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## **The historical development of imperfect indicative and conditional inflection in Pyrenean Romance**

### **Abstract**

Even historical developments which appear opaque due to limited empirical data may prove tractable when sources of diverse types are combined. For systems of three-way inflectional contrast among imperfect indicative forms in a geographically coherent cluster of Catalan, Aragonese and Gascon varieties (e.g. first-conjugation [kan'taβam] 'we sang'; third-conjugation [per'deβam] 'we lost'; fourth-conjugation [pa'tiβam] 'we suffered' in the Catalan variety of Castigaleu), two principal accounts have been proposed: an 'etymological' hypothesis in which three-way imperfect contrasts represent a conservative feature continuing Latin forms, and an 'analogical' hypothesis in which thematic labials in non-first-conjugation imperfects are ascribed to analogical innovation. By examining historical texts, modern dialect data and areal patterns in order to develop a unified analysis of the Pyrenean systems, this study demonstrates that the modern systems result from analogical innovation, and further establishes the directionality and relative chronology of the analogical changes involved.

### **Keywords**

analogical change; imperfect indicative; synthetic conditional; Catalan; Gascon; Aragonese;

## 1. Introduction

Pyrenean varieties of Gallo- and Ibero-Romance (Gascon Occitan, north-western Catalan, Aragonese) commonly exhibit three distinct series of desinential exponents for imperfect indicative forms (reflexes of Latin imperfect indicative), and a fourth distinct series of exponents in the Romance synthetic conditional (reflex of a Latin periphrasis collocating the lexical infinitive with imperfect indicative forms of HABÈRE ‘have’). These properties are unusual among Gallo- and Ibero-Romance varieties, in which the most widespread inflectional pattern for imperfect and conditional forms involves two distinct series of desinential exponents: one series is unique to first-conjugation imperfects, while a second series is shared by all non-first-conjugation imperfects and the synthetic conditional (Section 2). The relative rarity of three- or four-way contrast in Gallo- and Ibero-Romance, together with the geographical clustering of varieties in which three- or four-way contrast occurs, and the consistent structural similarity of inflectional systems with three- or four-way contrast, all point to the modern Pyrenean systems resulting from a shared suite of historical developments, for which a unified account is desirable.

A significant challenge for historical investigation of this phenomenon is that the empirical data available for any given variety do not allow direct observation of certain key historical periods or key properties of inflectional forms. This study illustrates a method by which the historical development may nevertheless be reconstructed, involving the integration of modern comparative dialect data (dialect descriptions and existing theoretical accounts, Sections 3, 4; linguistic atlas data, Section 5) with the observation of areal patterns in those data, and with historical textual attestations (Section 6). By analysing the resulting data set as a whole, in the light of general linguistic principles, it becomes possible to establish the substance and relative chronology of the changes which have taken place, and thus to propose a reconstruction which is consistent with the full range of available data (Section 7).

The conclusion reached for Pyrenean Romance is that systems of three-way contrast do not directly continue the Latin system of three-way imperfect contrast, but instead develop from systems of two-way contrast of the type attested throughout Gallo- and Ibero-Romance, via a series of analogical changes including the spread of thematic labial consonants from first-conjugation imperfects; the synthetic conditional ordinarily retains its etymological forms, but in rare cases is also affected by analogical spread of thematic labials originating in imperfect forms. The analysis further serves as a case study of wider relevance, illustrating how insights from a wide range of sources can be fruitfully combined to develop robust historical reconstruction even when available empirical data are significantly limited.

## 2. Imperfect and conditional inflection in Gallo- and Ibero-Romance

### 2.1. Systems with two-way contrast

Most Ibero-Romance and southern Gallo-Romance varieties present two series of desinences for imperfect forms.<sup>1</sup> One series of exponents, ordinarily characterised by the theme vowel /a/ and a labial consonant, is unique to the imperfect forms of first-conjugation verbs. A separate series, lacking a labial consonant, is found in the imperfect forms of all other conjugations, and is also present in the Romance synthetic conditional of all verb lexemes, irrespective of conjugation.<sup>2</sup> Systems of this type, illustrated in Table 1, are familiar from standard Portuguese, Castilian and Catalan, and are also found in the majority of Occitan varieties. (Note that for consistency throughout this study, conjugation classes will be labelled according to the Latin conjugational types of which they are continuants: thus, the i-conjugation is labelled IV, and the e-conjugation III).<sup>3</sup> The historical source of these forms is well-established in the literature and may be briefly outlined as follows.

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>vendre</i> ‘sell’	IPF.IND (IV) <i>partir</i> ‘divide’	COND (I) <i>cantar</i>	COND (III) <i>vendre</i>	COND (IV) <i>partir</i>
1SG	<i>can'tava</i>	<i>ve'nia</i>	<i>par'tia</i>	<i>canta'ria</i>	<i>ven'dria</i>	<i>parti'ria</i>
2SG	<i>can'taves</i>	<i>ve'nies</i>	<i>par'ties</i>	<i>canta'ries</i>	<i>ven'dries</i>	<i>parti'ries</i>
3SG	<i>can'tava</i>	<i>ve'nia</i>	<i>par'tia</i>	<i>canta'ria</i>	<i>ven'dria</i>	<i>parti'ria</i>
1PL	<i>can'tàvem</i>	<i>ve'níem</i>	<i>par'tíem</i>	<i>canta'ríem</i>	<i>ven'dríem</i>	<i>parti'ríem</i>
2PL	<i>can'tàveu</i>	<i>ve'níeu</i>	<i>par'tíeu</i>	<i>canta'ríeu</i>	<i>ven'dríeu</i>	<i>parti'ríeu</i>
3PL	<i>can'taven</i>	<i>ve'nien</i>	<i>par'tien</i>	<i>canta'rien</i>	<i>ven'drien</i>	<i>parti'rien</i>

Table 1. Comparison of COND and IPF.IND forms for continuants of Latin conjugations I, IV and III in Catalan (Moll 2006: 205, 223). Standard orthography, with addition of IPA stress mark.

Reflexes of Latin first-conjugation imperfect forms in -ĀBAM, etc. retain their characteristic theme vowel /a/ and a labial consonant continuing -B-, which undergoes lenition to [β], [v] or [w] depending on variety (and in some areas undergoes full deletion). This change is entirely regular, and can be observed in non-imperfect items presenting an equivalent context, such as the reflexes of FABAM ‘bean’ > Cast. *haba*, Cat. *fava*, Occ. [‘hawɔ], [‘faβɔ], [‘fava].

<sup>1</sup> Northern Gallo-Romance (‘oïl’) varieties, including standard French, typically generalise a single series of imperfect desinences across all verb lexemes. This development represents reduction of an earlier system presenting the familiar two-way contrast between first-conjugation imperfects and non-first-conjugation imperfects, of which some vestiges remain into the fourteenth century (see e.g. Pope 1952: 345–346, Buridant 2019: 383–384).

<sup>2</sup> Reflexes of \*essere ‘be’ typically present a unique series of imperfect forms continuing Latin ERAM, etc., the development of which falls outside the scope of this study.

<sup>3</sup> Labelling conventions vary across the grammatical traditions of the varieties discussed in the study: for Catalan and Aragonese, the e-conjugation is traditionally labelled II, and the i-conjugation III; for Occitan, while some authors adopt the Catalan convention, most literature follows the French convention in which the i-conjugation is labelled II and the e-conjugation III.

For Gallo-Romance, non-first-conjugation forms are traced to *-ĒBAM*, etc. This series of exponents was etymological in the reflexes of Latin second- and third-conjugation imperfect forms, as well as in the Romance synthetic conditional, which continues a periphrasis collocating the lexical infinitive with imperfect indicative forms of the second-conjugation verb *HABĒRE* ‘have’ (e.g. *CANTĀRE HABĒBAM* ‘I had to sing’ > Occ. *cantariá* ‘I would sing’). The same series of exponents also occurs in fourth-conjugation imperfect forms, where etymological *-ĪEBAM*, etc. underwent reduction to *-ĒBAM*, etc. (Ronjat 1937: 71).

Loss of intervocalic /b/ from the reflexes of *-EBAM*, etc., is considered to be an irregular change, for which two principal explanations have been proposed. Traditional historical accounts (e.g. Anglade 1921: 286, Fouché 1967 : 236, Ronjat 1937: 171, Zink 1989: 74, Buridant 2000: 271, Buridant 2019: 380–381, Bazin-Tacchella 2020) claim that *-B-* first fell in verbs such as *HABERE* due to a dissimilatory effect, e.g. *HABEBAM* > \**habeam*, and that forms in *\*-ea-* for the IPF.IND then spread to other lexemes.<sup>4</sup> Alternatively, forms in *\*-ea-* have been argued to originate in the COND, via idiosyncratic phonological reduction during grammaticalisation (Togebly 1964: 4, Esher 2018). Under either view, the modern desinences are traced to *\*-ea-*, in which the expected reflex of long E is high-mid /e/, and raises to /i/ in a further idiosyncratic development. Mediaeval Occitan texts consistently show desinences in *-ia-* (e.g. Grafström 1968: 122–123, Skårup 1997: 98–99), which in modern varieties typically develop to desinences in /jɔ/, /jɛ/ or /ja/, variation being correlated with person, number and geographical area (Ronjat 1937: 171–173).

For Ibero-Romance, scholars traditionally reconstruct a pathway<sup>5</sup> in which Latin fourth-conjugation imperfects in *-ĪEBAM*, etc. develop to *-ĪBAM*, etc., retaining their inherited contrast with Latin second- and third-conjugation imperfects in *-ĒBAM*, etc. As in Gallo-Romance, all non-first-conjugation imperfect forms are subject to an idiosyncratic change causing loss of intervocalic /b/: *-ĪBA-* > /'ia/ and *-ĒBA-* > /'ea/. Contrast between reflexes of *-ĒBAM*, etc. and *-ĪBAM*, etc. is subsequently lost due to a dissimilatory change uniquely affecting both the synthetic conditional and non-first-conjugation imperfects, in which the sequence /'ea/ develops to /'ia/ (see e.g. Penny 2002: 198, Moll 2006: 204–206, Batlle et al. 2016: 357–361). Thus, whichever the source of /'ia/ in fourth-conjugation imperfects, the result in terms of paradigmatic distribution is identical: a system in which one series of desinences is unique to first-conjugation imperfects, while all non-first-conjugation imperfects (and the synthetic conditional) share a

<sup>4</sup> This explanation, though consistently repeated in historical grammars, is known to be problematic (Posner 1961: 18, Togebly 1964, Esher 2018). Based on observed crosslinguistic tendencies, dissimilation would be expected to affect the first /b/ of *HABĒBAM*, etc. rather than the second. Paradigmatic pressure from other imperfect forms would likewise be expected to favour retention of the second /b/ rather than the first (Martin Maiden, p.c.). Lecoy (1967: 280) suggests that the established explanation has never been considered satisfactory (‘n’a jamais vraiment convaincu personne’), but is instead resorted to ‘comme une défaite’, i.e. as a strategy to extricate writers from an awkward point in the historical account.

<sup>5</sup> To the author’s knowledge, the pathway proposed for Ibero-Romance has not thus far been suggested for Occitan, although it would be entirely consistent with the attested data; the consistent preference in literature on Occitan for assuming early assimilation of *-ĪEBAM*, etc. to *-ĒBAM*, etc. may reflect the influence of scholarship on northern Gallo-Romance varieties as much or more than empirical evidence. The distinction remains without consequence for the present study.

distinct series.<sup>6</sup> The identity of form between conditional and non-first-conjugation imperfect desinences remains robust across most Ibero-Romance and Gallo-Romance varieties, and a number of analogical changes are sensitive to this identity, affecting conditional and non-first-conjugation imperfect forms equally and/or simultaneously (Esher 2018).

## 2.2. Systems with additional contrasts

In a number of Ibero- and Gallo-Romance varieties, imperfect indicative forms present a three-way contrast, with a distinct series of desinences for each traditional conjugation class; such varieties typically present a fourth distinct series of desinences which is unique to the synthetic conditional.<sup>7</sup> Systems of this kind, exemplified in Tables 2–3, are typical of Aragonese throughout the High Aragonese<sup>8</sup> dialect area, including the modern standard (Nagore Laín 1989: 154); of north-western Catalan (i.e. varieties of Pallars and Andorra, Alcover & Moll 1929-1933, Coromines 1937: 463); and of southern and western Gascon, including the modern standard (Romieu & Bianchi 2005: 279–280). The dialect areas concerned are thus directly adjacent to one another, forming a single cohesive area centred on the Pyrenees. This geographical distribution is indicative of a shared suite of developments, for which a unified account encompassing all three major dialect groups is necessary.

