. After the study of certain dialectal phonetic tendencies, and drawing on Bartoli's (1925) theory of areas, the author identifies three independent areas in the Catalan territory: two isolated areas, Balearic and Algueres, two lateral areas, Rossellones and Valencian, and two central areas, Central Catalan and North-Western Catalan.

c) Phonetics and morphology (cf. Alcover and Moll 1930). The proposal is based on morphologic and phonetic arguments: the ending of the 1SG of the indicative mood of I conjugation verbs. The pronunciation delimits six independent areas, which coincide with the six dialects cited above, though they have received different names: *cantar* 'to sing'; *jo canto* (standard Catalan) 'I sing': 1. East Pyrenees [now Rossellones]: cant[i]; 2. Eastern Catalan [now Central Catalan]: cant[u]; 3. Western Catalan [now North-Western Catalan]: cant[o]; 4. Valencian: cant[e], 5. Balearic: cant[\emptyset]; 6. Algueres: cant[\emptyset].² See also DeCesaris (1986).

d) Linguistic intercommunication (cf. Viaplana 1986), which holds that Balearic is the most differentiated dialect (indeed, people from the rest of Catalonia often find it slightly difficult to understand) and should be separated (along with Algueres) from Eastern Catalan, because of the substantial dialectal differences.

² Despite this morphologic coincidence between Balearic and Algueres, there are many differences between these two dialects.

Veny (1984) defends Milà's proposal against these criticisms and maintains it due to historical considerations. He compares eighteen linguistic traits related to historical phonetics, morphology and vocabulary to demonstrate the existence of a division between Eastern Catalan and Western Catalan. Later, Veny (1987) studied the diffusion of different words (W. *dimats* / E. *dimarts* 'Tuesday'; W. *hedra* / E. *heura* 'ivy'; W. *melic*/ E. *llombrígol* 'umbiliculus'), which, in his view, seem to confirm the macrodialectal division.

However, these eighteen historical traits are not representative enough to reflect the real situation of the Catalan language. For instance, a morphological trait that Veny (1984: 20) presents: the ending of the present subjunctive (W. 1. cant[a], 2. cant[e]s, 3. cant[e], 6. cant[e]n; E. cant[i], 2. cant[i]s, 3. cant[i], 6. cant[i]n) has recently changed, probably because of the pressure of Standard forms. A dialectal survey started in 1995³ shows the diffusion of the ending [i] in the most of the localities surveyed in the North-Western Catalan area (les Borges Blanques, Lleida, Balaguer, Tàrrega, Falset, la Seu d'Urgell, Cervera, Móra d'Ebre, Andorra la Vella). At the beginning of the twentieth century the present subjunctive had this ending [i] only in Falset; in the other places people used [a]/[e]. However, the ending [i] never appears in the Valencian area.

The evolution of verb forms shows that present studies of the dialectal division of Catalan should start from synchronic results, which can be examined and compared according to their presence or absence in the dialects. This approach will make it possible to identify links between certain dialectal varieties or, alternatively, to separate them.

3. Morphological segmentation of verb forms

La flexió verbal en els dialectes catalans is a corpus of morphologic characteristics that was not initially conceived as an atlas. However, after processing the information through a database, a computer programme was designed in 2001 in order to make computerized maps. This programme, which is the first example of automatic cartography in Catalonia, was published in CD-ROM (*Dades dialectals*) (cf. Perea 2005a and 2005b). The corpus contains 470,255 registers corresponding to the conjugation of 75 regular and irregular verbs from 149 localities in the Catalan speaking area.

Analysis of the verb forms of this corpus makes it possible to define six main Catalan dialects. The study, framed in the generative grammar pattern, extracts the minimal morphological elements that compose the words and uses them as units of comparison. The study covers the whole of the Catalan area. Each verb form, transcribed phonetically, is split into its morphologic constituents. Later, in order to group similar phonetic results together, the phonological representation of each form is postulated and also the phonological processes that acted to convert the phonological forms into the corresponding phonetic ones are formulated.

