

**Future, Conditional, and Autonomous Morphology
in Occitan**

THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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Abstract

Occitan presents a complex inflectional paradigm together with extensive regional variation, thus offering a rich source of morphological data; as the present study demonstrates, these data are of significant value both to morphological theory and to comparative Romance linguistics.

The study is concerned with the form and meaning of two categories within the Occitan verb paradigm, the 'synthetic future' (SF) and 'synthetic conditional' (SC) derived from the Latin periphrastic constructions *CANTARE HABEO* and *CANTARE HABEBAM* respectively. In Romance languages which present this type of future and conditional, SF and SC typically share a stem: due to their parallel origin, it is often assumed that this identity of stem is unremarkable, and that it diagrams a common semantic value, usually that of temporal futurity. However, careful examination of the Occitan data reveals that both these assumptions are overly simplistic.

While the semantic values associated with SF and SC in varieties of Occitan certainly overlap to some extent, this functional commonality is not absolute, nor does the distribution of semantic values map exactly to the distribution of stems within the paradigm. Furthermore, while in the majority of cases SF and SC do share a stem, Occitan also presents a phenomenon which may be unique within Romance, that of 'asymmetrical' stem distribution, in which the stems of the SF and SC are distinct from one another. The distribution of stems between SF and SC in Occitan can only be adequately explained by appealing both to semantic motivations and to the purely formal motivations of autonomous morphology.

The phenomena discussed here show that autonomous morphology can interact with extramorphological factors, and, as a consequence, that an autonomously morphological element may be present even in morphological phenomena which *prima facie* appear extramorphologically motivated.

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Introduction

In this study I present a description of the formal and functional developments undergone by the verb-forms commonly termed 'future' and 'conditional' in Occitan. My study sets out to identify the changes which have taken place, and forms or distributions which remain constant, offering analysis of these developments in the context both of Occitan and of Romance varieties generally, and considering the potential implications of these data for morphological theory.

The comparative and theoretical viewpoints adopted here make this study a novel enterprise in the field of Occitan linguistics. Although by virtue of the extensive regional variation which Occitan presents, the study of this language can offer a significant volume of data to comparative Romance linguistics, and a rich testing ground to morphological theory, the existing descriptions overwhelmingly comprise isolated monographic studies. There is little consciousness of a comparative picture, and less still of the implications of these data for linguistic theory; the only work approaching a comparative historical overview of Occitan varieties is Jules Ronjat's *Grammaire istorique des parlers provençaux modernes*. The present study consequently has a significant contribution to make in assembling and submitting to analytical scrutiny a substantial body of data, drawn from a wide variety of published sources and previously unpublished material, and in many cases hitherto inaccessible. By placing these data in the context of comparative Romance linguistics and of modern linguistic theory, the study is able to throw light both on aspects of the structure of Occitan and on the general comparative historical account of future and conditional forms in Romance, and explores the implications of the Occitan data for various theoretical positions within the field of morphology.

In the first part of the study, I discuss existing research in three areas with a direct bearing on the study of Occitan future and conditional forms: descriptions of Occitan, theoretical morphology, and the future and conditional forms found in other Romance languages.

The source material for this study is highly diverse, including prescriptive and descriptive grammars, dialect descriptions, textual sources, and linguistic atlases, as well as fieldwork conducted for the specific ends of this research project; it therefore warrants a critical examination. While the status of Occitan as unofficial, low-prestige or ‘patois’ for much of its history has contributed to preserving rich geographical variation across the area where the language is spoken, it has equally had a direct impact on the nature, extent and usefulness of the source material available today, which is often significantly different to that found for official or standardised Romance languages. In order to appreciate the full import of the data, it is thus indispensable to discuss the reliability and comparability of the source material from which they are drawn.

These data will be shown to bear on major theoretical issues concerning the structure of morphological paradigms and the relationship between form and function in inflectional morphology. The Romance future and conditional stem has traditionally been treated as a classical morpheme, assumed to link a distinctive allomorph with the expression of ‘futurity’, despite occasional slippages such as the well-known case of Italian, where the stem of the conditional is no longer associated with temporal posteriority, the notion of ‘future in the past’ now being expressed by a distinct, analytic construction. More recently, the notion of ‘morpheme’ introduced by Aronoff (1994) has suggested analyses in which the Romance future and conditional might be treated as arbitrarily sharing a stem despite the absence of a common semantic value. As the present study demonstrates, however, the Romance data are problematic for both these positions, displaying weaker formal identity than the first would expect, and stronger functional commonality than the second might appear to require.

While there is at present little theoretical work on Occitan morphosyntax, there exists a large body of descriptive data for other Romance languages, and some theoretical work on the general functional relationship of future and conditional, which can serve as a comparison for

the Occitan data. The forms of most direct interest to the present study are the synthetic future and conditional forms arising from the periphrastic 'infinitive + HABERE' type; in the vast majority of cases, modern future and conditional forms sharing this origin are reported as continuing to share a stem. This distribution has until now been considered unremarkable, and has frequently led to attempts to demonstrate functional commonality between the forms involved despite their varied modal and temporal usages. Two main types of approach may be distinguished: those which argue that the basic meaning of the synthetic future and conditional is temporal, and that the modal usages of each are metaphorical; and those which hold that the modal and temporal usages are contextual instantiations of a single underlying value characterised as 'prediction' or 'projection'. The parallels in the uses observed for the synthetic future and conditional argue that these forms do indeed present some degree of semantic commonality. However, the distribution of the semantic values involved does not invariably correspond to the distribution of the distinctive future/conditional stem, suggesting that function and form are not isomorphic and cannot be treated as directly diagramming one another.

In the second part of the study, I proceed to detailed consideration of the Occitan data. I outline the typical features of Occitan conjugation systems, prior to describing and analysing the particular formal developments presented by future and conditional forms in Occitan.

To a large extent, the general observations made above for Romance also hold true for the Occitan data which are the main concern of the present study. In the majority of cases, the expected historical development of future and conditional forms in regular and irregular paradigms leads to patterns of distribution in which future and conditional share a stem (similar to, but distinct from, the infinitive). Moreover, many of the novel developments encountered preserve the existing pattern of stem identity between future and conditional, although the means employed are formally diverse. Among these are cases of heteroclisis, in

which the future and conditional of a given lexeme adopt a stem characteristic of a separate conjugational class, while the rest of the paradigm remains unaffected; cases of convergence, in which future and conditional stems across distinct lexemes adopt a common phonological feature, thereby reinforcing the marking of future/conditional-ness; cases of defectivity, in which both future and conditional forms are absent; cases of suppletion, in which both future and conditional together adopt a stem characteristic of another lexeme or area of the paradigm; and cases of general paradigm levelling, in which the distinctive future/conditional stem is eliminated in both categories in favour of a stem common to the rest of the paradigm.

However, varieties of Occitan also present many cases of 'asymmetry', in which the stem identity between future and conditional is compromised or broken, a phenomenon apparently unique to Occitan within Romance, and one which calls into question the assumption that the familiar identity of future and conditional stem forms is a natural and unremarkable distribution. The asymmetries too are formally diverse: some, of relatively limited interest, are the result of incidental phonological differences; others, clearly morphological, are linked to a shift of conjugational class, or the spread of a stem from elsewhere in the paradigm; and while many are relatively isolated occurrences, several types present a degree of systematicity, occurring across multiple localities, or over several lexemes in a single variety. The existence and prevalence of asymmetry suggests that the formal relationship between future and conditional may be more tenuous and arbitrary than has previously been thought, and offers further evidence in support of the view that functional commonality is not sufficient to motivate and maintain formal stem identity.

In the final part of the study, I highlight areas for further research, and explore the theoretical implications of the data and analysis presented in this study. I argue that the Romance future and conditional, which show partial alignment between the distribution of semantic values and of stems in the paradigm, constitute an example of 'weakly morphomic' structure on the

interface between morphology and semantics — a phenomenon which is likely to be common and widespread, although the Romance synthetic future and conditional may form the first example of such a structure to be identified. Finally, I address the way in which purely morphological factors and extramorphological factors — all of which in this case appear to favour the same outcome, symmetry between future and conditional — interact to produce the range of distributions which can be observed in the data. I propose a model of this interaction which not only describes the Occitan data which are the central focus of the present study, but which can also readily handle the patterns observed in cognate Romance languages such as French and Italian, illustrating the potential value of allowing descriptions of each Romance variety to inform analysis of others.

1. Data and data collection

The present investigation takes as its object of study future and conditional forms in varieties of Occitan from localities across the territory where the language is spoken, and from periods from the Middle Ages up to the present day. The geographical and particularly the historical extent of coverage which can be achieved is, however, dictated by the source material available, which is in turn largely a consequence of the particular external history of the linguistic varieties under consideration.

The data available to this study are highly diverse, encompassing textual corpora, grammars both prescriptive and descriptive, and fieldwork recordings conducted for the specific purposes of the study, providing both primary data and direct confirmation of certain data from secondary sources. For a proper understanding of the significance and comparability of these data, it is therefore important to begin by reviewing the nature and reliability of the source material, which varies widely between periods and regions.