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<sup>6</sup> In northern Gallo-Romance and many Occitan varieties, fourth-conjugation imperfects additionally present a thematic augment /is/ (Maiden 2004, Meul 2013, Esher 2016, Esher 2017), originating in the Latin ingressive infix - (I)SC-: e.g. Fr. *je finissais* ‘finish.IPF.IND.1SG’, Occ. *finissiái* ‘finish.IPF.IND.1SG’. By contrast, the Gascon Occitan varieties examined here typically do not have a thematic augment in the imperfect (see section 5.2 for some exceptions).

<sup>7</sup> Three-way contrast in the imperfect, with a fourth distinct series of desinences in the synthetic conditional, is also common in Italo-Romance, e.g. *cantava* ‘sing.IPF.IND.3SG’, *aveva* ‘have.IPF.IND.3SG’, *partiva* ‘leave.IPF.IND.3SG’, *canterebbe* ‘sing.COND.3SG’ in standard Italian. There is robust historical and dialectal evidence for non-first-conjugation imperfect forms without a labial, e.g. mediaeval *avea* ‘have.IPF.IND.3SG’, *partia* ‘leave.IPF.IND.3SG’ (Rohlf 1968:288), and while it is ordinarily assumed that Italo-Romance forms with labials are etymological, straightforwardly continuing Latin imperfect forms (e.g. Jensen 1971:54-56), the analysis ultimately developed here for Pyrenean Romance invites a re-examination of the Italo-Romance forms and their development. Such investigation is the subject of ongoing work by the author.

<sup>8</sup> For a map, see Badía Margarit (1947:60): such forms are found throughout the north of the area, from Ansó (west) to Benasque (east), and throughout the west of the area, from the Campo de Jaca (Pyrenean foothills) to the south-east of Huesca province.

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>perdre</i> ‘lose’	IPF.IND (IV) <i>patir</i> ‘suffer’	COND (I) <i>cantar</i>	COND (III) <i>perdre</i>	COND (IV) <i>causir</i>
1SG	kan'taβa	per'deβa	pa'tiβa	kanta'ria	perde'ria	pati'ria
2SG	kan'taβas	per'deβas	pa'tiβas	kanta'rias	perde'rias	pati'rias
3SG	kan'taβa	per'deβa	pa'tiβa	kanta'ria	perde'ria	pati'ria
1PL	kan'taβam	per'deβam	pa'tiβam	kanta'riam	perde'riam	pati'riam
2PL	kan'taβaw	per'deβaw	pa'tiβaw	kanta'riaw	perde'riaw	pati'riaw
3PL	kan'taβan	per'deβan	pa'tiβan	kanta'rian	perde'rian	pati'rian

Table 2. IPF.IND and COND forms for the three traditional conjugations in the Catalan variety of Castigaleu (comarca de Ribagorça, Aragón; Moners i Sinyol 2008: 56–57).

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>véner</i> ‘sell’	IPF.IND (IV) <i>bastir</i> ‘build’	COND (I) <i>cantar</i>	COND (III) <i>véner</i>	COND (IV) <i>bastir</i>
1SG	kan'tawi	be'nēwi	bas'tiwi	kanta'ri	bene'ri	basti'ri
2SG	kan'tawəs	be'nēwəs	bas'tiwəs	kanta'res	bene'res	basti'res
3SG	kan'tawə	be'nēwə	bas'tiwə	kanta're	bene're	basti're
1PL	kan'tawəŋ	be'nēwəŋ	bas'tiwəŋ	kanta'reŋ	bene'reŋ	basti'reŋ
2PL	kan'tawəts	be'nēwəts	bas'tiwəts	kanta'rets	bene'rets	basti'rets
3PL	kan'tawəŋ	be'nēwəŋ	bas'tiwəŋ	kanta'reŋ	bene'reŋ	basti'reŋ

Table 3. IPF.IND and COND forms for the three traditional conjugations in the Gascon variety of Biran (département Gers, Nouvelle-Aquitaine; Massourie 2012: 260–261).

In these varieties, the three traditional conjugations are consistently differentiated by a contrast of theme vowel, in both the imperfect and the synthetic conditional. The desinences of the synthetic conditional are identical across all conjugations, and are never syncretic with those of the imperfect indicative. Imperfect indicative forms are characterised by paroxytonic stress (falling on the theme vowel), a thematic labial and unstressed personal desinences. In Catalan and Aragonese varieties (Table 2), the theme vowel of imperfect indicative forms matches the theme vowel of the synthetic conditional and the infinitive. By contrast, in Gascon varieties (Table 3), the match between the theme vowel of imperfect indicative, synthetic conditional and infinitive forms only occurs in the first and second conjugations; third-conjugation conditional forms share the theme vowel /e/ with the infinitive, while third-conjugation imperfect indicative forms display a unique theme vowel /ɛ/. In some Gascon varieties (Table 4), third-conjugation imperfects are of an even more distinctive form, with oxytonic stress and no thematic labial; in these varieties, the first person singular forms of the conditional and the third-conjugation imperfect share a final stressed /i/.



	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>véner</i> ‘sell’	IPF.IND (IV) <i>bastir</i> ‘build’	COND (I) <i>cantar</i>	COND (III) <i>véner</i>	COND (IV) <i>bastir</i>
1SG	kan'taβi	be'ni	bas'tiβi	kanta'ri	bene'ri	basti'ri
2SG	kan'taβəs	be'nəs	bas'tiβəs	kanta'res	bene'res	basti'res
3SG	kan'taβə	be'nə	bas'tiβə	kanta're	bene're	basti're
1PL	kan'taβəm	be'nəm	bas'tiβəm	kanta'rem	bene'rem	basti'rem
2PL	kan'taβət	be'nət	bas'tiβət	kanta'ret	bene'ret	basti'ret
3PL	kan'taβən	be'nən	bas'tiβən	kanta'ren	bene'ren	basti'ren

Table 4. IPF.IND and COND forms for the three traditional conjugations in the Gascon variety of Sauveterre-de-Béarn (département Pyrénées-Atlantiques, Nouvelle-Aquitaine; Massouré 2012: 264–265), illustrating ‘short’ imperfect forms in third conjugation.

The historical development of such systems is a subject of debate in the literature (Section 3), where three-way contrast is treated variously as a conservative feature continuing the three distinct Latin imperfect series, and as an innovative feature developing from a system of two-way contrast via a series of morphological analogies. In place of an overall consensus, two descriptive traditions emerge: authors discussing Ibero-Romance varieties generally favour the ‘etymological’ hypothesis of continuity with the Latin forms, while authors discussing Gallo-Romance varieties tend towards the ‘analogical’ hypothesis of morphological innovations.

### 3. Accounts of imperfect and conditional inflection in Catalan and Aragonese varieties

#### 3.1. Imperfect inflection in Catalan and Aragonese

For Catalan and Aragonese varieties displaying three-way imperfect contrast, two principal viewpoints are found. Most descriptions of three-way contrast in Catalan and Aragonese treat it as a conservative feature directly continuing the Latin contrast between -ĀBA-, -ĒBA- and -ĪBA- forms (e.g. Badía Margarit 1950: 121–122, Badía Margarit 1951: 312; Haensch 1960: 115–116; Arnal Purroy 1998: 341, 346–348; Tomàs Arias 1999: 131–132; Saura Rami 2003: 222–223, Lozano Sierra & Saludas Bernad 2005: 90–92; Lozano Sierra 2010: 138–142, 147). Others consider it an innovative feature, holding that only first-conjugation forms in -ava- are regular continuants of Latin first-conjugation forms, and that thematic labials are introduced from the first conjugation into the other conjugations by analogy (Cooper 1960; Kuhn 2008: 143, 155; see also Coromines 1937, Allières 1971: 286–288); while still others note both views without preferring either (Gonzales Guzmán 1953: 84; Mott 1989: 75; Giralt Latorre 1997: 239–246), or simply provide illustrative paradigms without discussing the diachronic development of the forms (Badía Margarit 1947; Sistac i Vicén 1993: 179–209).

The most detailed historical account is provided by Nagore Laín (2003: 361–367), who examines attestations of imperfect forms in a family of fourteenth-century Aragonese manuscripts. For non-first-conjugation verbs in these texts, the majority of forms have an exponent -ía without a thematic labial (e.g. third-conjugation *aparecía* ‘appear.IPF.IND.3SG’, *dezía/dizía* ‘say.IPF.IND.3SG’, *veníá* ‘come.IPF.IND.3SG’; fourth-conjugation *partía* ‘leave.IPF.IND.3SG’, *posedía* ‘possess.IPF.IND.3SG’, *sofrían* ‘suffer.IPF.IND.3PL’,



2003: 362). However, occasional attestations of forms with a thematic labial also occur: fourth-conjugation *pululiva* ‘teem.IPF.IND.3SG’, *floriva* ‘flourish.IPF.IND.3SG’, *destruyvan* ‘destroy.IPF.IND.3PL’, and third-conjugation *hyvan* ‘have.IPF.IND.3PL’ (2003: 363). Nagore Laín (2003: 364) notes further examples in other mediaeval texts, the earliest-dated attestations among which are *eva* ‘have.IPF.IND.3SG’ (1205), *conpliuva* ‘fulfil.IPF.IND.3SG’ (1295) and *exiva* ‘exit.IPF.IND.3SG’ (thirteenth-century). The majority of examples are of fourth-conjugation verbs, with the only third-conjugation verbs to take a thematic labial being the reflexes of HABERE ‘have’ and FACERE ‘do’ (e.g. *feua* ‘do.IPF.IND.3SG’, 1390).

While Nagore Laín inclines towards the etymological hypothesis, the evidence which he adduces in support of this approach proves to be compatible with both the etymological and the analogical views, and thus cannot serve to discriminate between them. His examples clearly situate the first attestations of forms with thematic labials a century earlier than the date of 1306 assumed by Cooper (1960), but still considerably later than the pre-literary period for which the changes  $-\bar{I}BA- > /'ia/$  and  $-\bar{E}BA- > /'ea/ > /'ia/$  are reconstructed across Gallo- and Ibero-Romance varieties, and as such are not probative in discriminating between the etymological and analogical hypotheses. The low frequency of *-iba*, *-eba* forms compared to *-ía* forms in textual sources may be an epiphenomenon of normative writing conventions (2003: 364), but this cannot be proven; and the regular retention of intervocalic voiced consonants (Nagore Laín 2003: 160,366) is not germane since the loss of intervocalic  $-B-$  in Romance imperfects is known to be an irregular change where it occurs. A final argument hinges on morphological form: the analogical introduction of a labial into third-conjugation *-ía* imperfects such as *metía* ‘put.IPF.IND.3SG’ or *podía* ‘be\_able.IPF.IND.3SG’ would result in forms such as *\*metiba*, *\*podiba*, unattested in Aragonese, as opposed to attested *meteba*, *podeba* (2003: 366); though it should be noted that imperfects in *-iva* for third- and fourth-conjugation verbs alike occur in Catalan varieties of Pallars and Andorra (Coromines 1937: 463). Rather than directly refuting the analogical hypothesis, these points highlight key features of three-way contrast which a convincing account must address: the thematic labial, the presence of theme vowel /e/ in third-conjugation imperfects, and the formal contrast between third- and fourth-conjugation imperfects.

### 3.2 Conditional inflection in Catalan and Aragonese

#### 3.2.1 Conditionals of *-ía* type without a thematic labial

The synthetic conditional in Catalan and Aragonese varieties with a three-way imperfect contrast is consistently identified as a reflex of the infinitive+HABĒBAM, etc. periphrasis. Two strands of evidence support this analysis. Firstly, within the varieties concerned, the stem exponents of the synthetic conditional exhibit robust formal parallelism with those of the synthetic future continuing the infinitive+HABEO, etc. periphrasis (Maiden 2018: 263–266), e.g. *haré* ‘have.FUT.1SG’, *haría* ‘have.COND.1SG’; *poré* ‘be\_able.FUT.1SG’, *poría* ‘be\_able.COND.1SG’; *sabré* ‘know.FUT.1SG’, *sabría* ‘know.COND.1SG’ in Castigaleu (Moners i Sinyol 2008: 56–66). Secondly, there is close formal similarity between the synthetic *-ía* conditionals occurring in most Pyrenean varieties (e.g. Table 2) and the synthetic conditionals of standard Ibero-Romance varieties, e.g. Cat. *cantaria* ‘sing.COND.1/3SG’, *perdría* ‘lose.COND.1/3SG’, *sentiria* ‘feel.COND.1/3SG’; Cast. *cantaría* ‘sing.COND.1/3SG’, *perdería* ‘lose.COND.1/3SG’, *sentiría* ‘feel.COND.1/3SG’, all of which are uncontroversially traceable to infinitive+HABĒBAM, etc.