Having obtained the morphological elements that result from verb segmentation (number / person, mood / tense, lexical class, and sublexical class) and that are used as units of comparison between the different verb forms of the Catalan dialects, for reasons of space, only a few examples from each morphologic group will be given in this study. The aim is twofold: a) to show that Balearic and Algueres are the most differentiated dialects from a morphologic point of view, and therefore cannot be included in the

³ The project (BFF-2001-3798) "Análisis e interpretación de la variación lingüística dialectal a partir de la explotación de un corpus oral" (VALDIC) was sponsored by a DGICYT grant from the Spanish Government.

Eastern Catalan area; *b*) to show the existence of various morphological elements that link varieties which, according to Milà's macrodivision, belong to different dialects.

3.1 Morphological elements related to "number" / "person"

In general, morphological elements related to "number" and "person" are, in all conjugations and in all tenses, [s], [m], [w] and [n], which correspond to the 2SG and the 1,2,3PL respectively. For instance, standard Catalan: cante[m] 'we sing' in all dialects: [m] (in spite of other morphological and phonological dialectal differences in the root or in the thematic vowel: cant[$E\cong$]+m, cant[é]+m, cant[á]+m...); therefore, cante+m (I sing), cantàve+m (I sang), cantare+m (I will sing), and so on.

However, in some II conjugation verbs, in the Balearic area, the morphological element of the 2PL in the present indicative is [s]: *fer* 'to make': standard Catalan and most dialects: fe[w] 'you make', which reflect the normal evolution of the Latin ending -TIS: CANTATIS > *cantats* > *cantau*; but Balearic uses the archaic fei[s]⁴ (again with phonological differences: $f[\leftrightarrow \cong j]+s$, $f[E \cong j]+s$). This form separates the Balearic dialect, especially the Majorcan and Minorcan varieties, from the rest of Catalan dialects.

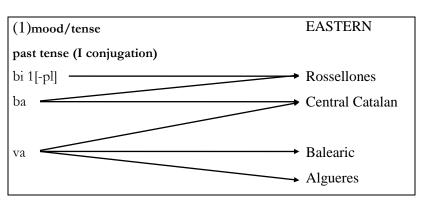
3.2 Morphological elements related to "mood" / "tense"

The data in this section show the relationship between certain morphological elements of the Eastern and Western area that seriously undermine the dialectal macrodivision.

The morphological elements of the past tense show a set of dialectal discrepancies in the phonetic solutions, even in the same variety: canta+va 'I sang' (canta[Ba], canta[BE], canta[Bt], canta[Bt], canta[Ve]...). The phonetic differences of the 1SG of the past tense of I conjugation verbs can be reduced to four phonological representations of the morphological element associated with "mood" and "tense": canta/bi/, canta/ba/, canta/va/, and canta/ve/.

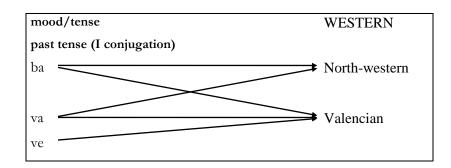
The morphological segments related to mood and tense are included in tables (1) and (2), according to the proposed macrodivision. It is easy to see that except for the form used in Rossellones [Bi] and a part of Valencian [ve] (Castellón and Llucena), the rest of the forms, crossed even in different localities of the same dialect, are shared by Eastern and Western areas.

(1)



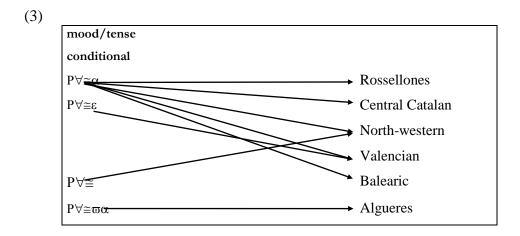
⁴ Wheeler (1982/1986: 559) explains that this solution appears in verbs whose past tense is stressed in the root; historically these verbs suffered a change in stress: $[\kappa \leftrightarrow \cong js] \sim [\kappa E \cong js]; [\kappa P \leftrightarrow \cong js] \sim [\kappa E \cong js]; [\pi P \leftrightarrow \cong js] \sim [\pi E \cong js]; [\pi P \leftrightarrow \cong js] \sim [\pi E \cong js]$





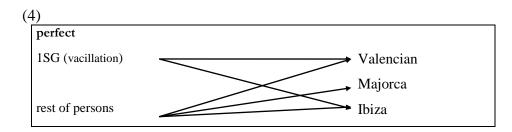
Another example is the morphological representation of the segment of mood and tense of the conditional. As with the past tense, there are many phonetic results: canta+ria 'I would sing' canta[Pt \cong a], canta[Pt \cong E], canta[Pt \cong , canta[Pt \cong]...).