Some such variability is of course to be expected for simple reasons of technology and human life-span. No modern Romance linguist has access to native speakers from the Middle Ages or the Renaissance to investigate their intuitions or spontaneous speech, nor are there recordings of informal spoken language from these periods. Instead, the available sources are limited to those written documents which have survived, and any conjecture based on them is subject to a number of caveats about how representative these documents may be.

However, the Occitan sources display significant additional variability, as a direct consequence of the external history of the language (outlined in §1.1.1 below). In the Middle Ages, Occitan served both as the ordinary vernacular and the prestigious language of legal and literary domains; over time, with the rise of the nation-state and the single national language, it has

been replaced in almost all functions, variously by French, Spanish and Italian. The absence of the codification and standardisation which characterise official languages has favoured the survival of significant regional variation, and it is precisely this variation which is of such great potential interest to historical Romance linguistics. However, the unofficial status of Occitan has equally led to a lack of scholarly interest in these varieties. Of published works on Occitan, relatively few may be classed as scholarly grammars, while works of comparative Romance linguistics frequently overlook Occitan data: consider, for example, Lausberg (1966), whose consideration of Occitan is limited to its mediaeval varieties, and to mention of the distinctive future type found in a variety of Bigòrra.¹²

The neglect of (in particular) modern varieties of Occitan is seriously detrimental to Romance linguistics, since these largely overlooked data have the potential to bring major insights to our understanding of Romance languages thought more familiar. The present study offers just one example of such an insight, in the form of the quite unexpected behaviour of the Occitan future and conditional: these data overturn received wisdom about the morphological structure of other Romance languages, yet, in the absence of scholarly interest in Occitan, they have until now gone un-noticed.

The potential importance of the Occitan data and the variable quality of the source material together mean that it is crucially important to establish the authenticity of the facts at issue. In this chapter, I discuss the types of source material available, evaluating the reliability, the comparability, and the potential usefulness to the present study, of the data found therein.

¹ The variety in question is that of the Barèja valley, and presents future forms *cantàra*, etc. with stress on the stem, as opposed to the more usual Occitan (and Romance) type *cantarà*, etc. See §2.3.7 below for more detailed discussion of the Barèja future and conditional, which present several further points of interest in addition to the single one mentioned by Lausberg.

² The present study adopts the convention of giving all place names in Occitan. A list of Occitan toponyms with their French or Italian equivalents is provided in Appendix 2.

It should be noted that the subject of this study, namely the possible directions of change, and the patterns which emerge or are preserved, is such as to render certain of the problems attendant on the source data less crippling than they might be to a study of the mechanisms by which change propagates, or of correlation between linguistic and social variables. Here, the crucial point will be the attestation that a given form exists, rather than information concerning its frequency or distribution. Nevertheless for such an attestation to be of value to the present study it must be established that it is authentic, whether through a demonstration of sound methodology in the source material, or through comparison of several different varieties: a form which recurs in two or more varieties, even geographically distant ones, cannot be dismissed as a mere accident of description.

Critical consideration of the source material is thus an indispensable preliminary to the important insights expressed in the present study.

1.1 External history

The external history of Occitan is relatively well documented, both in the context of external histories of French (see e.g. Walter 1988, Lodge 1993), which typically address the expansion of French across the state of France in place of regional varieties, and as the result of more recent attention surrounding issues of language planning, language death, linguistic minorities and diglossic variation (see e.g. Kremnitz 1981, Meisenburg 1985).

The earliest textual attestations of Occitan date from the 11th century, in the form of narrative verse (*Boecis; Chanson de Sainte-Foy d'Agen*) and charters written in a mixture of Occitan and Latin (Belmon & Vielliard 1997). By the 12th century, Occitan is widely attested (alongside Latin, which persists) as a language for official documents in Navarra, Gasconha, Lengadòc and Provença, and more famously, in the form of the trobador koiné termed *lemosin* or *provençal*, the language of lyric poetry explicitly codified in such works as the *Razos de Trobar* (late 12th century) and the *Leys d'Amor* (14th century). Documents from the 11th to 14th centuries show Occitan occupying the prestigious sphere of high culture, with a codified administrative standard in use throughout the Occitan-speaking region, and a codified literary standard in use even further afield; but they also demonstrate a lack of perceived linguistic fragmentation (Brunel 1926:ix-x; Bec 1967:71, 74-75). It accordingly seems likely that, while there would have been significant regional variation in linguistic structure, such variation was not perceived as indicative of many separate languages.

With the progressive annexation of the Occitan-speaking *comtats* to the French crown, Occitan is replaced by French in the written domain, and in official contexts such as parliamentary debate (Kremnitz 2002a:17-18); the edict of Villers-Cotterêts in 1539, stipulating that legal documents must be drafted 'en langage maternel françois et non autrement', confirms the place of French as language of prestige and power, and the educated elite increasingly adopt French.

While a number of attempts are made to restore Occitan to the literary sphere (see Lafont 1974 and Courouau 2001, 2008 for examples and discussion), it is clear that the common written tradition has been lost, with new systems being devised on the basis of French or Italian orthography, and that the language explicitly defended by these writers is defined over an ever more restricted geographical area (Kremnitz 2002a:22-23).

The French Revolution brought an increased desire for linguistic unification, both as a practical means for communication over a centrally-governed area, and as an ideological force for national cohesion (Weber 1976:72-73; Kremnitz 2002a:25-26). Over the ensuing period, French was increasingly promoted, notably through the provision of free and compulsory education, dispensed only in French, while speech varieties other than French were denigrated as sub-standard 'patois' which should be abandoned (see e.g. Weber 1976:313, Duneton 1978). At the same time, social and economic changes, notably industrialisation leading to urbanisation and greater mobility of the population, made French, as the common language, key to prospects of moving outside the home area, finding work and conducting everyday life in a new area (Weber 1976:86, 286-87; Kremnitz 2002a:28-29). These combined pressures resulted in a steady decrease in the use and transmission of Occitan.

The 19th, 20th and 21st centuries have seen fresh attempts at revival and codification. In Provença, the Felibrige sought to establish a literary standard — based on the founders' own variety, spoken in the lower valley of the Ròse — and an orthographic system, based on the French orthography with which the public were familiar, and labelled *grafia mistralenca* 'Mistral-style orthography' (see Vouland 2005 for the relationship between spoken *provençal rodanenc* and the literary standard). An alternative orthographic standard was later proposed by the Institut d'Estudis Occitans, the *grafia classica* or *grafia alibertina* ('classical orthography', 'Alibèrt-style orthography') drawing on mediaeval orthographic conventions and the recently-established Catalan standard (Schlieben-Lange 2002:99).

In practice, speakers of Occitan have been much more receptive to orthographic codification, which can accommodate some measure of regional variation, than to any attempt at imposition of a standard; the *grafia classica* is now used across the Occitan domain, including in Provença where it coexists with the *grafia mistralenca*. The term Occitan has also become widely accepted to refer to the dialect continuum, which is generally felt to have some degree of linguistic unity.³ Attempts at codification now focus on *standardisation pluricentrique* (Sumien 2006) which establishes regional standards within what is considered to be a common language Occitan, in an effort to maintain a link with the locally distinctive varieties still spoken, without foregoing the symbolic force of a single common language.

The extent to which the language is now used is somewhat difficult to establish. Martel (2007:3) cites estimates of 526 000, 789 000 or 583 000 speakers in 1999, but points out the many categories of 'speaker' which might be identified, including those who acquired the language through familial transmission, those who learnt it at school or in a professional context, those who use the language often, those who have active competence but little opportunity to employ it, and those who have essentially passive competence. Particularly interesting is Martel's inclusion of the non-negligible category of 'ceux qui savent, mais ne veulent pas que ça se sache'. Beyond the general tendencies for speakers to be older and in rural locations, Occitan is often restricted to particular semantic or cultural domains, or to interactions with particular people, such that it may not be considered appropriate for a speaker to flag their competence in the language; likewise, many people with essentially passive competence may have a much greater degree of active competence than they are prepared to admit to. Hence, while it is generally held that there are now no remaining monolingual speakers of Occitan, it is difficult to obtain an accurate picture either of speakers' competence, or of the extent to which this competence is used.

³ There are nevertheless a few activists, particularly in Provença and Gasconha, who claim separate language status for their varieties, and speak of many *langues d'oc* rather than one with multiple dialects (Kremnitz 2002b:109-11; the minority, separatist position is exemplified by e.g. Blanchet 1992, Lafitte 1996).

The external history of Occitan has direct consequences for the source material available to the present study, whether in terms of the volume and genre of material in existence, or in terms of potential fieldwork informants. One may note, for example, the gap in the textual record between mediaeval and very recent times, and the various problems of interpretation posed by differing orthographies (see §1.2.2.1 below); while the distribution of speakers is of direct import to recruiting informants for fieldwork (see §1.1.3 below). Furthermore, since Occitan has not undergone significant codification, there exists no single, definitive standard form of this language which may for convenience be considered representative; and there is equally a lack of sources offering an overview of Occitan varieties, as opposed to isolated dialect descriptions.