The near-exceptionless absence of a thematic labial in the conditional desinences of most Pyrenean varieties is neither predicted nor addressed within accounts which assume that the thematic labial of imperfect forms is a conservative, etymological feature. For example, all conditionals cited by Nagore Laín (2003: 379–380) are of the *-ía* type, and are treated as the expected reflexes of the infinitive+HABĒBAM periphrasis, or even as a simple concatenation of the lexical infinitive with modern imperfect forms of *aver* ‘have’; despite this author vigorously defending the hypothesis that the regular reflex of HABĒBAT in Aragonese is *eba* (or *iba* with vowel raising). Under Nagore Laín’s account of thematic labials as etymological in imperfect forms, one would expect to find conditional forms such as *\*acabareba/acabariba*, as opposed to *acabaría* ‘finish.COND.3SG’, yet in the historical documents surveyed, only the *-ía* type is attested; it is curious that there is no discussion of the developments in the conditional, given their divergence from the developments claimed for the imperfect.

### 3.2.2 Conditionals of *-íva*, *-íba* and *-eba* types

Conditionals with a thematic labial are attested in a very few Aragonese<sup>9</sup> varieties, for which labial variants are described as marginal and archaic. For the variety of Bielsa, Lozano Sierra & Saludas Bernad (2005: 98–99) indicate overabundance involving labial and non-labial variants in the second person singular, third person singular and third person plural conditional forms. e.g. *farías/faribas* ‘do.COND.2SG’, *faría/fariba* ‘do.COND.3SG’, *farían/fariban* ‘do.COND.3PL’, whereas in the other persons, only non-labial forms are available, e.g. *fari* ‘do.COND.1SG’, *farinos* ‘do.COND.1PL’, *fariz* ‘do.COND.2PL’. For the variety of Sobrarbe, Tomàs Arias (1999: 137–138) cites the forms *sereba* ‘be.COND.3SG’, *fereba* ‘do.COND.3SG’, as accepted by speakers but not actively in use, while Nagore (1995) notes forms such as *cantareba* ‘sing.COND.3SG’, *salireba* ‘leave.COND.3SG’, *tenereba* ‘have.COND.3SG’ attested by a reliable informant but described as archaic, and Nagore (1996) dismisses *-eba* conditionals in an Aragonese ethnotext as a form of calque erroneously introducing the imperfect exponent *-eba* into the conditional on the basis of the identity between imperfect and conditional desinences (in *-ía*) in Castilian.

Lozano Sierra (2010: 147), summarising these data, ascribes them to sporadic analogical influence from the imperfect; although *-iba* and *-eba* conditional forms are consistently treated as archaic in modern varieties, there is no attempt to attribute them to conservation of etymological *-B-*. Such a view is consistent with the restricted geographical incidence of *-iba* and *-eba* conditional forms, and their absence from historical documents: the most plausible explanation is that of forms arising from post-mediaeval analogy and eliminated by the late 20<sup>th</sup> century.

<sup>9</sup> Note that conditionals of the *-iva* type are also found in Alghero Catalan (e.g. *cantariva* ‘sing.COND.1/3SG’, Alcover & Moll 1929–1933: 11–12; Bosch i Rodoreda 2002: 148–149), and are historically present in Sardinian varieties of Catalan from at least the sixteenth century, becoming fully established by the nineteenth century (Sendra i Molió 2013: 56). Alghero Catalan has non-first-conjugation imperfects of both *-iva* and *-eva* types.

### 3.2.2 Conditionals of *-rba* type

A type of conditional unique in Romance is documented for the Aragonese variety of Panticosa (Nagore Laín 1986: 156–158), and illustrated in Table 5. This type is characterised by the presence of unstressed *-ba-* preceded by a closed, stressed syllable with final /r/, and is systematically, exceptionlessly attested for all lexemes, suggesting that it is a development of some antiquity.

	IPF.IND (I) <i>trobar</i> ‘find’	IPF.IND (III) <i>meter</i> ‘put’	IPF.IND (IV) <i>dormir</i> ‘sleep’	COND (I) <i>trobar</i>	COND (III) <i>meter</i>	COND (IV) <i>dormir</i>
1SG	tro' baba	me' teba	dor' miba	tro' barba	me' terba	dor' mirba
2SG	tro' babas	me' tebas	dor' mibas	tro' barbas	me' terbas	dor' mirbas
3SG	tro' baba	me' teba	dor' miba	tro' barba	me' terba	dor' mirba
1PL	tro' bábamos	me' tébamos	dor' míbamos	tro' bárbamos	me' térbamos	dor' mírbamos
2PL	tro' bábais	me' tébais	dor' míbais	tro' bárbais	me' térbais	dor' mírbais
3PL	tro' baban	me' teban	dor' miban	tro' barban	me' terban	dor' mirban

Table 5. IPF.IND and COND forms for the three traditional conjugations in the Aragonese variety of Panticosa (Nagore Laín 1986: 169–171, 186–187). Orthography as in source, with addition of IPA stress mark. Variants in *-z* are available for second person plural forms, alongside the listed forms in *-is*.

Nagore Laín's grammar ascribes the Panticosa conditionals to a localised development of the infinitive+HABĒBAM, etc. periphrasis: CANTĀRE (HAB)ĒBAM > *cantár(e)ba* > *cantárba* ‘sing.COND.1SG’ (1986: 156). Ordinarily, in the development of the Romance synthetic conditional from this periphrasis, material subject to deletion is located in syllables which were unstressed in Latin: the post-tonic final vowel of infinitives with penultimate stress, such as CANTĀRE ‘sing’, DORMĪRE ‘sleep’; the post-tonic final and penultimate vowels of infinitives with stress on the antepenult, such as MITTERE ‘send’; and the pre-tonic syllable HAB- in the imperfect forms HABĒBAM, etc. The development proposed for conditionals in Panticosa diverges from these tendencies, in additionally assuming the deletion of the syllable bearing primary stress in the imperfect forms HABĒBAM, etc. Although such deletion contrasts sharply with the retention of tonic *-Ē-* reconstructed for other Romance varieties, it does conform to a general Romance tendency for irregular, idiosyncratic changes in the early history of the synthetic conditional<sup>10</sup> as compared to the imperfect indicative (Esher 2018, see also section 2.1), and accounts for the placement of primary stress in the modern forms.

<sup>10</sup> Note however that the change must be confined to the synthetic conditional: there is no evidence in Panticosa for first or second person synthetic future forms such as *\*cantármus* ‘sing.FUT.1PL’ < *cantár(e)mos* < CANTĀRE (HAB)ĒMUS, *\*cantáris* ‘sing.FUT.2PL’ < *cantár(e)is* < CANTĀRE (HAB)ĒTIS, which would be expected to result from loss of tonic *-Ē-*.

	<i>dormir</i> ‘sleep’		<i>saper</i> ‘know’		<i>tener</i> ‘hold’	
	FUT	COND	FUT	COND	FUT	COND
1SG	dormi'ré	dor'mirba	sa'bré	sa'pérba	ten'dré	te'nérba
2SG	dormi'rás	dor'mirbas	sa'brás	sa'pérbas	ten'drás	te'nérbas
3SG	dormi'rá	dor'mirba	sa'brá	sa'pérba	ten'drá	te'nérba
1PL	dormi'rémós	dor'mírbamos	sa'brémós	sa'pérbamos	ten'drémos	te'nérbamos
2PL	dormi'réis	dor'mírbais	sa'bréis	sa'pérbais	ten'dréis	te'nérbais
3PL	dormi'rán	dor'mirban	sa'brán	sa'pérban	ten'drán	te'nérban

Table 6. FUT and COND forms for *dormir* ‘sleep’, *saper* ‘know’, *tener* ‘hold’ in the Aragonese variety of Panticosa (Nagore Laín 1986: 186–192). Orthography as in source, with addition of IPA stress mark.

Key considerations supporting Nagore Laín’s proposal are the exceptionless nature of these conditional forms (indicating that the forms are not due to a change which is recent or still in progress), and the systematic contrast of synthetic future and synthetic conditional forms (Table 6), a feature unusual within Romance. Synthetic future forms in this variety are uncontroversially of the familiar infinitive+HABEO, etc. type, and, for all lexemes, contrast with synthetic conditional forms in respect of primary stress placement. Additionally, there is a significant minority of verbs in which the stem of the synthetic future differs segmentally from that of the synthetic conditional (see also Maiden 2018: 263–264). In these cases, the synthetic future exhibits a distinctive stem, while the stem of the synthetic conditional is segmentally and prosodically identical with the infinitive (e.g. *saper* ‘know’, *tener* ‘hold’ in Table 6). The distinctive stems of the synthetic future result transparently from context-sensitive sound changes in environments created by the regular deletion of intertonic vowels, as in other Romance languages where these changes occur by the early mediaeval period; the absence of such stems from the synthetic conditional is consistent with the proposed early deletion of tonic -Ē-, which would bleed the relevant changes.

While the close segmental similarity between the synthetic conditional stem, the infinitive, and (in the majority of verbs) the synthetic future stem may suggest an analogical route, in which the synthetic conditional is remodelled on the infinitive and substrings of imperfect indicative forms, the challenge for such an account lies in suggesting a plausible pathway to actuation for this change, and in motivating the *lack* of either stress shift or analogical remodelling in the synthetic future.

Since the sound change claimed for the synthetic conditional is not expected to apply to the imperfect indicative, the modern conditional forms do not illuminate the historical development of imperfect indicative forms, or vice versa.<sup>11</sup>

<sup>11</sup> At the time of writing, the only other known case of comparable systematicity in formal contrast between future and conditional forms concerns the Gascon variety of Barèges (Massourie 2006), in which the future and conditional are not expected to show formal similarity, since the conditional is of perfective origin, while the future is a continuant of infinitive+HABEO, etc. (Esher 2012: 239–243). In the variety of Panticosa, there is no evidence for reflexes of Latin *perfectum* forms in the conditional; instead, this variety is unique in attesting systematic contrast between continuants of infinitive+‘have’ periphrases.

### 3.3 Interim summary

In northwest Catalan and Aragonese varieties, typical systems involve a three-way contrast among imperfect forms (*-aba*, *-eba*, *-iba*) and a fourth unique series of forms in the synthetic conditional, usually of the form *-ía*. The presence of thematic labials in the imperfect indicative is thus systematic across this area, while the presence of thematic labials in the synthetic conditional is much more sporadic: geographically restricted, and in some varieties existing only as a marginal variant. Comparative and historical evidence indicates that *-ía* forms in the synthetic conditional are reflexes of infinitive+HABĒBAM, etc., albeit via irregular sound change, as in other Romance languages; and that the presence of thematic labials in the synthetic conditional is (except in Panticosa) due to more recent morphological analogy, for which the imperfect indicative is the most plausible model. For the imperfect indicative, available historical evidence is too recent to provide strong empirical support for either the etymological or the analogical hypotheses, while the phonological and morphological substance of the forms are compatible with both hypotheses.

## 4. Accounts of imperfect indicative and conditional inflection in Gascon varieties

### 4.1 Imperfect inflection in Gascon

For Gascon varieties, the prevailing view in the literature is that three-way contrast in the imperfect is an innovative, analogical feature (see e.g. Ronjat 1937: 173–175, Posner 1961, Coromines 1991:137, Massourie 2012: 232); Rohlfs (1935: 148–149) is unusual in treating it as conservative and etymological.

The principal arguments adduced in favour of the analogical hypothesis concern the distribution of thematic labials in third-conjugation verbs. Several varieties have ‘short’ forms without a thematic labial for all third-conjugation verbs (e.g. *venè* ‘sell.IPF.IND.3SG’, Table 4); in other varieties, the emergence of ‘long’ forms (e.g. *venèva* ‘sell.IPF.IND.3SG’, Table 3) is progressive and directly observable in historical documents. The earliest examples of ‘long’ *-eva* imperfect forms occur in the mid-fourteenth-century *Récits d’Histoire Sainte* (Lespy & Raymond 1876) for the two lexemes *vier* ‘come’ and *tier* ‘hold’ (alongside ‘short’ forms, e.g. *tie/tieba* ‘hold.IPF.IND.3SG’, *tihen/thien/tieban* ‘hold.IPF.IND.3PL’, *vie/vieba* ‘come.IPF.IND.3SG’). Attestations of imperfect forms for other third-conjugation lexemes in this text are of a short *-e* type (e.g. *faze* ‘do.IPF.IND.3SG’, *sabe* ‘know.IPF.IND.3SG’); earlier attestations of third-conjugation imperfections involve either ‘short’ *-e* forms, or *-ie* forms such as *avie* ‘have.IPF.IND.3SG’, *tenie* ‘hold.IPF.IND.3SG’ (Ronjat 1937: 174–175) resembling the *-ia* type continuing *-ĒBAT* in other varieties. For fourth-conjugation verbs, the earliest attestations discussed in existing scholarly literature are of the *-iva* type, dating from the mid-thirteenth century (Ronjat cites *compluiua* ‘fulfil.IPF.IND.3SG’ from a charter dated 1246), and thus significantly preceding the emergence of *-eva* imperfections. There is no evidence for the presence of labial consonants in the conditional continuing the infinitive+HABĒBAM, etc. periphrasis, which consistently displays formal parallelism of stem with the Romance synthetic future.