After obtaining the corresponding phonological forms, there are also four morphological alternatives —see table 3: the most used /Pía/ in the majority of dialects alternates with /Pí/, in a small area of North-Western Catalan (Boí), with /Píe/ in two localities of the north of Valencia (Castellón and Llucena) and finally with the Algueres form /Píva/. This dialect presents the most differentiated form, confirming that it cannot be included in the eastern area.



The last example of this section is the perfect tense. The use of this tense is limited (only in a part of Valencian and in Balearic, and in this case, solely in the Majorca and Ibiza varieties). In the rest of the dialects, especially in the Standard Catalan, the perfect is only used in formal, literary writing.

Moreover, the use of the persons in this tense also varies: the 1SG is used much less than the rest. The map shows the lack of the 1SG in Majorcan and vacillation in its use in Valencia and Ibiza.



3.3 Morphological elements related to "lexical class"

The essential function of the morphological segments related to the thematic vowels is to distinguish lexical classes; that is to say, to distinguish conjugations. The I conjugation has a thematic vowel [á]; the II conjugation has the vowel [é], and the III conjugation, the vowel [í].

The tenses that show the presence of the thematic vowel most clearly are the nonpersonal forms, the infinitive, gerund and participle, and also the perfect, the future and the conditional.

The gerund:

I conjugation:	cant[á]nt 'singing';
II conjugation:	perd[é]nt 'losing';
III conjugation:	dorm[í]nt 'sleeping'.

However, these vowels act only in a transparent way in a part of the Majorcan subdialect; the rest of dialects present a set of thematic vowels in each conjugation, some of which may be shared by more than one conjugation. Thus, in some III conjugation verbs the Valencian and Ibiza varieties show an atypical vowel [é], as a result of the simultaneous presence in the ending of a velar element [i γ]: for instance, dormig[é]nt;⁵ instead of the general form dorm[í]nt 'sleeping'.

The present indicative shows, in the set of Catalan dialects, three thematic vowels to form the 1,2PL: cant[á]m; cant[$E\cong$]m; cant[é]m 'we sing'; cant[á]u; cant[$E\cong$]u; cant[é]u 'you sing'. Traditionally, the present form with a thematic vowel [á] is typical of Balearic dialects; nevertheless, in *La flexió verbal* some areas of central Catalan, Northwestern Catalan, and Algueres retain this vowel.

3.4 Morphological elements related to "sublexical class"

Sublexical classes, that is to say, subconjugations, are defined by the presence of morphological segments related to "extension". In most Catalan dialects the II and III conjugations are divided into two subconjugations on the basis of the absence or the presence, respectively, of a velar and palatal extension in some forms of the verb. The I conjugation, the most productive, never has an extension. Thus,

Standard Catalan:	
I conjugation:	canto 'I sing'
II conjugation A:	perdo 'I lose'/ II conjugation B: be[k] 'I drink'
III conjugation A:	<i>dormo</i> 'I sleep'/ III conjugation B: serv[$E \cong \Sigma$]o 'I
	serve'.

Again, Algueres is the most differentiated dialect as regards the sublexical class. In this variety, the I conjugation is also divided into subconjugations according to the presence or absence of different extensions in certain forms of the verb. Thus, the I conjugation of Algueres has three subconjugations:

⁵ See Wheeler (1993: 196).

I conjugation A: cant 'I sing' / I conjugation B: canvi[k] 'I change'; I conjugation C: odi[$\epsilon \cong \tau \Sigma$] 'I hate' — see Pais (1970) and Rovira (1993).