Indeed, the status of Occitan varieties as unofficial, fragmented dialects has resulted in them receiving relatively little scholarly interest in comparison to other Romance varieties — witness, for example, the *Lexikon der Romanistischen Linguistik*, in which volume V,2 (dealing with Occitan and Catalan), is instantly recognisable by its narrow spine; of the 9 chapters on Occitan, only the first, some 17 pages long, is concerned with 'grammar', broadly defined to including historical phonology alongside syntax and morphology. The neglect of Occitan by comparative Romance linguistics is paradoxical: as discussed in §5 and §6 below, not only do these varieties present extensive regional variation and thus many different historical developments, but certain of these developments may be unique within Romance. Occitan data thus have the potential to afford significant insights into the behaviour of cognate Romance languages; yet, whether due to difficulty in accessing the data or to lack of visibility for the language other than in its mediaeval forms, they are rarely taken into account by comparative studies.

1.2 Existing sources

1.2.1 Existing descriptions

1.2.1.1 Grammars and dialect descriptions

The synchronic grammars and dialect descriptions available are in the main heavily biased towards the mediaeval language, and the literary Provençal standard established by the Félibrige, with the result that these varieties are often much more fully described than others.

For the mediaeval language, there exist not only an abundance of grammars presenting morphological paradigms (e.g. Anglade 1921, Skårup 1997, Paden 1998), but also descriptive works on syntax (Henrichsen 1955, Jensen 1994). The scope of both types of study is necessarily limited to the description of forms and functions occurring in the corpus of extant texts, which is unlikely to include all possibilities of the language as spoken at the time (see 1.2.2 below for general problems of textual sources). In particular, information on the provenance of a given form is lacking: to take a concrete example, although multiple forms for infinitive, future and conditional are frequently given, it is impossible to obtain an accurate picture of how these forms are distributed across the Occitan-speaking region, and which infinitive forms co-occur with which future and/or conditional forms. Nevertheless, the grammars of the mediaeval language offer some degree of historical depth, and the studies of context and function are valuable in ascertaining how categories such as future and conditional may overlap or contrast with one another.

For the modern language, the most readily available grammars are normative, whether produced in the interests of codification, or as material for L2 learners. As these grammars seek to promote standard orthography and formal stability, they generally mask precisely the

information interesting to a study of the present type: thus future and conditional are always presented as sharing a stem, and the conditional is systematically written with <-r-> even across the large area in which no /r/ is present in this form. While many provide variant forms, as with the grammars of mediaeval Occitan there is typically little or no information about the geographical or social distribution of these forms (see, as an example, Alibèrt 1976:133-97). The information offered by the normative grammars hence chiefly concerns what their authors (almost exclusively native speakers) consider to be prominent or desirable patterns within the verb paradigm, and as such has limited power to confirm or disconfirm data attested elsewhere.⁴

There exist also a number of synchronic dialect descriptions, both by linguists and by non-linguists, most published during the late nineteenth and early twentieth century. Sample paradigms from a selection of these grammars are reproduced in Figs. 1-5, illustrating the diversity in presentation, orthography and range of forms provided.

The extent of the geographical area covered by such a description can vary widely. Most frequently, and indeed most usefully for present purposes, the area selected for study is that of a particular town, village, or valley (Quint 1998, 1999, Lieutard 2004, Moulin 2006), which allows the data to be relatively accurately situated; some are of rather wider scope, extending to a *département* or entire region (Rohlf's 1935, Allanche 1941, Caudéran 1996).⁵ Some localities have received more attention than others: in the east, for example, there are far more grammars of 'Provençal' (generally the literary variety, though Fourvières (2000) occasionally notes a

⁴See Maiden & O'Neill (2010:120) for a case in which the distributions posited by grammarians, even if they are idealisations of the data, may still offer genuine insight into native speakers' knowledge of abstract patterns of stem distribution.

⁵ The titles are often misleading in this respect: *A Descriptive Analysis of Gascon* (Kelly 1973) is in fact a description of the variety of Donzac, while the so-called *Grammaire gasconne: dialecte de l'Agenais* (Roques 1940), far from providing information on the variety of Agen and the surrounding area, turns out to be a comparative grammar in which a uniform 'Gascon' and 'Languedocien' of uncertain provenance appear alongside French and Spanish.

form typical of Marsilha) and of Nissart than of the Aupenc varieties, on which information is somewhat difficult to find.

	Present	Imparfait	Passé Simple	Futur	Conditionné ²	Subjonctifs		FAIRE	
	FA	FA	FA	FA	FA	Present	Imparfait	Passé composé	Imparfait
1	F ^h OU	1 H ^h HI	1 GU ^h ERI	1 R ^h AI	1 R ^h HI	FA	FA		
2	F ^h AS	2 H ^h HES	2 GU ^h ERES	2 R ^h AS	2 R ^h HES	1 G ^h UI	GU ^h ÈSSI	Masc. sing.	
3	F ^h A	3 H ^h HA	3 GU ^h ET	3 R ^h A	3 R ^h HA	2 G ^h UES	GU ^h ESSES	et plur.!	2) F ^h AI

Figure 1. Paradigm for *faire* 'do' in Nissart (Blaquiera 1997). Orthography part-classica, part-mistralenca, with idiosyncratic use of <h> as a diacritic to indicate that both adjacent vowels are syllabic.

[Image reduced due to copyright restrictions]

The content of these works varies in range and usefulness. Theoretical treatments are a rarity, though for the purposes of the present study this is in fact an advantage, since the majority of data are presented 'uncontaminated' by theoretical machinery. Analyses such as those by Kelly (1973) or Dalbera (1994) provide few data beyond those required to illustrate a particular morpheme-based or phonological point. As a consequence, description of irregular conjugation classes (in which novel developments of the future and/or conditional are most common) is limited, and paradigms are frequently incomplete, missing some or all of the future and/or conditional forms. In the paradigm for *crénher* reproduced in Fig.4, for example, only 1sg future and conditional forms are given, while in the paradigm for *mólzer* shown in Fig.3 the conditional is not mentioned at all; in such cases it is impossible to determine whether the missing forms do indeed share a stem with the forms provided, or whether this is simply an unsubstantiated assumption on the part of the author. The data of most interest to the present study are thus afforded least consideration. Lieutard (2004) constitutes an apparent exception to this

tendency: although complete verb paradigms are not central to his description of syllable structure, he does nevertheless provide them in an appendix, citing both future and conditional forms in full, and in IPA transcription (Fig.2), thus circumventing the usual problem of interpreting what phonological form a given orthographical representation corresponds to (see also §1.2.2.1 below for difficulties concerning orthography).⁶

The grammars by Quint (e.g. 1998, 1999), which provide complete paradigms for a wide variety of conjugational types in both *grafia classica* and IPA transcription are among the few truly descriptive works by linguists. Not all the forms cited in Quint's grammars were directly attested in fieldwork, the rest being inferred from related verbs and other parts of the paradigm; this problem appears to affect the conditional more frequently than any other category, and the conditional forms provided to complete the partial paradigms obtained from fieldwork occasionally suggest an asymmetry which may not necessarily exist in the spoken language (e.g. futures in *disparetr-* and *dispareir-* are attested for *disparéisher* 'disappear', but the missing conditional is filled in with the single stem *dispareir-*; does this reflect a true stem asymmetry, a symmetry for which the conditional was simply not attested, or asymmetric defectivity in which no conditional form exists?). However, since all such reconstructed forms are clearly marked, it is at least possible to differentiate between genuine attestations and informed conjecture.

As will be observed from Figures 1-5, information provided on function is generally limited to designating the French or Italian cognate form; one notable exception is offered by Camproux (1958), who offers a richly detailed description of the use and meaning of the different categories in the varieties of the Gavaudanés.

⁶ Certain of the forms given in the published paradigms were not directly elicited, but reconstructed from a single stem form per tiroir coupled with the inflections obtained for other verbs of the same class (Hervé Lieutard, p.c.).

présent	imparfait	prétérit	futur	subj. prés.	subj. imp.	cond.
'krejsi	krej'sjɔ	krejse'ʎeri	krejse'rɛj	'krejse	krej'sɛsi	krejse'rjɔ
'krejses	krej'sjɔs	krejse'ʎeres	krejse'ras	'krejses	krej'sɛsɔs	krejse'rjɔs

Figure 2. Paradigm for *créisser* 'grow' in Graulhet (Lieutard 2004).

[Image reduced due to copyright restrictions]

<i>Ind. prés. :</i>	molze, molzes, mols [mus, mu] ; molzem, molzètz, molzon.
<i>Ind. imp. :</i>	molziá, etc.
<i>Ind. prêt. :</i>	molzeguère, etc.

Figure 3. Paradigm for *mólzer* 'milk' in the region of Aubenàs (Moulin 2006). *Grafia classica*.

[Image reduced due to copyright restrictions]

Indicatif présent.....	<i>crégnou, es, e, cregnèn, è, crégnoun.</i>
Imparfait.....	<i>cregnièou.</i>
Passé défini.....	<i>crégnièrou.</i>

Figure 4. Paradigm for *crénher* 'fear' in the valley of Barciloneta (Arnaud & Morin 1920). *Grafia mistralenca*.