Together, these observations offer empirical evidence for ‘short’ third-conjugation imperfections and *-iva* fourth-conjugation imperfections being of greater antiquity than ‘long’ third-conjugation imperfections, and thus for ascribing ‘long’ third-conjugation imperfections to analogical innovation. By contrast, the



development of fourth-conjugation *-iva* forms is not directly observable; the view that such forms are of analogical origin is based on comparison with first-conjugation imperfect forms, third-conjugation imperfect forms and conditional forms.

#### 4.2 Vowel aperture in conditionals and third-conjugation imperfects

A problem specific to the Gascon data concerns vowel quality in all synthetic conditional forms and in third-conjugation imperfect forms. In Gascon varieties, as in the Catalan and Aragonese varieties discussed in section 3, and unlike the other Occitan and Ibero-Romance varieties discussed in section 2.1, the desinences of synthetic conditional forms and of third-conjugation imperfect forms typically contrast. The phonological substance of the contrast, however, differs. In most of the Catalan and Aragonese systems discussed here, imperfects in *-eβa/* contrast with conditionals in *-ia/*, and derivations of both forms from Latin *-ĒBAM*, etc. have been proposed, whereas in Gascon varieties, imperfects in *-e/* or *-ewə/* contrast with conditionals in *-e/*, and *-e/* cannot be derived as a reflex of long *-Ē*. A particular difficulty in tracing the development of vowel aperture in imperfect and conditional forms is that no orthographic distinction is made between */e/* and */ɛ/* in textual sources until the sixteenth century, by which time the morphological contrast of imperfect and conditional forms is already well-established (section 6).

In the work of Bourciez (1890: 210–211, 222–223) and Bourciez (1937), ‘short’ imperfects and the synthetic conditional are assumed to be entirely regular reflexes of forms with *-ĒBA-* desinences, via the development *-ĒBA- > -ia- > -ie- > -e-*, the difference of vowel quality remaining unexplained. Ducamin (1908: 160–185) proposes a more refined version of this account, in which the synthetic conditional forms retain the regular outcome */e/*, while the imperfect forms undergo lowering from */e/* to */ɛ/* under the analogical influence of preterite forms in */ɛ/* (1908: 183).

The view that */e/* is regular while */ɛ/* is a more recent innovation is supported by the fact that, in some Gascon varieties, */e/* does occur in imperfect forms (whether ‘short’ or ‘long’; Rohlf 1935: 149, Bourciez 1937: 162; see also section 5.2 for the example of Saint Vivien du Médoc in Table 8), whereas there are no known attestations of */ɛ/* in the synthetic conditional.<sup>12</sup> Such a view is also consistent with observations of the Catalan and Aragonese systems discussed in section 3, where synthetic conditional forms of the *-ía* type are most plausibly analysed as retaining a reflex of *-ĒBA-*.

The hypothesis of influence from the preterite originates with Zauner (1896), being subsequently adopted by Ronjat (1937: 175–176), and further developed by Allières (1988).<sup>13</sup> These scholars’ view is chiefly motivated by the existence of preterites with theme vowel */ɛ/* for first- and third-conjugation verbs

<sup>12</sup> A theme vowel */ɛ/* occurs in first-conjugation conditional forms in the variety of Barèges (département Hautes-Pyrénées, Occitanie; Massourre 2006: 209, 2012: 241), but these are of perfective origin (Maiden 2007, Esher 2012: 239–243).

<sup>13</sup> Rohlf (1935: 148–149) claims that the presence of a labial in non-first-conjugation imperfect forms (e.g. *causiva* ‘choose.IPF.IND.3SG’, *batèva* ‘beat.IPF.IND.3SG’, Table 3) is a conservative feature continuing the etymological Latin labial), but shares the widespread view attributing the vowel */ɛ/* in third-conjugation forms to influence from the preterite. Under Rohlf’s analysis, ‘short’ third-conjugation forms (e.g. *batè* ‘beat.IPF.IND.3SG’, Table 4) arise via truncation of original ‘long’ forms. The same author treats */e/* in the synthetic conditional as the regular continuant of *-ĒBA-* (1935: 146), without comment on the systematic absence of labial forms from the conditional or on the mechanism via which *-ĒBA-* is assumed to yield *-eva-* in the imperfect but *-e-* in the conditional.

in mediaeval Occitan and for all lexemes in most modern Occitan varieties outside Gascony. Such preterites are the regular reflexes of weak (non-root-stressed) perfects of the DEDĪ type (Wheeler 2012: 13–17, 20; see also Anglade 1921, Skårup 1997 for mediaeval Occitan forms). Like the ‘short’ imperfects, mediaeval weak preterites are stressed on the final syllable (with the exception of the third person plural; e.g. *vendèt* ‘sell.PRET.3SG’ vs. *vendèro(n)* ‘sell.PRET.3PL’). Thus, modern imperfects share segmental and suprasegmental characteristics with mediaeval preterites, a fact consistent with the hypothesis of introduction of /ɛ/ from the preterite into the imperfect, although the motivation for such a change remains obscure.<sup>14</sup> It should be noted that influence from the preterite is restricted to analogical extension of desinential material rather than wholesale replacement of imperfect forms by preterite forms: modern imperfect forms consistently present a reflex of the Latin *infectum* stem etymological in the imperfect, as opposed to a reflex of the Latin *perfectum* stem etymological in the preterite.

As in Catalan and Aragonese, the synthetic conditional is consistently traced to infinitive+HABĒBAM, etc. (e.g. Zauner 1896: 454). Ronjat (1937: 175) cites the lack of labials in the synthetic conditional as evidence for the ‘short’ imperfect type predating the ‘long’ imperfect type, arguing that the synthetic conditional must have been formed before the ‘long’ imperfect type appeared. Only Allières (1988: 179) departs from this view, in claiming that the replacement of desinences continuing -ĒBA- by desinences continuing -EDI- (originating in DEDI, etc.) pre-dates the formation of the synthetic conditional, and Allières’ account is not compatible with historical or comparative evidence: Occitan weak -DEDI- preterites do not spread to the reflex of HABERE until the late mediaeval period (replacing strong preterites e.g. *ac* ‘have.PRET.1/3SG’; see Esher 2021a, 2021b, forthcoming), whereas the grammaticalisation of the synthetic conditional is near-complete in the earliest mediaeval attestations (see e.g. Bach ms.).

#### 4.3 Interim summary

In Gascon varieties, typical systems involve a three-way contrast among imperfect forms, either *-ava*, *-èva*, *-iva* or *-ava*, *-è*, *-iva*, and a fourth unique series of forms in the synthetic conditional, usually of the form *-é*. As in Catalan and Aragonese, the synthetic conditional forms are most plausibly analysed as reflexes of infinitive+HABĒBAM; thematic labials do not occur in the synthetic conditional. Available historical evidence indicates that synthetic conditional forms in *-é*, ‘short’ third-conjugation imperfects in *-è*, and fourth-conjugation imperfects in *-iva* are all of greater antiquity than ‘long’ third-conjugation imperfects with a thematic labial. These facts do not directly discriminate between the etymological and analogical hypotheses for fourth-conjugation imperfects, but do offer strong support for the analogical hypothesis as regards third-conjugation imperfects. The presence of a low-mid vowel /ɛ/ in third-conjugation imperfects

<sup>14</sup> A further observation adduced by Allières (1988) in support of this view concerns theme vowels in third-conjugation preterites. In modern Gascon varieties with /ɛ/-imperfects, including the modern standard (Romieu & Bianchi 2005: 279–280), third-conjugation preterites are now formed with the vowel /u/ or /y/, instead of /ɛ/: consider e.g. *venó* [be’nu] ‘sell.PRET.3SG’ vs. *venè* [be’ne] ‘sell.IPF.IND.3SG’ (Allières 1988: 178). The geographical correlation between third-conjugation imperfects with theme vowel /ɛ/ and third-conjugation preterites with theme vowel /u/ or /y/ is suggestive of a development in which novel /u/ or /y/ forms progressively supplant /ɛ/ forms in the preterite, with /ɛ/ forms being redistributed into third-conjugation imperfects. The relevance of the geographical observations nevertheless depends on the historical source of /u/ and /y/ in the preterite (Ronjat 1937: 190), and the chronology of their appearance in comparison to /ɛ/ forms, points which remain to be satisfactorily established.



cannot be the outcome of regular sound change from etymological *-Ē-*, and is instead attributed to analogical influence from the preterite; the etymological form of third-conjugation imperfects is assumed to have been a short form ending in */e/*, parallel to the synthetic conditional.

The following sections of the study, focusing particularly on Gascon varieties, explore the insights afforded into these reconstructed developments by additional empirical evidence: modern comparative dialect data (section 5) and historical corpus data (section 6).

## 5. Comparative dialect data for Catalan and Gascon varieties

### 5.1. Catalan varieties

For 148 Catalan- and Valencian-speaking localities, full or partial paradigms for 68 verbs were elicited and published by Alcover & Moll (1929–1933), and subsequently digitised and published online with interactive mapping facility at <http://espm.iec.cat/fvdc/>. Consultation of these data indicate considerable geographical coherence. Thematic labials in the synthetic conditional are not attested in the Pyrenean area. Non-first-conjugation imperfect forms with labials occur only around the valleys of the Segre and Noguera, in the north-western part of Alcover & Moll’s survey area; varieties outside this region present the *-ia* type of non-first-conjugation imperfect familiar from standard Catalan (Figure 1).

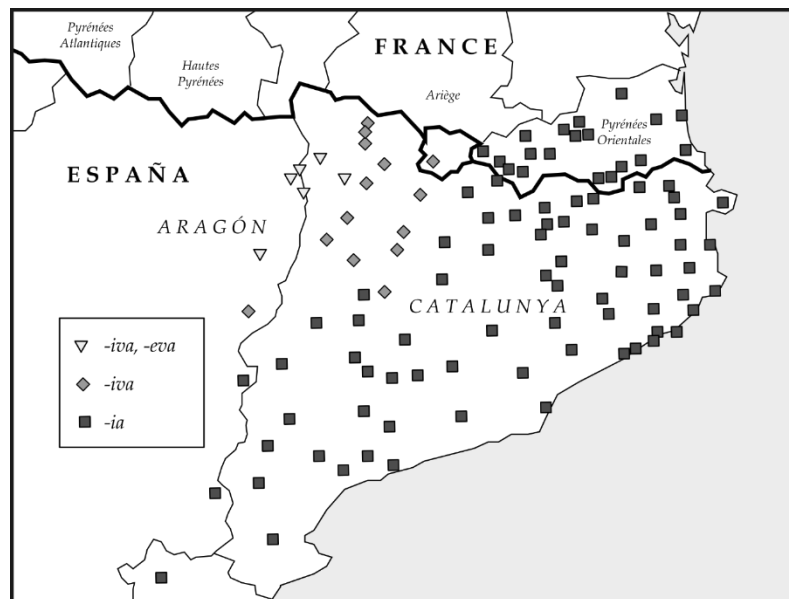


Figure 1. Forms of non-first-conjugation imperfects (northern mainland part of area surveyed by Alcover & Moll 1929–1933, map adapted from data at <http://espm.iec.cat/fvdc/>).

Within the north-western region where thematic labials occur for non-first-conjugation verbs, a gradient is observed (see also Posner 1961: 31–32, 38). Westerly varieties, bordering Aragón, tend to exhibit a three-way contrast of the *-ava -iva -eva* type described in sections 2.2 and 3.1. More easterly varieties instead tend towards a two-way contrast, in which first-conjugation imperfects are of the *-ava*

type, while third- and fourth-conjugation imperfects are both of the *-iva* type and are thus not formally distinguished from each other. The attestations of the *-iva* type are significant for two reasons. Firstly, *-iva* is exactly the form which introduction of a thematic labial from first-conjugation imperfects into etymological *-ía* non-first-conjugation imperfects would be expected to yield. Secondly, the area in which varieties with the two-way *-ava* vs. *-iva* contrast for imperfect forms are attested is geographically intermediate between varieties with a three-way *-ava*, *-eva*, *-iva* contrast, and varieties with the typical western Romance two-way *-ava*, *-ía* contrast. These data thus suggest a progressive analogical development in which an *-ava*, *-iva* system emerges from earlier *-ava*, *-ía*.