Algueres not only presents a structural difference but also shows a strong diffusion of the velar extension, something that is never found in the rest of Catalan dialects. Thus, in the II conjugation, the velar extension also appears in the future and in the conditional. This result alternates with general solutions without extension, because of differences related to age: older people keep the extension, but younger groups do not. So, future: *beuré* 'I will drink' [ba \otimes aPé] ~ [bawPé] and conditional: *beuria* 'I would drink' [ba \otimes aPía] ~ [bawPía]

Finally, the distribution of the palatal extension in some tenses of III conjugation verbs is one of the eighteen examples given by Veny (1984) in his list in support of the dialectal macrodivision: Eastern (with "é"): *serveix*, *serveixi*, *servesca*; Western (with "f"): *servixc*, *servisca*, *servixa*. The data of *La flexió verbal* retain this partition, although, by the beginning of the twentieth century, two localities in the North-Western area, Falset and la Seu d'Urgell showed an extension with "é": Falset: [partéj Σ o]; la Seu d'Urgell: [parté Σ o].

However, an examination of the recent data shows that in the North-western area, thing that never happens in Valencian dialect, an extension with "é" has spread in a territory where the use of an extension with "í" had previously been widespread. Nowadays, extensions with "é" are used in Andorra la Vella, la Seu d'Urgell, Mollerussa, les Borges Blanques, Lleida, Móra d'Ebre, Cervera, Falset, and Tàrrega. This means that the process of diffusion of the extension has displaced the isogloss of the macrodivision. Using synchronic criteria shows that the general division cannot be retained, although it was kept at a particular moment in the language's history. The result also shows the importance of the transition areas and the pressure of the Standard, which coincides, in the majority of cases, with Central Catalan.

4. Morphological segments and the classification of Catalan dialects

If we accept the dialectal macrodivision, the Eastern-Western partition would be expected to have a high number of mutual morphological segments, which would closely link the varieties on each side of the isogloss. If differences exist, they would be related essentially to phonetic characteristics. Besides, each of these large areas would have a set of common morphological segments that would distinguish it from the other and make it independent.

However, there are morphological segments that appear throughout the Catalan area; for instance, the morphological segments related to the thematic vowel, or lexical class, belonging to the future, conditional and infinitive in all the dialects (see table 5).

CONJUGATION	Ι	II	III
FUTURE	α≅	Ø	$\forall \cong$
CONDITIONAL	α≅	Ø	$\forall\cong$

(5)

INFINITIVE	α≅	Ø	∀≅
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Obviously, the existence of general coincidences is the most widespread feature, because these coincidences produce that different dialects belong to the same language. If there were no linguistic coincidences, then the varieties would not be dialects but different languages. This assertion affects not only morphological elements but also phonological processes.

The morphological segments related to "mood" and "tense" of the gerund and the participle are also shared by all the varieties (see table 6).

(6)

CONJUGATION	Ι	II	III
GERUND	ντ	ντ	ντ
PARTICIPLE	δ	δ	δ

However, in some dialects the final consonant groups of the gerund undergo a process of phonological simplification. As Milà used a phonological process of vowel neutralization to divide the Catalan territory into two areas, this process of phonological simplification might be expected to have the same scope; but in this case, the simplification is found only in Rossellones, central Catalan, North-western Catalan, certain Valencian localities and in the Balearic area (only in the variety of Ibiza).

Other phonological processes do not support the macrodivision. For instance, the deletion of final -r is found in Rossellones, Central Catalan, North-Western Catalan, Balearic, Algueres and in some areas of Valencian.

In addition to the mutual and general coincidences, the rest of morphological segments are useful to establish groups between the varieties that share or do not share some of these morphological segments.