[Image reduced due to copyright restrictions]

Most descriptions provide forms for 'be' and 'have'⁷; there is substantial variation in how many, and which, other lexemes or conjugational types are include, and the paradigms also vary in their completeness. The 'Tableau des principaux verbes irréguliers' given by Sicre (1909:56-57) for the area of Foish is not unusual in entirely omitting the forms of the imperfect subjunctive and the conditional, presumably on the assumption that the first always shares a stem with the preterite, and the second always shares a stem with the future. On the face of it, such omissions render a source of limited usefulness to a study which seeks among other things to determine how true the assumption of systematic identity between future and conditional really is; although since Sicre (1909:46) also notes that '[q]uelques verbes affectent, à l'infinitif, deux ou plusieurs formes différentes', citing several examples, such as that of 'follow', variously *seguir*, *sièguer* and *segudar*, one may conjecture that had the future and conditional shown variation,

⁷ These verbs are usually termed 'auxiliaries', although they also occur as full lexical verbs; Occitan varieties are not attested as making a formal, morphological distinction between lexical and auxiliary 'be' and 'have'.

this would have been explicitly mentioned too. In common with many other dialect descriptions, Sicre gives no indication of the distribution of the variant infinitive forms, in particular how many of them an individual speaker might know or use; a particularly extreme example is that of Bouras et al. (2002), who largely confine themselves to observing that 'il y a souvent communication entre les 2e et 3e conjugaison, certains verbes selon les endroits se conjuguent sur l'un ou l'autre modèle, c'est une question d'usage' (2002:60).

INFINITIF PRÉSENT	PARTICIPE PASSÉ	MODE INDICATIF				IMPERATIF	SUBJONCTIF PRÉSENT
		INDICATIF PRÉSENT	IMPARFAIT	PASSÉ DÉFINI	FUTUR		
<i>ana</i> , aller.	<i>anat</i>	sing. <i>bau</i> , <i>bas</i> ; <i>ba</i> plur. <i>anam</i> , <i>anats</i> , <i>ban</i>	<i>anabo</i>	<i>anguègui</i> (<i>anègui</i>)	<i>anirai</i>	<i>bè</i> (<i>lai</i>)	<i>que angue</i>

Figure 5. Table of irregular verbs in the region of Foish (Sicre 1909). *Grafia mistralenca*.

[Image reduced due to copyright restrictions]

Finally, a survey of descriptions available to a study of Occitan cannot overlook the *Grammaire istorique des parlers provençaux modernes* (Ronjat 1930, 1932, 1937, 1941). Ronjat uses the term Provençal in the wide sense, since his work is intended as a general history of phonology, morphology, syntax and the lexicon in varieties of Occitan from all regions. The undertaking is an ambitious one, and the extent of coverage which it achieves varies from one domain to another: the treatment of historical phonology, to which the first two volumes are devoted, is significantly more detailed than those of either syntactic or lexical phenomena. Likewise, even

within the volume on morphology, the level of detail differs widely from one geographical area to another. The most complete descriptions concern literary Provençal, and the Ròse valley varieties from which it is derived: for these varieties a complete set of inflectional endings are given for each of the main conjugational classes, and there is further an overview of stem distribution for a significant number of irregular verbs. There is also detailed information on a number of varieties of the Lemosin, where Ronjat himself and Chabaneau had conducted fieldwork; the data for this area are, quite exceptionally, provided in phonetic transcription (Ronjat otherwise uses the *grafia mistralenca* current at the time). However, for Aupenc varieties little information is given beyond regular inflectional patterns, and the entire region of Gasconha (over which, as will be seen, there is enormous local variation) is compressed into only a few pages. An illustrative fragment of Ronjat's description of irregular verbs in Gasconha, dealing with *caler* 'be necessary', *valer* 'be worth' and *voler* 'want' is reproduced in Fig.6: specific information on the future is limited to citing stem forms *car-*, *bar-*, *bour-* common in the *département* Lanos (40), while no information is given for other areas, or for the conditional, which might be assumed either to share the future stems *car-* etc., or to be asymmetric with the future, displaying the 'usual' stem type *caler-* etc.

As a result, many of Ronjat's data are not directly comparable to each other, as some areas receive much more (and indeed more detailed) attention than others. This uneven coverage may in large part be attributed to the quality and nature of the source material, since for several areas Ronjat is reliant on the reports given by existing descriptions. It should, though, be mentioned that where he uses such data he does not always transcribe them with complete faithfulness: one such example is that of the data provided for the Barciloneta valley by Arnaud & Morin (1920:312). In the original work, the verb *deure* 'owe, have to' < DEBERE is attested as having an asymmetrical distribution of stems across the future and conditional, the stem *deur-* being present in both, and the stem *devr-* additionally present in the conditional alone (see §6.4 below); however, in Ronjat's transcription (1937:313), no information is given for either future

or conditional. Ronjat describes Arnaud & Morin's data as 'intéressantes et sûres' (implying that he considers these data as valid and would be justified in reproducing them faithfully), while adding in a parenthesis 'je note ça et là des doutes' (implying that he comments explicitly on data which strike him as problematic); yet he simply omits the future and conditional forms, as if they were absent from the source. In the case of Barçiloneta, the disparity between the information given by Ronjat and his source is at least visible, since the source is named, albeit in the rather cryptic form 'Arn-Mor'; identifying Ronjat's sources can be difficult, since references are given in abbreviated form or not at all, and formal bibliography and abbreviations are only listed in the first volume. Likewise, while Ronjat sometimes functions as a secondary source drawing on existing publications, and sometimes as a primary source publishing his own data, the two types of data can rarely be distinguished with much certainty. As with the synchronic grammars discussed above, therefore, the *Grammaire istorique* may serve to confirm data attested elsewhere, but cannot stand alone as a source, nor can the data it provides be used to disconfirm data found in other sources. The fact that it remains to this day the widest and most complete historical survey of Occitan verb morphology available to the linguist is a testimony both to Ronjat's work and to the subsequent lack of scholarly interest in these varieties.

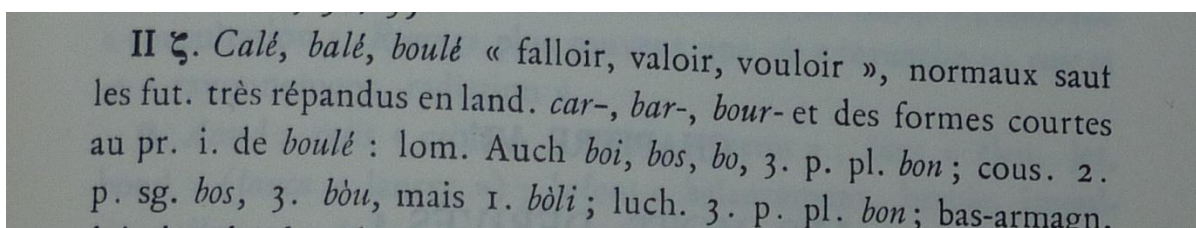


Figure 6. *Caler* 'be necessary', *valer* 'be worth', *voler* 'want' in varieties of Gasconha (Ronjat 1937). *Grafia mistralenca.*

[Image reduced due to copyright restrictions]

1.2.1.2 Linguistic atlases

There exist a number of linguistic atlases covering parts of the Occitan-speaking domain, of varying usefulness to the present study.

The *Atlas linguistique de la France* (henceforth ALF), covering France and the bordering regions, extends across the whole of the area where Occitan is spoken. However, the ALF questionnaire contained relatively few finite verb forms — examination of the index yields only 3 lexical items ('be', 'have', 'want') for which both future and conditional forms were elicited alongside the infinitive — and thus contains few data of practical interest for this study; the ALF data can serve to confirm, but not disconfirm, the existence of certain forms attested in other sources, and cannot provide information on the relationship between future and conditional. A similar problem is attendant on the *Atlante linguistico italiano* (henceforth ALI), which has both future and conditional for only 'see', 'lose', 'be', 'sleep', 'sing', 'have', and 'go', the *Sprach- und Sachatlas Italiens und der Südschweiz* (conventionally abbreviated as AIS) which cites both future and conditional for the two lexemes 'be' and 'do', the *Atlas lingüístic de Catalunya* and the *Atlas lingüístic de la Vall d'Aran*;⁸ in the *Atlas linguistique du Biterrois*, no lexical item is present in both future and conditional forms. The ongoing project of the *Atlante linguistico ed etnografico del Piemonte occidentale* (2003-, and see <http://www.alepo.unito.it/default.htm>), meanwhile, is announced as having a morphological component, but the relevant volume has not yet appeared.

The atlases of most immediate interest to this study are those published as part of the extensive CNRS project *Atlas linguistique de la France par régions*. Launched in the 1950s, the project aimed to provide data on speech varieties across the whole of France, in a series of atlases each of which focused on a particular region. Each atlas was overseen by linguists specialising in the

⁸ Though note that the ALG contains full paradigms for Casau (699E) in the Val d'Aran.

relevant local varieties, who devised a questionnaire, in the form of a list of words and phrases to be translated from French into the local variety, and selected a number of survey points, typically 15-20 per *département*, in which they administered the questionnaire to one or more informants. The interviews were recorded, and later transcribed onto blank copies of the questionnaire (*cahiers d'enquête*). The results were then transferred onto maps of the region, each map illustrating the responses to a given question. While the questionnaires covered broadly equivalent domains, centred on lexical fields such as the countryside, weather and farming techniques, there was some variation between regions and over the forty-odd years of the project as to the precise items included. In particular, there is significant variation in the extent to which the questionnaires investigate morphological phenomena.