## 5.2 Gascon varieties

For 153 Gascon-speaking localities, full or partial paradigms for 60 verbs (Allières 1971: 7–8) were elicited for the *Atlas linguistique et ethnographique de la Gascogne* (henceforth ALG; Séguéy 1954–1973), and the resulting data published in cartographic form in the fifth volume of the atlas (Allières 1971). Unusually for linguistic atlas data, the maps do not show complete inflectional forms, but instead relate to the distribution of individual exponents, such as desinences and theme vowels, in an endeavour to capture the systematic organisation of inflectional forms and paradigms. Individual wordforms must thus be reassembled by combining data from multiple maps; the process is illustrated by Esher (2014), and Massouré (2012: 258–273) provides reconstituted paradigms for the three traditional inflectional classes in eleven localities. For the present study, the relevant maps are ALG 1661–1663 (final vowels in imperfect forms of three major conjugations), 1669 (synthetic conditional desinences), 1685–1687 (stressed morphs in imperfect forms of three major conjugations), and 1770 (thematic augments in fourth-conjugation imperfects and gerunds).<sup>15</sup> The geographical distribution of inflectional contrasts between non-first-conjugation imperfect forms is shown in Figure 2<sup>16</sup>, exemplified by third-conjugation *bàter* ‘beat’ and fourth-conjugation *bastir* ‘build’. The overall impression is of high geographical consistency: each system occurs in a cluster of adjacent survey points, while adjacent systems are closely related.

In the south-western area, corresponding to the départements Landes and Pyrénées-Atlantiques, third-conjugation imperfects are of the ‘short’ *-è* type, while fourth-conjugation imperfects are of the *-iva* type. This area is bordered, in the Hautes-Pyrénées, western Gers and southern Gironde, by varieties in which fourth-conjugation imperfects are also of the *-iva* type, but third-conjugation imperfects are of the ‘long’ *-èva* type. To the south, in the varieties of Barèges and Gavarnie (Hautes-Pyrénées), both third- and

<sup>15</sup> In much of the département Landes, as well as in southern Gironde, [a] in first-conjugation imperfect forms has undergone raising to [ɛ] (ALG 1685). First-conjugation imperfects of *-èva* type occur with three different non-first-conjugation systems (III *batèva* IV *bastissèva*; III *batè* IV *bastiva*; and III *batèva* IV *bastiva*), all three of which are attested elsewhere with first-conjugation imperfects of *-ava* type. The poor correlation between first-conjugation and non-first-conjugation inflectional types indicates that the emergence of *-èva* in first-conjugation verbs is independent of the developments discussed here (see also section 6.2 for the chronology of the changes).

<sup>16</sup> In order to focus on the overall paradigmatic distribution patterns of morphological exponents, Figure 2 abstracts over localised variation in the realisation of the thematic labial ([β] or [w] depending on area, ALG maps 1685–1687), the third-conjugation theme vowel (ordinarily [ɛ]; [e] is a rare variant, attested at the survey points 548, 656SW and 693NE, ALG map 1686), final unstressed vowels (typically [ɔ] or [ə], see ALG maps 1661–1663); and exponents of person and number (ALG maps 1626–1627 and 1661–1663).

fourth-conjugation imperfects are of the *-iva* type (see also Massourre 2006: 197–200): this system, though rare among Gascon varieties, is significant since it corresponds to the northern Catalan *-iva* type discussed in 5.1 and thus represents an areal continuity (Allières 1971: 287).

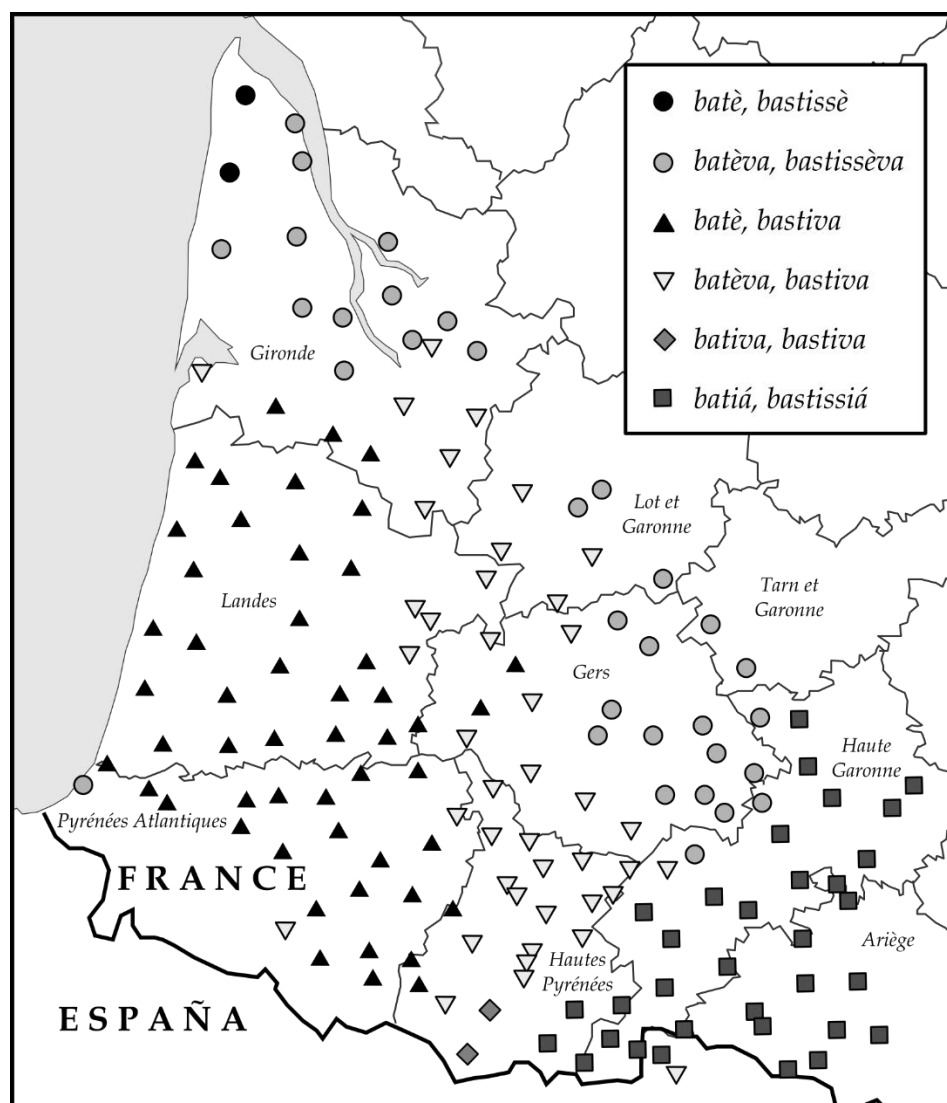


Figure 2. Forms of non-first-conjugation imperfects in the ALG survey area (data compiled from ALG maps 1661–1663, 1685–1687, 1770).

In the northern and eastern parts of the ALG survey area, and also in Anglet (Pyrénées-Atlantiques), third-conjugation and fourth-conjugation imperfects consistently share desinences, but fourth-conjugation imperfects are uniquely distinguished by the presence of a thematic augment */is/* continuing the Latin ingressive infix *-(Ī/Ē)SC-* (Maiden 2004, Meul 2010, 2013, Esher 2016). These systems, crucial to understanding of the historical development of imperfect inflection in Gascon varieties, yet unmentioned in the literature reviewed in section 4, can be classified into three groups.

A first group comprises varieties clustered in the south-eastern part of the survey area (Haute-Garonne, Ariège). In these varieties, the desinences of synthetic conditional and non-first-conjugation imperfect forms exhibit systematic identity, and are transparently reflexes of mediaeval Occitan /'ia/ < -ĒBA- (modern /'iə/ or /'jə/), without a thematic labial. Fourth-conjugation imperfect forms are typically characterised by the presence of a thematic augment /is/. Systems of this type, illustrated in Table 7, are widespread across southern Occitan varieties, including the area which borders the ALG survey zone.

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>véner</i> ‘sell’	IPF.IND (IV) <i>bastir</i> ‘build’	COND (I) <i>cantar</i>	COND (III) <i>véner</i>	COND (IV) <i>bastir</i>
1SG	kan'taβɔ	be'njɔ	basti'sjɔ	kanta'jɔ	bene'jɔ	basti'jɔ
2SG	kan'taβɔs	be'njɔs	basti'sjɔs	kanta'jɔs	bene'jɔs	basti'jɔs
3SG	kan'taβɔ	be'njɔ	basti'sjɔ	kanta'jɔ	bene'jɔ	basti'jɔ
1PL	kan'taβɔm	be'njɔm	basti'sjɔm	kanta'jɔm	bene'jɔm	basti'jɔm
2PL	kan'taβɔts	be'njɔts	basti'sjɔts	kanta'jɔts	bene'jɔts	basti'jɔts
3PL	kan'taβɔn	be'njɔn	basti'sjɔn	kanta'jɔn	bene'jɔn	basti'jɔn

Table 7. Imperfect and conditional forms of the three traditional conjugations in the variety of Lescure (ALG 790NE; Allières 1971: 182–183; Massourre 2012: 263–264). The absence of -r- in the conditional is due to sound change (Esher 2015).

A second group comprises varieties forming a band along the north-eastern part of the survey area (Gers, Lot-et-Garonne, Tarn-et-Garonne, Gironde) and also the isolated variety of Anglet (ALG 690, Pyrénées-Atlantiques). In these varieties, exemplified in Table 8, the desinences of third-conjugation and fourth-conjugation imperfects are both of the -*èva* type with a thematic labial, but there is no thematic labial in the synthetic conditional.

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>véner</i> ‘sell’	IPF.IND (IV) <i>bastir</i> ‘build’	COND (I) <i>cantar</i>	COND (III) <i>véner</i>	COND (IV) <i>bastir</i>
1SG	kan'taβi	bən'deβi	basti'seβi	kan'tri	bən'dri	basti'ri
2SG	kan'taβəs	bən'deβəs	basti'seβəs	kan'trəs	bən'drəs	basti'rəs
3SG	kan'taβə	bən'deβə	basti'seβə	kan'trət	bən'drət	basti'rət
1PL	kan'taβəŋ	bən'deβəŋ	basti'seβəŋ	kan'trəŋ	bən'drəŋ	basti'rəŋ
2PL	kan'taβəs	bən'deβəs	basti'seβəs	kan'trəs	bən'drəs	basti'rəs
3PL	kan'taβəŋ	bən'deβəŋ	basti'seβəŋ	kan'trəŋ	bən'drəŋ	basti'rəŋ

Table 8. Imperfect and conditional forms of the three traditional conjugations in the variety of Grézillac (ALG 643NE; Allières 1971: 176–177).

Finally, at the northern tip of the département Gironde, non-first-conjugation imperfects are oxytonic and lack a thematic labial (Table 9). A salient feature of these varieties is that the vowel aperture of the synthetic conditional desinences corresponds exactly to that of the imperfect indicative desinences: /e/ in Saint Vivien du Médoc (ALG 548), /ɛ/ in Hourtin (ALG 650N). Fourth-conjugation imperfect forms are also characterised by the presence of a thematic augment /is/. In both these respects, the overall organisation of imperfect and conditional inflection in these varieties corresponds to that observed in south-eastern varieties such as that of Lescure (Table 7), suggesting that the two groups of systems are related, with the differences in the phonological substance of conditional and non-first-conjugation imperfect inflection being imputable to localised sound changes.

	IPF.IND (I) <i>cantar</i> ‘sing’	IPF.IND (III) <i>véner</i> ‘sell’	IPF.IND (IV) <i>bastir</i> ‘build’	COND (I) <i>cantar</i>	COND (III) <i>véner</i>	COND (IV) <i>bastir</i>
1SG	kan'tawi	be'ni	basti'si	kan'tri	bene'ri	basti'ri
2SG	kan'tawəs	be'nes	basti'ses	kan'trəs	bene'res	basti'rəs
3SG	kan'tau	be'ne	basti'se	kan'tre	bene're	basti're
1PL	kan'tawəm	be'njeŋ	basti'sjeŋ	kan'trjeŋ	bene'rjeŋ	basti'rjeŋ
2PL	kan'tawəts	be'njets	basti'sjets	kan'trjets	bene'rjets	basti'rjets
3PL	kan'tawən	be'njeŋ	basti'sjeŋ	kan'trjeŋ	bene'rjeŋ	basti'rjeŋ

Table 9. Imperfect and conditional forms of the three traditional conjugations in the variety of Saint Vivien du Médoc (ALG 548; Allières 1971: 196–197; Massourre 2012: 270–271).