In many cases, the morphological segment unites varieties that belong to dialects that the macrodivision assigns to different groups. Some examples are shown here:

a) The morphological segments related to the thematic vowel, or lexical class, of the past tense are found in Rossellones, central Catalan, Valencian and Balearic. The distribution according to conjugation is shown in table 7:

(7) Rossellones, central Catalan, Valencian and Balearic

CONJUGATION	Ι	II	III
PAST TENSE	α≅	$\forall \cong$	$\forall \cong$

- *b*) The morphological segments related to the thematic vowel, or lexical class, of the gerund are found in Rossellones, central Catalan, Valencian and Algueres (see table 8):
- (8) Rossellones, central Catalan, Valencian, and Algueres

CONJUGATION	Ι	I II	
GER.	α≅	≅3	∀≅

c) Also regarding the gerund, North-western Catalan and the variety of Minorca (cf. 9) and the varieties of Majorca and Ibiza (cf. 10) diverge significantly from the general result of the thematic vowels of the III conjugation: the vowel "é" appears, when the expected result would be "í".

(9) North-western Catalan and Minorca

CONJUGATION	Ι	II	III
GERUND	α≅	≌3	∀≅/≊≅

(10) Majorca and Ibiza

CONJUGATION	Ι	IIA	IIB	IIIA	IIIB
GERUND	α≅	≌3	≌3	≌3	$\forall \cong$

These results, based on the coincidence or divergence of morphological segments, seem to reject the hypothesis that divides dialects into Eastern and Western. In other words, they suggest that the Eastern and Western macro division can no longer be supported, at least from a synchronic point of view.

5. Conclusions

A small sample of data has shown that, from the morphological point of view at least, it is not possible to retain the primary division of Catalan language into two original dialects, because there is no close, stable and general relationship between Rossellones, Central Catalan, Balearic and Algueres on the one hand and between North-Western Catalan and Valencian on the other. We will never know whether Catalan was born, as it were, *with two faces* —Western and Eastern— because we lack clear evidences and written documentation. However, though at one stage in the history of Catalan dialectology the division may have been justified, this is no longer the case today.

The two phonological processes related to unstressed vocalism proposed by Milà are not enough to draw a partition, because the division is not borne out by the rest of phonological processes: think for example of the case of the simplification of consonant groups with the deletion of final -r in Catalan.

Other conclusions can be deduced from the results:

1. Nowadays, dividing the Catalan territory into six main dialects, some of them with broad superimposed areas of transition: Rossellones, Eastern Catalan [Central C.], Western Catalan [North-Western C.], Valencian, Balearic and Algueres is more useful than to keep Milà's macro division, and it also reflects the real situation of the language. The six dialects coincide in number with Alcover's proposal and are included on a linguistic *continuum* in which one can draw isoglosses of various typologies, but no real

dividing lines. The change in the names is the result of political and sociolinguistic factors. For instance, referring to "Central Catalan" means using a term that presupposes that a specific dialect is situated in a central position and is consequently more "important" than the others.

The six dialects share a set of morphological and other traits with other varieties that are not always geographically close. Each dialect presents a substantial important number of morphological coincidences. At the same time, subareas or subdialects can be defined on the basis of specific shared linguistic characteristics.

The map shows the division into six dialects.



2. The most differentiated dialects are first Algueres and then Balearic, not only due to intercommunication but for linguistic reasons as well. Algueres shows a set of particular morphologic traits that are not comparable to any other Catalan variety. Balearic has retained a set of archaic traits. In this case, in spite of the supposed homogeneity between its subdialects (the varieties of Majorcan, Minorca, Ibiza and Formentera), in certain morphological segments the Minorcan subdialect, for instance, is independent.

3. Highly differentiated areas not geographically close to each other may share certain morphological segments; and, at the same time, certain segments can present differences in the same geographical area. For instance, Rossellones and Valencian are united because they share some morphological elements; the same is true of the union of Central Catalan, North-Western Catalan, Balearic and Algueres. This connection is due to historical reasons.

4. The approach of this study is qualitative and distributive. A dialectometric classification, now underway, will probably provide quantitative confirmation of the independence of the six dialects and will also give accurate information on the size of the transition areas.

5. Just as language changes because speakers change, it is possible, and necessary, to change hypotheses and theories that have been accepted for a long time. Thomas Kuhn said that science only advances after a crisis that generates a revolution. Refining and updating old proposals is vital in order to ensure that our understanding of linguistic variation can progress.

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