For the Occitan domain, six atlases in particular are relevant: the *Atlas linguistique de l'Auvergne et du Limousin* (henceforth ALAL), *Atlas linguistique de la Gascogne* (ALG), *Atlas linguistique du Languedoc Occidental* (ALLOc), *Atlas linguistique du Languedoc Oriental* (ALLOr), *Atlas linguistique du Massif Central* (ALMC) and *Atlas linguistique de la Provence* (ALP).

The ALAL (1975-), which covered 76 localities in the *départements* of Corresa (19), Cruesa (23), Dordonha (24), Puèi Domat (63) and Nauta Vinhana (87), may be quickly dispensed with. The contents of the questionnaire are unknown; what is certain is that if it included a morphological component, the data thus elicited were not published. The three published volumes contain only one map concerning a future or conditional form, the 1sg conditional of 'want' which appears almost incidentally in the elicitation of forms of the verb 'rain' (*je voudrais qu'il pleuve*).

Of more immediate interest is the ALMC. The questionnaire for this atlas was administered in 55 localities across the *départements* Ardècha (07), Avairon (12), Cantal (15), Naut Lèire (43) and Lozèra (48), the ALMC questionnaire elicited partial paradigms for the 10 verbs 'be', 'have', 'sing', 'sell', 'hear', 'heal', 'go', 'do', 'drink' and 'want', which between them cover the three major

conjugational classes and a number of irregulars. Although not all forms were obtained in all localities, the majority are present, and the morphological section of the ALMC is distinguished as the only one published, the verb paradigms appearing in tables in the final pages of the third volume (see Fig.8).

Figure 7. Survey points for the ALMC.

[Image removed due to copyright restrictions]

Figure 8. Verb forms (synthetic future) as published in the ALMC.

[Image removed due to copyright restrictions]

The questionnaire for the ALP (1975-) was directly modelled on that of the ALMC, and contained a section of approximately 400 questions on morphology and syntax; however, the three published volumes contain only lexical data for the 170 survey points across the *départements* Aups de Provença Nauta (04), Aups Nauts (05), Aups Maritims (06), Bocas de Ròse (13), Droma (26), Isèra (38), Var (83) and Vauclusa (84).⁹

The most substantial series of morphological questionnaires, though, began with the ALG in the mid 1950s. The region covered by the ALG (see Fig.9) extended from the Spanish border, north to and sometimes beyond the river Garona, including the *départements* Gèrç (32), Gironda (33), Lanas (40), Hauts Pirinèus (65), parts of Arièja (09), Garona Nauta (31), Òlt e Garona (47), Tarn e Garona (82), and the area of Pirinèus Atlantics (64) over which varieties of Occitan rather than of Basque were spoken.

The morphological questionnaire for the ALG was significantly more detailed than that which had preceded: not only did it contain a lengthy section on pronoun combinations, but it elicited partial paradigms for some 40 verbs¹⁰, together with some additional forms displaying vowel alternation in the present indicative for 16 further items. The majority of the *cahiers d'enquête* survive, though several concerning Arièja and Garona Nauta are now missing; it is believed that the recordings have been overwritten. The *cahiers* are currently being digitised as part of the ongoing project THESOC¹¹ at the Universities of Nice and Toulouse; approximately 10 were available at the time of this study.

⁹ It is my understanding (Guylaine Brun-Trigaud, p.c.) that the ALP *cahiers d'enquête* are still in existence, although they were not available at the time of the present study.

¹⁰ The French questionnaire items were: *être, avoir, chanter, vendre, bâtir, aller, faire, s'asseoir, boire, tenir dans, connaître, courir, croire, croître, cuire, devoir, dire, fuir, naître, partir, ouvrir, pouvoir, recevoir, savoir, sentir, servir, sortir, suivre, tenir, tomber, traire, valoir, venir, vivre, voir, vouloir, mourir, falloir, pleuvoir, se taire*. They cover the main conjugation types and many irregular patterns, with detail also on the behaviour of reflexes of the Latin fourth conjugation.

¹¹ 'Thesaurus Occitan'. See <http://thesaurus.unice.fr/>

The morphological data obtained were published in three volumes, of which V-i and V-ii concerned the verb, V-i containing the maps and V-ii a commentary. However, almost no forms are given in full, since the data are presented in a morpheme-based analysis to the extent that roots, stem formatives and desinences are displayed on separate maps. Fig.10 shows the ALG map of infinitive (IF/1), future (F/7) and conditional (C/8) stem formatives for *vénguer* 'come'; the complete wordforms must be reconstructed by combining this map, an equivalent map of lexical roots, and several further maps of person/number desinences. Where only a conditional form is given, the corresponding future form must be located by establishing within which solid-outlined area the variety in question falls. Even in the commentary, where 20 localities are picked out as samples (*localités témoins*¹²), paradigms are not provided as sets of word-forms but once again as separate roots and inflections to be reconstituted, a somewhat hazardous operation the accuracy of which is difficult to check. The data for the *localité témoin* Gavarnia are reproduced in Fig.11: while the morphemic analysis aims for economy and maximal generalisation, it complicates the extraction of complete wordforms. It is possible to reconstruct stems *cantèr-*, *venó-* and *dormigó-/bastigó-* for the conditionals (C) of the three regular conjugation classes (3-6), but the distribution of the desinences [ja] and [i] (or [ji]) among the different persons remains unclear, as does the stem vowel (if there is one) of the conditional of 'be' (1). For complete word-forms, recourse must be had to the *cahiers*.

¹² Data for these localities are now available in the form of a searchable electronic database, developed by Jean-Louis Fossat, University of Toulouse.

Figure 9. Map of ALG *points d'enquete*.

[Image removed due to copyright restrictions]

Figure 10. Map of infinitive (IF/1), future (F/7) and conditional (C/8) stem formatives for *vénguer* 'come' (ALG).

[Image removed due to copyright restrictions]

Figure 11. Presentation of data for the *localité témoin* Gavarnia (ALG).

[Image removed due to copyright restrictions]

Figure 12. Map of ALLOc points *d'enquete*.

[Image removed due to copyright restrictions]

Figure 13. Map of ALLOr *points d'enquete*.

[Image removed due to copyright restrictions]

The ALG was followed by the ALLOc, which covered the *départements* Òlt (46), Tarn (81), and Tarn e Garona (82), together with those parts of Garona Nauta, Gironda, Òlt e Garona and Arièja not documented in the ALG, and areas of Aude (11), Avairon (12), Corresa (19) and Dordonha (24), 132 points in all (see Fig.12). Four volumes of lexical data were published from 1979 onwards; however, publication ceased due to insufficient funding before any of the morphological data appeared in print. This circumstance is particularly unfortunate, since the morphological questionnaire of the ALLOc was the most detailed yet, adding to the ALG list *dormir* 'sleep', *écrire* 'write' and *lire* 'read', though omitting *fuir* 'flee' and eliciting fewer forms for *boire* 'drink'. However, both the *cahiers d'enquête* and the original recordings survive in the archives of the University of Toulouse, and have now been digitised in their entirety. Given the similarity of the questionnaire, and the short time-span separating the two projects, the ALLOc data are directly comparable with those of the ALG.

The ALLOr area covered the *départements* Gard (30) and Erau (34), together with the remaining part of Aude, and parts of Ardècha, Avairon, Losèra, and Pirinèus Orientals (66), in total 86 survey points (see Fig.13). Publication of the ALLOr began in 1982, and, as in the case of the ALLOc, was never completed: three volumes of lexical data appeared. The *cahiers d'enquête* survive and have been digitised in the same manner as those of the ALLOc, though the recordings are no longer extant. The morphological questionnaire slightly expanded the ALLOc questionnaire, to include *entendre* 'hear', *tirer* 'pull', *prendre* 'take', *plaindre* 'complain, pity', and *pondre* 'lay', the latter two items adding a morphological type which had not been included in any previous questionnaire, namely verbs originally in *-nher* (a subtype of the class which I label IIIb; see §2.1 below). Unfortunately, for many items, no transcription is given in the *cahiers d'enquête*, and in the absence of the recordings as a control there is little indication of the reason for these lacunae.

Of the atlas data available, this study draws chiefly on those of the ALG, ALLOc and ALLOr (in the case of the ALG, the data are taken from both maps and original *cahiers*, while in the cases of the ALLOc and ALLOr the data come purely from the *cahiers*; unless otherwise specified, maps of the ALLOc and ALLOr regions, and maps combining regions, are not reproductions of existing published maps, but are my own work). These three atlases present the great advantage of providing both data which are comparable across all three regions, having been gathered in similar period and fashion, and also sufficiently detailed data to give information about paradigm structure; it must be stressed that it is rare to find such rich data both at the level of individual paradigms and in terms of the conjugational types covered.

[0115]

2088 mé kréj_i

2089 kréj_i, kréj_it, kréj_ién, kréj_ión

2090 kréi_a

2091 ~~kréj_i~~ kréj_i

2092 kréj_i, kréj_ién

2093 kréj_isé, kréj_iso

2094 kréi_a, kréj_its

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Figure 14. Extract from ALLOc *cahier d'enquete* (31.12, Tolosa).