Overall, the ALG data consistently illustrate geographical distributions suggestive of gradual, stepwise change and the geographical diffusion of innovations across widening areas. The isolated attestation of the *cantava-bastissèva-batèva* type in Anglet represents an exception to the general tendency, but one which is not necessarily inconsistent with gradual diffusion: in diachrony, the spread of an innovation across a central area can result in more conservative systems remaining in scattered, peripheral locations (Trudgill 1990: 262, citing principles applied in Bonfante 1947).

### 5.3 Interim summary

The comparative dialect evidence surveyed here provides a fuller picture of areal trends and attested systems in non-first-conjugation imperfect inflection. In particular, the atlas data highlight the consistency of geographical distribution: varieties with the same system cluster into coherent blocks, while systems occupying contiguous areas share structural properties regarding both the phonological substance of exponents and the paradigmatic and lexical distribution of exponents. The overall impression is of gradual transition from one system to another. The ALG data are particularly valuable in this respect, since they illustrate a wider and more subtly gradient range of systems than those observable for Catalan and Aragonese, or those considered in much existing literature on Gascon<sup>17</sup>: the full range of ALG data demonstrates the continuity of these systems with each other, with those found in north-west Catalan and Aragonese, and also with the more familiar inflectional types of standard Catalan and southern Occitan. Together, these data confirm the intuition that three-way contrast in the imperfect indicative is an innovative feature which arises and spreads within an area of previous two-way contrast, producing formal divergence between the novel exponents of the non-first-conjugation imperfect indicative and the more conservative exponents of the synthetic conditional which continue -ĒBA-.

## 6. Historical evidence from Gascon textual sources

Building on the insights afforded by the ALG data, this section examines aspects of the emergence and diffusion of modern imperfect inflection in Gascon varieties via attestations in historical texts. A comprehensive and readily accessible overview of mediaeval data is available via the Linguistic Corpus of Old Gascon (Field 2012, 2013), covering the period from the late eleventh century to the end of the fifteenth century. For later periods, in the absence of existing corpora, a number of published texts are examined for imperfect indicative forms.

### 6.1 Imperfect forms in the Linguistic Corpus of Old Gascon

The Linguistic Corpus of Old Gascon (henceforth LCOG) comprises texts produced within Gascony between the late eleventh century and the end of the fifteenth century: principally, charters and other legal texts, recording individual bequests and contracts, which can be dated and localised with high accuracy and reliability. Texts are classified into five regions of provenance, shown in Figure 3<sup>18</sup>. All verb forms occurring in the texts are lemmatised, tagged for TAM and person/number values, and harvested into a dedicated database.

For the purposes of this study, all 1647 tokens tagged as ‘imperfect indicative’ in the LCOG database were extracted and examined. These forms occur in texts produced between 1070 and 1492, thus

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<sup>17</sup> A notable example is that of Posner (1961), who focuses solely on ‘Bearnese’ varieties, i.e. those spoken in the historical province of Béarn, corresponding to the eastern part of the modern département Pyrénées-Atlantiques. Posner additionally excludes the synthetic conditional from consideration, despite its importance in understanding the historical development of the imperfect indicative (and, ironically, the commitment of her study to explaining the development of the imperfect indicative in the context of its formal and functional relationship to other TAM categories).

<sup>18</sup> Adapted from original map at <[mllidev.umbc.edu/gascon/English/description/regions.html](http://mllidev.umbc.edu/gascon/English/description/regions.html)>.

spanning the full period covered by the corpus. The geographical distribution is uneven, with almost half of all tokens (725) instantiated in texts from the southern region, and a considerable time-lag between the earliest attestations in the central and southern regions (late eleventh century) and the northern region (early thirteenth century). The range of forms attested, together with the number of tokens for each, is summarised in Table 10.<sup>19</sup> The exact vowel quality of forms with orthographic <e>, <ie> and <eve> is not specified: as the orthographic systems used during the mediaeval period do not explicitly indicate either stress placement or vowel aperture, orthographic <e> may represent [e], [ɛ] or in some cases [ə].

region	tokens	earliest attestation	latest attestation	types (I)	types (IV)	types (III)
Centre	104	1070	1415	-av- (7)	[no tokens]	-e (45), -ia (23), -ie (9)
South	725	1090	1492	-av- (121)	-ive (21)	-e (450), -ie (11), -ia (5), -eve (3)
West	210	1130	1398	-av- (29)	-e (1)	-e (143), -ia (2)
East	177	1176	1491	-av- (36)	-ia (4)	-ia (87), -ie (3), -e (3)
North	431	1230	1388	-av- (36)	-e (7)	-e (302), -ia (4)

Table 10. Inventory of imperfect indicative tokens in the Linguistic Corpus of Old Gascon.

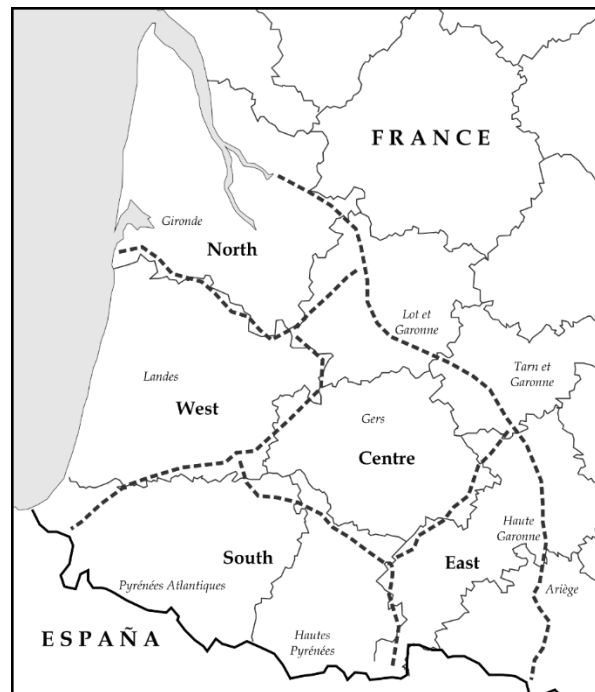


Figure 3. Regions within Linguistic Corpus of Old Gascon.

### 6.1.1 First-conjugation verbs

<sup>19</sup> Table 10 excludes results for the single lexeme *èsser* ‘be’, which presents isolated, etymological forms continuing Latin ERAM, etc. (as in modern Gascon varieties; see ALG map 2014).



For first-conjugation verbs, all areas exclusively present conservative forms with theme vowel /a/ and a thematic labial, corresponding to orthographic forms in <av>, <au> or <ab> (e.g. *entraue*, *entrave*, *entrava*, *entraba* ‘enter.IPF.IND.3SG’). While the possibility of orthographic conservatism cannot be excluded, the exceptionless use of <a> in this context (in comparison to orthographic variance for other inflectional forms) strongly suggests that the appearance of first-conjugation forms with theme vowel /ε/ in the western part of the Gascon area postdates the period covered by the LCOG data.

#### 6.1.2 Fourth-conjugation verbs

For fourth-conjugation verbs, few tokens are attested, but some tendencies are strongly apparent. In the southern region, all attestations of fourth-conjugation verbs are of the *-iv-* type, without exception: e.g. *audivē/audiue* ‘hear.IPF.IND.3SG’, *auziuen* ‘hear.IPF.IND.3PL’, *cumpliue* ‘fulfil.IPF.IND.3SG’, *complivem* ‘fulfil.IPF.IND.1PL’, , *descobriuen* ‘discover.IPF.IND.3PL’, *desmentive* ‘refute.IPF.IND.3SG’, *escopiben* ‘spit.IPF.IND.3PL’, *falhiue/faliue* ‘be\_lacking.IPF.IND.3SG’, *feriue/ferive* ‘wound.IPF.IND.3SG’, *morive* ‘die.IPF.IND.3SG’, *offeriven* ‘offer.IPF.IND.3PL’, *poscediuen* ‘possess.IPF.IND.3PL’, *requerive* ‘request.IPF.IND.3SG’. The earliest attestation in an original document dates from 1246;<sup>20</sup> *-iv-* forms also occur in a charter dated 1171 but known only from a copy made in 1251.<sup>21</sup> The systematicity of *-iv-* forms suggests that their development is complete by the mid-thirteenth century at the latest, but the lack of attestations in earlier documents precludes tracing their prior history.

For the period covered by the LCOG data, *-iv-* forms are only found within the southern region: their geographical distribution is thus much more restricted in the mediaeval period than in the modern ALG data, indicating that such forms originated in the south and have subsequently spread northwards. In the eastern region, all tokens of fourth-conjugation imperfects are of the *-ia* type (three instances of *morīa* ‘die.IPF.IND.3SG’ and one of *elegian* ‘choose.IPF.IND.3PL’), while elsewhere, all tokens are of the *-e* type: in the west, *possede* ‘possess.IPF.IND.3SG’; in the north, *defalhe* ‘default.IPF.IND.3SG’, *ysse* ‘exit.IPF.IND.3SG’, *muren* ‘die.IPF.IND.3PL’, *possede* ‘possess.IPF.IND.3SG’, and three instances of *requere* ‘request.IPF.IND.3SG’. These forms consistently lack the thematic augment *-iss-*, indicating that the introduction of the augment is a later development. The contrast between *-ia* forms in the east and *-e* forms elsewhere corresponds to the distribution observed in modern varieties and is consistent with the assumption that both series of forms are the regular reflexes of *-ĒBA-* forms; for *-e* forms, the earliest fourth-conjugation attestation is found in a thirteenth-century copy of a document dating from 1259,<sup>22</sup> and the latest in a charter dated 1398, copied within a few years of the original.<sup>23</sup>

#### 6.1.3 Third-conjugation verbs

<sup>20</sup> LCOG RecGasc17a (Orthez, 1246): MS. Paris, Archives nationales, J 1022. Reproduced, with corrections, from the edition in Luchaire (1881).

<sup>21</sup> LCOG RecGasc26 (Bagnères-de-Bigorre, 1251): MS. Bagnères-de-Bigorre, A.M. Bagnères-de-Bigorre, AA I, no. 1. Reproduced, with corrections, from the edition in Luchaire (1881).

<sup>22</sup> LCOG CartSCrD.CLXX (Bordeaux, 1259). Redactor Fort Baudres; MS. Bordeaux, A.D. Gironde, H. 869, 13th c.

<sup>23</sup> LCOG ChartBiscarL.1 (Saint Paul en Born, 1398). Redactor Petrus de Luco, notari public/clericus. MS. Biscarrosse, Coll. René Lalanne, no.?, 1400 ca. Reproduced, with corrections, from Lafita (1997).

For third-conjugation verbs, a higher number of tokens are found. As for fourth-conjugation verbs, there is a robust overall tendency of preference for *-ia* forms in the east, and *-e* forms elsewhere. Within majority *-e* regions, attestations of *-ia* occur in localities on or near the border with *-ia* varieties (e.g. in texts from Beaumont-de-Lomagne in the département Tarn-et-Garonne), suggesting that the variation is indicative of a transitional zone. It is also notable that *-ia* forms commonly co-occur with *-ie* forms in the same text (e.g. in texts from La Réole in the département Gironde, or Bagnères-de-Bigorre in the département Hautes-Pyrénées), most plausibly interpreted as orthographic variation.

With regard to time-depth, the earliest-dated and latest-dated attestations of the different third-conjugation imperfect types are shown in Table 11. For each region, the predominant type (shaded in grey) is attested from the very earliest attestations of imperfect forms to the very latest, while the variant types ordinarily occur somewhat later, and over a shorter time period. From these data it is clear that, across all regions where the *-e* type predominates, it is well-established and near-systematic by the time records begin: by the mid-eleventh century at the latest, in the case of the central and southern areas, for which the oldest texts are available.

region	all imperfect tokens	<i>-e</i> type	<i>-ia</i> type	<i>-ie</i> type	<i>-ev-</i> type
Centre	1070/1415	1070/1415	1274/1324	1273/1274	[not attested]
South	1090/1492	1090/1492	1114/1251	1125/1276	1290/1347
West	1130/1398	1130/1398	1270/1270	[not attested]	[not attested]
East	1176/1491	1202/1318	1178/1491	1179/1179	[not attested]
North	1230/1388	1230/1388	1230/1293	[not attested]	[not attested]

Table 11. Earliest and latest attestations of third-conjugation imperfect types. Dates for the predominant type in each area are shaded in grey.