It must be recognised that the methodology used to elicit these data is not without its problems. Translation from a standard language, for instance, carries the risk of eliciting forms influenced by the standard language, or which the speaker would not produce in spontaneous speech. However, it can also have an advantage, as the striking results of fieldwork undertaken by Field (2003) demonstrate. Field's published study concerns the morphological forms used in several varieties of the *département* Hauts-Pyrénées to express the future in the past; his data are drawn

from the results of a questionnaire asking Occitan-French native bilinguals to translate sentences from French into Occitan. Although these speakers have native competence in French and know that French uses the synthetic conditional as future in the past, none of their Occitan translations use the synthetic conditional, and when Field suggests a possible translation with the synthetic conditional expressing this function, his suggestions are systematically refused. In this case, the method of translation from a standard language, far from compromising the authenticity of the data obtained, serves as a guarantee that this linguistic behaviour which differs from the standard is in fact genuine.

More serious are the form of the questionnaire, and the pace of the interviews as represented by the ALLOc recordings. The forms of each verb are elicited in quick succession, and it is not impossible that this may induce automatisms which are at variance with the informant's actual production¹³; in the ALLOc questionnaire, the conditional immediately follows the future, which itself follows the preterite. The juxtaposition of future and conditional in the questionnaire acts as a further guarantee for the authenticity of stem asymmetry where it occurs, since not only does the questionnaire language not display asymmetry between future and conditional, but the preceding future form given by the informant might be expected to influence the conditional. However, the ordering may equally cast some doubts on the authenticity of the occasional futures found with stems characteristic of the preterite: consider the asymmetry attested for *siègre* 'follow' in Lausera (ALLOc 82.02), between *siegrá* SC.3sg and *sigrà* SF.3sg. Here, the forms immediately preceding the future are *siguèrem* pret.1pl, *siguèron* pret.3pl, and one may speculate that the future stem in /i/ (as opposed to the /jε/ found in the conditional) reflects perseveration of the preterite stem rather than a genuine stem asymmetry between future and conditional.

¹³ Martin Maiden (p.c.) notes cases in various Romanian linguistic atlases in which informants faced with an atlas questionnaire eliciting verbs produced impf.ind or perf.ind forms in place of the actually occurring 3pl.prs.ind, regularly syncretic with 3sg.prs.ind, presumably to avoid producing the same word twice. This observation does not necessarily contradict the claim of perseveration advanced for Lausera, since the items at issue in the Romanian data are not stems but full words.

Finally, the balance between the scientific ends of the interview and human consideration for the informant, who is already faced with the very unnatural task of translation, appears on some occasions uneasy. The interviews are clearly conducted in the interests of eliciting as many data as ideally required by the questionnaire, and confirming their accuracy. To these ends, at many points during the interviews, the fieldworker repeatedly elicits a given item, in order to confirm it; the fieldworker may also submit alternative forms to the informant's consideration. While the rationale for this is clear, the recordings at times suggest a degree of frustration and/or confusion on the part of the informant, when repeatedly asked for an item already given, or one which is not present in his or her variety. Certain of the questions are also pragmatically artificial,¹⁴ such as the imperative of the verb *morir* 'to die' (2353); the transcription for 47.04 (Bèthpug) is annotated

Ça pourrait se dire comme ça, mais ça ne se dit pas. On ne le dit jamais à une personne!
Et si c'est une bête, on lui dit *krèbœ!* ou *n as k a krəba!*

For the purposes of illustrating some of the difficulties attendant on such interviews, I reproduce below a number of short extracts from the interview for ALLOc point 31.12 (Tolosa), concerning questionnaire items 2082-2098, the verbs *courir* 'run', *croire* 'believe' and *croître* 'grow'. The transcription is my own, with Occitan (*grafia classica*) in italics.

In the first instance, homophony in French between 3sg and 3pl present subjunctive leads to the plural form *corguèsson* being elicited in place of the singular *corguèsse*; this is corrected for by introducing a singular subject, *le vesin* 'the neighbour'. The fieldworker (F) then suggests to the informant (I) the expected form *corrisquèsse*, which is vigorously refused as not a local form.

F Alors, reprenons un peu puisque ça en est en fin de bande. "Il aurait fallu qu'il coure".
I *Au(r)íá calgut que corguèsson.*

¹⁴ Similar effects can be observed for the future and/or conditional forms of certain lexemes, eg. future of *paréisser* is pragmatically artificial in some varieties (see §1.1.3 below); the lexical items included in the ALG/ALLOc/ALLOr questionnaires appear not to be subject to such pragmatic restrictions in the future/conditional.

- F Bon. *Auriá calgut que le vesin ...?*
 I *Que le vesin corguèsse.*
 F Ou bien *que le vesin corris-... corrisquèsse.*
 I *Corrisquèsse non, ça se dit pas.*
 F Vous l'avez dit.
 I *Corrisquèsse ça se dit pas. Corguèsse, ça c'est le patois d'ici.*

The suggestion of *corrisquèsse* is curious since the fieldworker explicitly acknowledges¹⁵ that the speaker has already refused this form; yet a little later, following elicitation of the preterite and the imperative, the fieldworker again presents a stem in *corrisqu-* for consideration. The insistence is such that it might risk introducing doubt into the mind of the informant; fortunately, the speaker here is sufficiently steadfast that it does not trouble his intuition, and merely situates his forms as local to Tolosa with even stronger emphasis.

Difficulty in eliciting the preterite is not unexpected, since although the preterite is alive and well in most varieties of Occitan, the preterite in French is no longer in use, having been replaced by the compound past. In the case of *croire* below, it is unclear whether the informant hears the intended 'je le crus' or instead 'je l'ai cru'; his response is certainly a compound past. The subsequent request for an alternative elicits only a slightly different realisation of the past participle; a different approach, first eliciting the imperfect subjunctive,¹⁶ and then attempting the preterite, adding the phrase *l'autre jorn* 'the other day' to locate the event in a more remote past, elicits the preterite *cregèi* on the second attempt.

- F Bon. "Cette fois-là, je le crus".
 I *Aquel còp au èi crejut.*
 F Ou bien?
 I *Ei cregut.*
 F Bon. Alors. On va le prendre d'une autre façon, "je voudrais bien qu'il le croie".
 I *Voldriá qu'au cregèsse.*
 F Bon. Et alors, *l'autre jorn, jo, au cre- ...?*
 I *Jo, au èi crejut.*
 F Bon. Vous avez dit: *auriá bien volut qu'ac cregèsse.*
 I *Qu'au cregèssa.*

¹⁵ *Vous l'avez dit* 'you said so', i.e. 'you said that you do not say *corrisquèsse*'.

¹⁶ Note that although the French phrase contains a present subjunctive, the informant nevertheless produces an imperfect subjunctive, in conformity with standard sequence-of-tense rules in Occitan.

- F *O qu'el?*
 I *Qu'el au cregèssa.*
 F Bon. *E l'autre jorn, jo, ac, cre-?*
 I *L'autre jorn, jo au cregèi.*
 F Voilà. *Jo au ...?*
 I *Jo au cregèi.*

Once the 1sg form of the preterite has been elicited, the 3sg form *cregèt* follows readily. However, a problem is encountered on reaching the 1pl form: *cregèran* is not accepted by the fieldworker, who is clearly expecting a form resembling *cregèrem*¹⁷ for 1pl, and assumes *cregèran* to be 3pl. *Cregèran* is not listed for 1pl in the *cahier d'enquête*; yet interestingly, a similar exchange occurs over the preterite of *créisser*, suggesting that *cregèran* and *cresquèran* may indeed be 1pl forms, rather than 3pl forms produced in error.

More problematic still is *croître*, which is of relatively low frequency in French, and is not immediately recognised by the informant, until the fieldworker offers *grandir* as a synonym. The infinitive, past participle and present participle are elicited without problem (though *lev-* hints at the informant using *levar* 'lift, come/get up' rather than *créisser*), but the 1sg form produced is clearly not the one expected, the fieldworker interpreting *cresi* not as 'I grow' but as 'I believe'. Although the fieldworker reiterates that the desired form is one of *créisser*, the informant continues to supply the form *cresi* (on which grounds one may be tempted to speculate that *cresi* is in fact the form he uses, or that, perhaps more probably, *créisser* is not usually employed for 1sg.prs.ind). As the homophony in French between *je crois* 'I believe' and *je crois* 'I grow' is unhelpful in resolving the assumed blur, the fieldworker reverts to the synonym *je grandis*, which promptly elicits its cognate *grandissi*, followed by the expected form *creissi*.

- F Bon. Maintenant, comment dites-vous "le blé ne veut pas croître"?
 I Euh... "croître" je sais pas.
 F "Croître", c'est-à-dire "grandir", quoi.
 I Ah, *lev-*, *le blat vòl pas créisser*.

¹⁷ Final <m> in the *grafia classica* represents [n].

F Oui. C'est exactement le verbe *créisser* qui m'intéresse. *Vòl pas ...?*
 I *Vòl pas créisser.*
 [...]