Among the striking aspects of the third-conjugation data is the geographical, chronological and lexical distribution of the *-ev-* type. Although widespread in modern varieties, within the LCOG dataset this type is attested only in the southern area, for the lexemes *venir* ‘come’ and *tenir* ‘hold’ (locally often *vier*, *tier*) or compounds thereof: *bieve* ‘come.IPF.IND.3SG’; *apertiua* ‘belong.IPF.IND.3SG’, *apertiuen* ‘belong.IPF.IND.3PL’. The attestations are also relatively late compared to the predominant *-e* type: the form *bieve* occurs in an eighteenth-century copy of a document originally produced in 1290,<sup>24</sup> while both *apertiua* and *apertiuen* are found in the same text, produced in 1396 and known from a 1406 copy.<sup>25</sup> For comparison, other and earlier attestations of these and related lexemes in the same region do not have a thematic labial: *tie/thie/tine* ‘hold.IPF.IND.3SG’, *tinen/tenen* ‘hold.IPF.IND.3PL’, *apertenie* ‘belong.IPF.IND.3SG’, *combenia* ‘suit.IPF.IND.3SG’, *bie* ‘come.IPF.IND.3SG’, *bien* ‘come.IPF.IND.3SG’; note that both lexemes are susceptible to the regular deletion of intervocalic /n/, a change common to many Gascon varieties. Thus, textual evidence confirms that the emergence of the *-eva* type is a more recent

<sup>24</sup> LCOG DictLarchBagn.4 (Bagnères-de-Bigorre, 1290). Redactor Bidau de Curred, notari de Tarbe. MS. Tarbes, A.D. Hautes-Pyrénées, Larcher, Dictionnaire, XXV, 344, copy 18th c.

<sup>25</sup> LCOG LVertBenacB.XXVII (Horgues, 1397). Redactor Bidau de Seuba, notari public per la auctoritat imperiau. MS. Paris, B.N., NAF 23286, 1406.

development originating in the southern area for a small cluster of lexemes, and subsequently undergoing geographically and lexically gradual spread.<sup>26</sup>

## 6.2 *Imperfect forms in additional texts*

For later historical periods, coverage is highly variable due to the progressive exclusion of Gascon varieties from the administrative and literary domains for which documents are typically produced and conserved. The textual sources available to the present study are thus of disparate genre, date and locality. An overview of the systems of imperfect inflection attested is presented in Table 12, prior to more detailed discussion of the sources and attestations. The region labelled ‘East’ in the LCOG is not considered here, due to the high degree of continuity observed between mediaeval and modern systems for this area, and the lack of non-first-conjugation imperfect forms with thematic labials: further investigation is thus of limited value for the questions addressed in the present study.

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<sup>26</sup> An anonymous reviewer suggests that the role of the pair *tier* (< TENERE, II) and *vier* (< UENIRE, IV) as a pivot for the spread of labial imperfect forms from the fourth to the third conjugation may be linked to the Romance tendency for mutual influence between these two lexemes, which are specifically prone to heteroclisis mixing forms characteristic of conjugations III and IV. Paradoxically, for mediaeval Gascon, where *tier* and *vier* are clear precursors in change, almost all attested forms of these lexemes are of unambiguously third-conjugation shape; unambiguously fourth-conjugation forms occur only in the infinitive, as marginal variants alongside infinitives of the majority third-conjugation type.

author/text	date	text type	types (I)	types (IV)	types (III)
<i>LCOG southern region/modern département Pyrénées-Atlantiques</i>					
<i>Récits</i>	mid-14 <sup>th</sup> C	scripture	-av-	-iv-	-e, -ev-
<i>Fors</i>	1552	lawbook	-av-	-iv-	-e
Salette	1583	scripture	-av-	-iv-	-e, -ev-
<i>LCOG western region/modern département Landes</i>					
Arnaudin	1880	folktales	-ev-	-iv-	-e
<i>LCOG northern region/modern département Gironde</i>					
Dupuy	1505–1523	accounts	-av-	[no tokens]	-e
<i>Macarienes</i>	1763	political pamphlet	-ev-	-iv-	-ev-, -e
Verdié	1815–1818	comic verse	-av-	-issev-, -ev-	-ev-
Dador	1867	grammar	-av-	-issev-	-ev-
<i>LCOG central region/modern département Gers</i>					
Garros	1567	verse eclogues	-av-	-isse	-e
Ader	1610	narrative verse	-av-	[no tokens]	-e
Dastros	1636	pastoral verse	-av-	-isse	-e
Loubet	1836	narrative verse	-av-	-issev-	-ev-

Table 12. Imperfect indicative types in a range of historical texts.

For the southern region, the texts consulted are the *Récits d'Histoire Sainte* (Lespy & Raymond 1876), an anonymous compilation of Biblical retellings in prose; the *Fors de Béarn* (Eygun 2010), comprising laws and customs of the province of Béarn; and a verse translation of the Psalms by Arnaud de Salette (Darrigrand 2010). Overall, these texts illustrate three-way opposition between first-conjugation -av-, second-conjugation -iv- and third-conjugation -e. This finding is not surprising since the system described is attested both in the mediaeval LCOG data and in the modern ALG data. As discussed in sections 4.1 and 6.1.3, the third-conjugation -ev- type is attested only for *tier* ‘hold’, *vier* ‘come’ and their compounds: this lexical distribution is robustly attested in both the *Récits d'Histoire Sainte* and Salette’s Psalms. The principal contribution of the textual sources is to confirm the respective vowel quality of imperfect and conditional desinences: third-conjugation imperfect desinences are in the majority written with <é>, indicating open /ɛ/, while conditional desinences are written with <è>, indicating closed /e/ (this sixteenth-century convention is opposite to modern Occitan orthography, which notes /e/ as <é> and /ɛ/ as <è>). However, since the divergence of imperfect and conditional forms is assumed to have taken place much earlier (section 4.2), this confirmation makes only a limited contribution to historical accounts of imperfect and conditional inflection.

For the western region, few sources are available: the present study is based on a compilation of folktales collected by Félix Arnaudin in the ‘Grande-Lande’ area (south-eastern part of the modern département Landes), from speakers born in the early- to mid-nineteenth century. For the oldest speakers, born in Sabres and Labouheyre c.1820, the system of first-conjugation -ev-, fourth-conjugation -iv- and

third-conjugation *-e* (found in the majority of ALG data for the département Landes) appears well-established: e.g. *ournéuen* ‘return.IPF.IND.3PL’, *ouariuen* ‘heal.IPF.IND.3PL’, *aué* ‘have.IPF.IND.3SG’ (Boisgontier 1994: 109). The change from *-av-* to *-ev-* in first-conjugation imperfects can therefore be situated within the period between the early fifteenth century and the early nineteenth century. For fourth-conjugation imperfects, the only mediaeval attestation available is *possede* ‘possess.IPF.IND.3SG’ in a charter<sup>27</sup> produced in Saint Paul de Born (western Landes) in 1398. Saint Paul de Born is located outside the Grande Lande, but still within the modern area of *-ev-*, *-iv-*, *-e*; thus, the replacement of final-stressed *-e* imperfects by penult-stressed *-iv-* imperfects in the fourth conjugation can also be (cautiously) situated within the period between the early fifteenth century and the early nineteenth century.

Some additional light on the replacement of the etymological *-e* type by the *-iv-* type in the fourth conjugation is provided by a text from the northern region: *Les Macarienes*, a satirical verse text originating in the south-eastern part of Gironde, contiguous with the north-eastern tip of Landes, and within the area for which the ALG data attest fourth-conjugation *-iv-*. *Les Macarienes* contains a single example of a fourth-conjugation imperfect form: *seguiouets* ‘follow.IPF.IND.2PL’ (Latry 2019: 40), clearly of the *-iv-* type.<sup>28</sup> The historical window for the change from *-e* to *-iv-* can thus be refined from the earlier estimate, occurring between the early fifteenth century and the mid-eighteenth century (as, indeed, for the change from *-av-* to *-ev-* imperfects in first-conjugation verbs: consider e.g. *marcheoûe* ‘walk.IPF.IND.3SG’, *parleoûen* ‘speak.IPF.IND.1PL’, *examineoûets* ‘examine.IPF.IND.2PL’ (Latry 2019: 40, 46, 51). *Les Macarienes* also provides informative data on the lexical progression of *-ev-* imperfects in the third conjugation: in this text, all third-conjugation imperfects are of *-ev-* type, except for the single lexical item *aver* ‘have’ which retains its etymological form in *-e*: compare e.g. *courreoûe* ‘rush.IPF.IND.3SG’, *creseoûen* ‘believe.IPF.IND.1PL’, *poudeoûen* ‘be\_able.IPF.IND.1PL’, *entendeoûets* ‘hear.IPF.IND.2PL’, *hazeouen* ‘do.IPF.IND.3PL’, *aoûé* ‘have.IPF.IND.3SG’, *aoûen* ‘have.IPF.IND.3PL’ (Latry 2019: 40, 42–44, 48, 50).

The other texts examined for the northern region were all produced in or near Bordeaux. The earliest-dated of these is a sixteenth-century *livre de raison*<sup>29</sup> compiled by the merchant Fortaney Dupuy between 1505 and 1523 (Bochaca & Micheau 2014); in continuity with the LCOG data, this text attests first-conjugation imperfects of the *-av-* type, e.g. *demorabe* ‘stay.IPF.IND.3SG’ (2014: 72), and third-conjugation imperfects of the ‘short’ *-e* type, e.g. *debe* ‘owe.IPF.IND.3SG’ (2014: 198). The later texts are from the nineteenth century: the comic plays of Meste Verdié (Bonnet 1921), published between 1815 and 1818, but plausibly reflecting late eighteenth-century usage since their author, Jean Antoine Verdié, was born in 1779; and a pedagogical grammar compiled by Guillaume Dador, born in 1818. Both these texts attest the generalisation of third-conjugation imperfects of the ‘long’ *-ev-* type (including *aver* ‘have’), e.g. *sabèbes* ‘know.IPF.IND.2SG’, *abèbes* ‘have.IPF.IND.2SG’, *benèbe* ‘come.IPF.IND.3SG’, *fadèbe* ‘do.IPF.IND.3SG’, *counechebe* ‘know.IPF.IND.3SG’ (Bonnet 1921: 75–76, 105, 113, 169). For fourth-

<sup>27</sup>ChartBiscarL.1 (close), 3062 words. St.Paul-en-Born (west) 1398. Redactor = *Petrus de Luco, notari public/clericus*. MS. Biscarosse, Coll. René Lalanne, no.?, 1400 ca.

<sup>28</sup> The digraphs <ou> and <oû> are used in this text to represent both the vowel /u/ and the glide /w/. The digraph <gu> is used to represent /g/ preceding a front vowel. The orthographic sequence <guiou> thus corresponds to a phonological sequence /'giw/. The value of the vowel written <e> is not directly determinable here (see ALG maps 1661, 1668 for modern forms).

<sup>29</sup> A *livre de raison* is a personal ledger, used principally as an account-book detailing orders, loans and payments, but which may also contain records of notable family events such as births, marriages and deaths.

conjugation verbs, these texts also attest presence of the thematic augment *-iss-*. In Dador’s grammar, the fourth-conjugation model indicates the systematic presence of an augment *-iss-* in the imperfect, e.g. *finissèbe* ‘finish.IPF.IND.3SG’ (Dador 1867: 8–11). Attestations in Verdié’s work indicate two patterns for fourth-conjugation imperfects (as in many modern varieties; see e.g. ALG 1982): one pattern with the augment, e.g. *benissebe* ‘bless.IPF.IND.3SG’ (Bonnet 1921: 176), and one without, e.g. *senteben* ‘sense.IPF.IND.3PL’ (Bonnet 1921: 152). From these texts, the spread of the ‘long’ *-ev-* type throughout third-conjugation imperfects, and of the ‘augmented’ *-issev-* type through most fourth-conjugation imperfects, can be dated to a period between the mid-sixteenth century and the end of the eighteenth century.

Finally, for the central region, the available texts principally comprise verse from the late sixteenth and early seventeenth century: the *Eglògas* of Pey de Garros (born c.1525; Penent 2012); the *Gentilome gascon* of Guillaume Ader (born c.1570); and the seasonal tableaux of Jean-Géraud Dastros (born c.1594; Ginestet 2009). These texts are consistent in attesting third-conjugation imperfects of the ‘short’ *-e* type (e.g. *hazé* ‘do.IPF.IND.3SG’, *aue* ‘have.IPF.IND.3SG’, Penent 2012: 89; *disé* ‘say.IPF.IND.3SG’, *hasé* ‘do.IPF.IND.3SG’, Ader 1610: 35; *aoüe* ‘have.IPF.IND.3SG’, *poudé* ‘be\_able.IPF.IND.3SG’, Ginestet 2009: 85, 93). Tokens of fourth-conjugation imperfects are rarer, but available examples attest the presence of a thematic augment: /is/ for Garros (*brugissé* ‘hum.IPF.IND.3SG’, Penent 2012: 181), /iʃ/ for Dastros (*seguiché* ‘follow.IPF.IND.3SG’, *serbichen* ‘serve.IPF.IND.3PL’, Ginestet 2009: 91).