 F Bon. Alors si je suis en train de le faire aujourd'hui. *Ieu, cre-*
 I *Jo.*
 F *Jo, cre-*
 I *Jo cresi.*
 F Non. De *créisser*.
 I *Jo cresi.*
 F Non. Alors, *auèi jo cre –*
 I *Auèi, jo cresi?*
 F Non. Non pas "je crois", mais "je crois", "je grandis".
 I *Jo grandissi.*
 F Alors, avec le verbe *créisser*, *jo?*
 I *Creissi.*

While it is clearly important to be sure that the form which has been elicited corresponds to the paradigm cell whose associated form was desired, and in this respect the fieldworker's perseverance and care are laudable, there seems to be a danger here that authentic forms may be rejected (and as a result not mentioned in the *cahier* transcription) if they do not correspond closely enough to what the interviewer expects to find; and there is also a tension apparent here in the role of the fieldworker, who simultaneously occupies a position of seeker after knowledge (consulting the informant who is assumed to be expert on the variety of a given locality), and of expert qualified to decide whether the native speaker informant's responses are to be considered satisfactory — even correct — or not.

The full extent of the resulting omissions is hard to assess, though there is at least one case materially affecting the future and conditional, that of *créisser* in the variety of Fauch (ALLOc 81.12).

F Oh maintenant "il croîtra plus vite".
 I *Creirà plus vite.*
 F *Creirà ou creisserà ?*
 I *Creisserà plus vite.*
 F *Creisserà, bon.*
 [...]

 F "S'il mangeait, il croîtrait" ?
 I *Se manjava, creiriá ? Crescriá ?*
 F *Crei-... ?*

- I Crescriá.
 F Creisseriá ?
 I Creisseriá, oui. Ou crescriá.
 F Crescriá ?
 I Crescriá, oui.

Here, although the informant supplies both *creirà* and *creisserà* for the future, and *creiriá* and *crescriá* (besides accepting the suggestion of *creisseriá*) for the conditional, only *creisserà* and *crescriá* are noted in the transcription (reproduced below). The forms in *creir-* are presumably discarded as apparent contamination from *creire* 'believe', though given the prevalence of stems in *coneir-* for *conéisser* in the surrounding area, their exclusion may well be over-zealous.

- 2095 Kréísé
 2096 Krékút
 2097 Ën Kréiséën
 2098 Kréisi, Kréisés, Kréis, Kréisën, Kréidés, Kréisæ
 2099 Kréisyó
 2100 Krékèri, Krékèt, Krékèrën, Krékèru
 2101 Σ Kréiséra
 2102 Kréisée, Kréiséeën
 Fauch 130
 2103 Krékèso
 2104 ~~Kréi~~ Krékryó (maintenu malgré Kréiséryó soufflé)

Figure 15. Future (2101) and conditional (2104) of *créisser*, as transcribed in the *cahier d'enquête*. (Fauch, ALLOc 81.12).

1.2.2 *Textual sources*

1.2.2.1 Written sources

As a direct consequence of the external history traced in §1.1 above, there is much more written material available for the mediaeval language than for any subsequent variety. Furthermore, this material is much more readily accessible, perhaps in response to the strong interest shown in this period by literary scholars and historians as well as linguists. Not only are there many scholarly editions, including digital ones (e.g. Lodge 2006, Rixte in preparation) of the extant mediaeval texts, but there also exist electronic corpora: the *Concordance de l'Occitan Médiéval* (Ricketts et al. 2005), which aims to include all extant mediaeval texts, and of which the first two tranches, concerning lyric and narrative poetry, are currently available, while the third, of prose, is in preparation; and the *Digital Corpus of Medieval Gascon* (Field in preparation), which consists of texts from Gasconha with xml tagging for lexical and morphosyntactic information. The reservations stated under §1.2.1.1 above for grammars of the mediaeval language equally apply to the mediaeval texts on which the grammars are based. With the exception of charters, it is extremely difficult to date and place a text reliably, and even in the case of the charters it cannot be assumed that the scribe comes from and writes in the variety of the place where the charter was drawn up. These texts are accordingly of greater potential usefulness for information on context, use and function than for information on the morphological forms current in a specific locality.¹⁸

There are no comparable corpora for any more recent period. An electronic corpus (TELOC¹⁹, University of Toulouse) is currently in preparation, but remains at an early stage, and for the moment is limited to a small selection of recent novels. For information on the intervening

¹⁸ Though see Lass (1997:66-68) for two cases in which textual variation is indicative of genuine morphological and phonological variation in a given speaker's variety.

¹⁹ 'Textes en Langue Occitane'. See <http://w3.erss.univ-tlse2.fr/teloc/>

period, recourse must be had instead to an assortment of texts published in paper format: charters, letters, poetry and popular songs published often piecemeal in historical and local journals, treatises, and works of fiction. The nature of the source material means that coverage is uneven: equivalent documents are unlikely to have been produced or have survived in all areas, let alone made it to the published state. The speakers of many varieties will have left no trace at all, being illiterate or conducting their business in French. Letters and pamphlets (see Boyer et al. 1989 for the importance of Occitan in revolutionary and counter-revolutionary propaganda), while probably constituting the majority of texts produced in Occitan between the mediaeval period and the present day, are ephemeral; and literary revivals, while their physical manifestations (published and quoted texts) are potentially more lasting, are themselves sporadic and localised.

More recently, production of written texts in Occitan has increased, in line with the attempts at revival (see e.g. Kirsch 2002:154-62). However, these often bring with them a new problem, in the form of the standard orthography. Before the introduction of the *grafia classica*, people writing in Occitan typically used a *graphie patoisante*, attempting to render the sounds of their variety according to the graphical conventions of the French or Italian orthography in which they had learnt to read. As these systems were not designed for Occitan, they are in some respects inadequate for its transcription — for example, tonic stress is rarely indicated, and there is much hesitation as to how the affricates /ts/ and /tʃ/ (phonemic in Occitan but not in standard or southern French) should be rendered. However, the combination of the speaker's attempt at a representative transcription, and the use of a set of graphical conventions which are familiar to the linguist, mean that the *graphies patoisantes* can be taken as providing in general a reasonably transparent approximation to the spoken form.

The *grafia classica* provided graphemes for the phonological inventory of Occitan, diagrammed the placement of stress and facilitated on-the-page recognition of phonologically diverse word-

forms as belonging to a single lexeme. By introducing a degree of abstraction between orthographic and phonological form, it allowed a common orthographic system to be used across different varieties: thus the reflex of final unstressed A, realised inter alia /ə/, /a/, and /ɔ/, is consistently represented <a>. However, this very development which facilitates mutual intelligibility on the page masks the finer phonological detail which is of interest to the linguist (a general problem of serviceable orthography; see Lass 1997:57-59). The problem is exacerbated by the partial adoption of linguistic norms, and the varying degree to which writers exploit the partial flexibility of the *grafia classica*: thus the written form <farai> 'I will do' may correspond to any of /faraj/, /farej/, /fɔraj/ and others, while a speaker from the Lengadòc with the realisation /farej/ may choose to write it <farai> in line with the recommendations of Alibèrt (1976), or <farèi> as a more accurate representation of phonological form, <è> being the standard notation for /ɛ/ in the *grafia classica*.²⁰

Besides such general problems of distance between written and spoken language, the particular nature of this study means that texts are often an insufficient or frustrating source. A text can tell us that a form exists, by including it — but unlike a native speaker, the text cannot attest to the absence of a given form from a variety or idiolect, as its absence from the text is merely a lack of attestation in that text; absence of evidence is not evidence of absence. Furthermore, it is rarely possible to obtain complete paradigms by going through a text.

This last point may be illustrated by a brief heuristic study on French using the corpus Frantext.²¹ In this study, I attempted to extract paradigms for four relatively common verbs, the auxiliaries *être* and *avoir*, and two further irregulars, *aller* and *voir*, from the novel *L'Education sentimentale*, published in 1869 and the longest of Flaubert's works available on Frantext at 188,255 words. Although in the context of modern corpora this single novel represents a very

²⁰ Note also that <farèi> is systematically recommended for /farej/ by normative grammars for Gasconha (see eg. Birabent & Salles-Loustau 1989).

²¹ Consulted online at <http://www.frantext.fr/>. French was selected as a language closely related to Occitan, and for which textual corpora are more readily available.

small sample, its length far outstrips that of the individual texts available for varieties of Occitan; furthermore, like many of the available Occitan texts, it is a narrative about (in this case fictional) past events. The fact that not one complete paradigm is forthcoming in a text of this length and genre, with a mix of dialogue and narration, indicates that any one Occitan textual source is unlikely to provide sufficient data for the present study. For the verbs *être* and *avoir*, examination of *L'éducation sentimentale* found no first person, second person or 3pl forms for the preterite and imperfect subjunctive, and assorted gaps in the present subjunctive, future and conditional; while the 2sg and 2pl forms of the present subjunctive of *être* are attested, these were only found as imperatives, not as canonical subjunctives. In the case of *aller* and *voir*, meanwhile, only half the paradigm is recoverable, and the form *voyons* is only found in interjections such as *voyons donc* ('come now', 'see here'), where it might be argued to have become lexicalised and thus not to count as an instance of the 1pl verb form. Even if the corpus is extended from this one novel to the entirety of Flaubert's works available on Frantext (some 58 texts amounting to 2,468,344 words in all), the paradigms remain incomplete — the 2sg preterite of *être* is missing, as is the 2pl preterite of *avoir*, while for *aller* there is no attestation of 2sg or 2pl preterite, 2sg or 1pl imperfect subjunctive, and 2pl conditional. This study illustrates the limitations of a single text as a source for representative paradigms, and, by extension, for information on usage (since a text is unlikely to contain examples of all usages associated with a form which only occurs rarely); these difficulties are particularly acute for Occitan, given the rather sparse materials available for any one variety.