By contrast, the mid-nineteenth century *Lous Malhurs d’Embaquès* (Loubet 1843) systematically attests third-conjugation imperfects of the ‘long’ *-ev-* type (e.g. *béseouos* ‘see.IPF.IND.2SG’, *bouléouo* ‘want.IPF.IND.3SG’, *parichèouo* ‘appear.IPF.IND.3SG’) and fourth-conjugation imperfects of the *-ev-* type with a thematic augment (e.g. *hugissèouo* ‘flee.IPF.IND.3SG’). The system attested in this text corresponds to the ALG data for most modern varieties of the Gers. Comparison with the earlier texts shows that the introduction of the thematic augment into fourth-conjugation imperfects considerably pre-dates the emergence of ‘long’ imperfect forms in this area: the augment is present from at least the mid-sixteenth century, while the ‘long’ forms appear no earlier than the mid-seventeenth century and no later than the mid-nineteenth century.

### 6.3 Interpretation of the Gascon data

Combining the insights of historical sources with linguistic atlas data provides a more detailed view of the development of Gascon imperfect forms, particularly regarding the relative chronology of change, and the likely patterns of emergence and geographical diffusion.

For third-conjugation imperfects, the earliest attestations are systematically of the ‘short’ *-e* type, consistent with the hypothesis that this type originates as the regular reflex of *-ĒBA-* forms. The ‘long’ *-ev-* type emerges in the southern region towards the end of the thirteenth century, as a marginal variant confined to the two lexemes *tier* ‘hold’ and *vier* ‘come’, and this lexical distribution persists in southern varieties until at least the late sixteenth century. ‘Long’ *-ev-* forms plausibly emerge in the northern and central areas by the mid-eighteenth century, and are certainly well established by the nineteenth century. The relatively recent emergence of ‘long’ forms confirms that these constitute an innovative rather than a conservative feature, and analogical remodelling based on the imperfect forms of other conjugations offers the most plausible mechanism for their development.



For fourth-conjugation verbs, the original emergence of *-iv-* forms is not directly observable: such forms are present in the southern area from the earliest attestations of fourth-conjugation imperfects. However, more recent textual and atlas data show that *-iv-* forms have spread north, replacing original, etymological ‘short’ *-e* forms in the Landes, western Gers and south-eastern Gironde. Adopting a comparative approach, it may be inferred that *-iv-* forms likewise represent an analogical innovation in the southern area, just as they do in more northerly regions, but that the original analogy in the south occurs at an earlier period, prior to the first written attestations. For the central and northern regions, it is clear that fourth-conjugation imperfects were originally of the short *-e* type, with desinences matching those of third-conjugation imperfects, just as is observed in Occitan inflection outside Gascony, and in the eastern part of Gascony. The introduction of a thematic augment *-iss-* into fourth-conjugation imperfects occurs by the mid-sixteenth century in the central region, and by at least the late eighteenth century in the northern region. Evidence from the central region indicates that the analogical introduction of long *-ev-* desinences into third- and fourth-conjugation imperfects is a more recent development than the introduction of the thematic augment *-iss-*, occurring within a window between the late seventeenth and mid-nineteenth century. Although the introduction of long *-ev-* desinences in the northern region cannot be precisely dated with respect to the introduction of the augment *-iss-*, it is reasonable to infer the same relative chronology as in the central region: first the augment, then the ‘long’ *-ev-* type.

The development of *-ev-* forms in first-conjugation imperfects is shown to be a relatively recent innovation, independent of analogical developments in the other conjugations. The divergence of the imperfect indicative and synthetic conditional desinences, however, cannot be directly observed in historical sources due to orthographic limitations and the early date of the change, which is thought to pre-date the literary period.

## 7. Proposed sequence of developments in Pyrenean varieties

By combining the diachronic and diatopic data reviewed in sections 2–6, the historical development of imperfect and conditional inflection can be reconstructed as a series of steps.

### 7.1 Stepwise introduction of thematic labials in Gascon imperfect indicative forms

The most detailed evidence available concerns Gascon varieties, for which several developments in imperfect inflection occur at historically observable periods. Notably, it can be established that non-first-conjugation imperfects with thematic labials represent an innovative feature.

Across Gascon varieties, third-conjugation imperfect forms of the short, final-stressed type (e.g. *batè*) considerably pre-date third-conjugation imperfect forms of the long, penult-stressed type with a thematic labial (e.g. *batèva*) ; while in central varieties, fourth-conjugation imperfect forms of the *-iva* type (e.g. *bastiva*) are shown to replace earlier forms with final stressed *-e* (e.g. <*baste*>, reconstructed as *bastè*). The spread of thematic labials is lexically gradual; geographically, forms with labials diffuse northwards from the southern area in which they first emerge.

For the majority of Gascon varieties, the introduction of exponents uniquely distinguishing fourth-conjugation imperfects from third-conjugation imperfects is observable in historical texts. In varieties with the distinctive *-iva* type, this form is attested from an earlier period than the *-èva* type. In varieties with a



thematic augment *-iss-*, the introduction of the augment pre-dates the introduction of thematic labials into both fourth-conjugation and third-conjugation imperfects (e.g. *batè*, *bastissè* pre-date *batèva*, *bastissèva*); for such varieties, the relative chronology of introduction of labials into third- and fourth-conjugation imperfects is not directly observable in the texts studied here, and the two conjugations may in fact undergo this change near-simultaneously.

## 7.2 Relative conservatism of the synthetic conditional in Catalan and Aragonese

A constant across almost all varieties examined in this study is the differentiation between exponents of the imperfect indicative and the synthetic conditional. Evidence from Catalan and Aragonese varieties indicates that, where etymological forms persist, they are retained not in the imperfect indicative but in the synthetic conditional: the expected reflexes of *-(I)ĒBA-* are thus identified as /ia/ for Catalan and Aragonese, and /e/ for Gascon. This finding supports the view that, for Gascon, the presence of /e/ in third-conjugation imperfect indicative forms, assumed to date from the pre-literary period, represents an innovation differentiating the imperfect indicative from the synthetic conditional.

Presence of thematic labials in the synthetic conditional is an areally sporadic phenomenon, attested only for certain Catalan and Aragonese varieties in which non-first-conjugation imperfect indicative forms exhibit a thematic labial. With the exception of the unique and probably etymological forms in Panticosa, the presence of thematic labials in the synthetic conditional is most plausibly viewed as a relatively recent innovation in which thematic labials spread from non-first-conjugation imperfect indicative forms to synthetic conditional forms.

Based on these facts, it is plausible to assume an initial state for all varieties under consideration in which (as in most other Occitan and Ibero-Romance varieties), third- and fourth-conjugation imperfect forms share, with each other and with the synthetic conditional, a single series of exponents continuing *-(I)ĒBA-*: /ia/ in Catalan and Aragonese (as in eastern Gascon varieties and southern Occitan), /e/ as a localised variant in Gascon. For Gascon, /e/ is subsequently lowered to /ɛ/ in non-first-conjugation imperfects only, under the influence of the preterite. In all varieties, first-conjugation imperfects retain their etymological form, a regular reflex of *-ĀBA-* with vowel /a/ and thematic labial.<sup>30</sup>

A second developmental stage involves the progressive spread of thematic labials from first-conjugation imperfects into some or all non-first-conjugation imperfects, with concomitant changes of theme vowel and stress pattern.

A final, more rarely attested, stage involves the extension of thematic labials into the synthetic conditional.

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<sup>30</sup> Deletion of the thematic labial is attested as a more recent change in some Catalan and Occitan varieties (see Alcover & Moll 1929–1933 for Catalan, Esher 2021a for Occitan).

### 7.3 Identity or contrast of theme vowel in non-first-conjugation imperfects with labials

The details of vowel quality in non-first-conjugation imperfects are also of importance in understanding the directionality of analogy. The diatopic data considered here include Catalan and Gascon varieties in which third- and fourth-conjugation imperfects share a single series of exponents (-[i]va); Gascon varieties in which third- and fourth-conjugation imperfects are differentiated by theme vowel (-[i]va vs. -[ε]va); and Catalan and Aragonese varieties in which third- and fourth-conjugation imperfects are differentiated by theme vowel (-[i]va vs. -[e]va).

For Gascon -[i]va vs. -[ε]va systems, directionality is historically observable: original -[ε] forms are replaced in the fourth-conjugation by innovative -iva forms, introducing the characteristic fourth-conjugation theme vowel /i/, penultimate stress and the -va element etymological in first-conjugation imperfects. Subsequently, -va may be extended into third-conjugation -[ε] forms, in which case the original stressed vowel [ε] is retained.

For Catalan varieties with -iva forms, the reconstruction of /ia/ as the expected reflex of -(I)ĒBA-, together with the geographical proximity of these varieties to systems with -ia for all imperfects, suggest that the -iva forms are simply due to wholesale introduction of a labial -v- from first-conjugation imperfects into non-first-conjugation imperfects, at the boundary between the tonic and post-tonic syllables. A consequence of this view is the necessity of assuming initial /ia/ for the Gascon variety of Barèges and Gavarnie, which likewise exhibit -iva forms throughout non-first-conjugation imperfects.

For Catalan and Aragonese varieties with both -[i]va and -[e]va imperfects, a different proposal must be made. Original /ia/ forms are reconstructed for non-first-conjugation imperfects in these varieties, which are located geographically in an area contiguous with varieties which have only the -iva type. Thus, in contrast to [ε] in Gascon varieties, there is no immediate historical precedent for the presence of /e/ in third-conjugation imperfect forms. A more plausible assumption, initially advanced by Posner (1961), is that modern -iva/-eva systems develop from earlier -iva systems via analogical introduction of /e/ from other TAM categories of third-conjugation verbs. For Aragonese, where [e] tends to raise to [i], the reintroduction of [e] may also be favoured by a process of hypercorrection, i.e. reanalysis in which speakers interpret an inherent phonological realisation as contextual, and replace it to eliminate the assumed ‘contextual’ effect (see Ohala 1989).

## 8. Conclusions

Systems of three-way or four-way contrast among imperfect indicative and synthetic conditional forms are robustly attested in a geographically coherent cluster of Gallo- and Ibero-Romance varieties (centring on the Pyrenees); these systems contrast with the more familiar and widespread systems of two-way contrast which occur in the surrounding varieties. Two principal hypotheses have been proposed regarding the historical development of three- or four-way contrast: an ‘etymological’ hypothesis in which three-way imperfect contrasts represent a conservative feature continuing Latin forms, and an ‘analogical’ hypothesis in which thematic labials in non-first-conjugation imperfects are ascribed to analogical innovations. As shown here, a major obstacle in discriminating between these hypotheses is the rarity or absence of pertinent empirical data: for Catalan and Aragonese varieties, available data postdate the relevant historical period,

while for Gascon varieties, a crucial distinction of vowel quality is not directly observable in historical orthography.

The originality of the present study lies in treating the Pyrenean systems as an areal phenomenon, for which a unified analysis is desirable. By combining data drawn from dialect descriptions, linguistic atlases and historical documents for multiple varieties, the study addresses the details of localised developments, and stitches these details together into an overall analysis which is compatible with the forms observed in the full range of varieties considered. This comparative approach compensates for the lack of directly observable data for particular periods, areas or phenomena, by scaffolding informed reconstruction based on periods, areas and phenomena for which reliable data are available. The findings of the study indicate that the ‘analogical’ hypothesis is to be preferred, and further allow the directionalities and relative chronology of analogical innovations to be established.

Beyond the value of these findings for the historical description of verb inflection in the relevant varieties, the data and analysis presented here will be of interest to theoretical work on morphological analogy for the relationships which they illustrate. The distributions of structured contrast within systems of imperfect and conditional inflection are consistent and highly constrained: contrast in thematic and desinential material can be made between first-conjugation imperfects and all other forms; between non-first-conjugation imperfects and the synthetic conditional; and between fourth-conjugation imperfects and third-conjugation imperfects. This observation confirms that analogical change within paradigms tends to proceed in a stepwise manner, sensitive to inflectional class structure and morphomic distribution patterns (Esher 2015, 2016, 2018, 2020; Maiden 2018). Yet the substance of the changes also involves the morphological equivalent of reversing a phonological merger, since previously identical series of exponents undergo innovative differentiation. This aspect of the Pyrenean systems is more surprising, and identifying the motivations for the relevant changes will additionally require accounting for the disparity between varieties which maintain inherited patterns of identity between exponent series, and varieties which introduce innovative contrasts. The contribution of the present study is to establish a robust empirical foundation on which such theoretical investigation can build.

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