Since the available textual corpora are so limited, their usefulness in establishing frequency data is correspondingly restricted, and in practice cannot go beyond a general intimation that certain parts of the paradigm (e.g. future and conditional) are much rarer than others (e.g. present indicative, infinitive), and that certain conjugational types are also very rare.

1.2.2.2 *Collectage* recordings

For the modern period, a further source exists in the form of ethnographic fieldwork recordings (in French *collectage*) on local traditions, folk-tales, songs, proverbs and memories of times past, grouped together under the term *ethnotextes* by Bouvier (e.g. 1992). *Collectage* is often of spontaneous speech, and can thus provide samples of relatively natural linguistic behaviour. However, as with written sources, it is extremely difficult to extract a complete paradigm, the problem being compounded by the short length of most *collectage* recordings, and the restricted range of topics, which tend to skew the range of verb forms towards the present and particularly the past, rendering forms such as future and conditional even less frequent than they might otherwise be.

One domain in which future forms are more frequently attested is that of proverbs predicting the weather or moral consequences, as in these examples from Allanche (1941:81-90):

Quand en març trona, l'annada sarà bona.
'When it thunders in March, it'll be a good year.'

Al jorn del jutjament, tan valdrà mèrda coma argent.
'On Judgment Day, shit will be worth as much as money.'

Filha que landra, taula que branla e femna que parla latin, totas auràn una trista fin.
'A roving girl, a rickety table and a learned woman²² will all come to a bad end.'

However, the short length of most proverbs means that while they may be adduced as isolated attestations of a given future form, they supply little or no information about other forms in the paradigm. Their usefulness to the present study is thus severely compromised by the absence of conditional forms with which the future forms might be compared. For instance, the reflex of UALERE often displays asymmetry between future and conditional (see §6.6.3 and §6.8 below), but since only the SF, not the SC, is attested in the second example, it is impossible to know whether the distribution is symmetrical or asymmetrical. It should further be noted (Martin

²² Literally 'a woman who speaks Latin'. The *Tresor dou Felibrige* renders *femo que parlo lati* as 'bas-bleu'.

Maiden, p.c.) that proverbs are crosslinguistically subject to retaining archaic lexical or phonological features which are not necessarily representative of the language as spoken.²³ As a result, the usefulness of proverbs to the present study is limited to providing confirmation of existing attestations (notably, not for disconfirming data or furnishing new data).

1.3 Fieldwork

Following consideration of the potential problems attendant on the existing source material, I conducted a series of fieldwork interviews in the spring and early summer of 2010. The fieldwork aimed both to obtain data for lexemes or localities which had not previously been described, and to test the validity of, or obtain independent confirmation for, the existing data — in particular, the ALLOc and ALLOr data which, given their importance to the present study, and the methodological reservations expressed in §1.2.1.2 above, it was essential to check. Fieldwork offered a means to elicit data directly relevant to my own research, which would be comparable across the localities I surveyed, and which could also be compared with the atlas data, thereby providing some degree of historical depth.

Both the constraints of time and space in the present study, and the changing sociolinguistic context, meant that it was not feasible to conduct a study on the scale of the ALG/ALLOc/ALLOr questionnaires. In the fifty years since the atlas fieldwork was conducted, the number of native speakers has significantly reduced, and the average age of these speakers has increased. Potential informants are far from numerous, nor are they necessarily easy to approach: the low social visibility of Occitan means that it can be difficult to ascertain in the first place who is a speaker, and a number of intrusive or exploitative studies have left informants in certain areas with an understandable mistrust of outsiders conducting research, a mistrust which frequently manifests itself in concealment of competence in Occitan. The most effective way of finding

²³ Consider the English example *Ne'er cast a clout till may be out*, an instruction not to cast off [winter] clothing until such time as the hawthorn had come into bloom (Martin Maiden, p.c.).

informants is thus via a mutual contact who can vouch both for speaker as competent and willing, and for researcher as trustworthy (see Milroy 1987:66). This method, which is entirely dependent on social networks or chance contacts, will not necessarily provide a statistically balanced or representative sample; however, it offers the signal advantage of reliable contacts, and thus informants who are happy to participate in fieldwork. On the recommendation of native speakers personally known to me, I was able to contact informants around Realmont and Castras (Tarn), Aigasvivas and Bazièja (Lauragués), Los Sarrasins (Òlt e Garona), Rodés (Avairon), and the Massat valley (Arièja). Of these informants, the majority were aged in their seventies and eighties and lived within 10-15km of the place where they had grown up; the age of the informants, coupled with the often isolated nature of the villages, frequently meant that they had time to spare and could be glad of someone novel to talk to (see Cheshire 1982:11).

Given the low frequency of many word-forms and conjugational types in texts and in spontaneous speech, direct translation from French (as in the atlas questionnaires, and see also Bower 2008:73) was chosen as the method most likely to elicit the requisite data, and to do so efficiently. While influence from French was clearly a risk, it was considered a risk less serious than that of not obtaining sufficient or appropriate data for analysis. Moreover, as discussed in §1.1.2.1.2 above, the use of a questionnaire in a standard (or simply different) language has an advantage as well as a disadvantage: where the elicited forms clearly differ from the language of the questionnaire, there is an extra guarantee for the authenticity of these forms, since the informant produces them notwithstanding potential stimuli to the contrary.

In the particular context of my own fieldwork, administering the questionnaire in French rather than in Occitan had a number of additional advantages. While I am fluent in both French and in the Occitan variety of Tolosa, I still have a markedly English intonation. In French, this rarely causes a problem since speakers generally have experience of hearing French spoken with an English accent. In Occitan, however, the situation is different: I was without exception the first

English speaker of Occitan that my informants had met, with an entirely unfamiliar and quite distracting accent. French therefore constituted a more practical choice for conveying the questionnaire items as efficiently as possible. Asking the questions in French also reduced the possibility of misunderstandings due to regional differences in cases where the informant's variety was very different from my own, and of undue influence where the two varieties were close to one another.

A short session of free conversation was included after the questionnaire to obtain controls for some of the questionnaire items. The free conversation was typically led by the native-speaker colleague who had introduced me to the informant, thus providing the informant with a familiar conversation partner of proven linguistic competence, to facilitate spontaneous speech; the situation remained relatively formal due to my presence and that of the microphone (see Cheshire 1982:7, also Milroy & Gordon 2003:61-62), but this was not considered a disadvantage, the aim of the session being to elicit not casual speech such as might be needed for a variationist study, but a number of morphological items in spontaneous speech as a control for the items elicited in the self-conscious translation task. Throughout, the data remain comparable with those elicited in the very formal atlas interviews.

The recorded part of the interview was thus conducted in three stages: a short conversation explaining the purpose of the fieldwork, asking the informant's consent, and eliciting some basic information about the informant (name, date and place of birth, places they had since lived in, parents' place of birth); the questionnaire; and the free conversation.

Translation does not form part of natural linguistic behaviour; it requires a high level of linguistic awareness on the part of the speaker, can be tedious where many forms from a single paradigm are required (Bowern 2008:95), and in particular is tiring, with potentially adverse effects for the accuracy of the data (Bowern 2008:89). Given the age of the participants in this

study, which had the potential to exacerbate the fatigue caused by the task, it was decided to keep the questionnaire to a strict minimum, with a reduced list of forms in comparison to the atlas questionnaires. The informants' age also had pragmatic consequences for the free conversation, biasing it towards present or (particularly) past activities rather than towards the potentially more sensitive topic of the future, with corresponding effects on the forms elicited.

On the basis of these considerations, I drew up an initial questionnaire of approximately 150 items. I chose to target verbs of conjugational class IIIb (see §4 below), a pattern which is rarely described in much detail by the existing grammars, and not all subtypes of which had been included in the ALLOc questionnaire, but which the atlas data had shown to be an unstable type particularly susceptible to morphological change, whether asymmetry, heteroclisis, convergence, or full-blown shift of conjugational class. To permit comparison and analysis of potential shifts of conjugational class, I added to the list of IIIb verbs (*conéisser* 'know', *córrer* 'walk', *còser* 'cook', *créisser* 'grow', *crénher* 'fear', *mólzer* 'milk', *nàisser* 'be born', *paréisser* 'seem', *plànher* 'pity', *pòner* 'lay an egg') a sample verb from each of conjugations I (*cantar* 'sing'), II (*dormir* 'sleep') and IIIa (*vendre* 'sell').

For each of these verbs, it was important to elicit a representative paradigm, both for the immediate purposes of the study, and for general purposes of language description. For the present study, data for word-forms other than futures and conditionals was necessary in order to evaluate developments in the future and conditional stems with respect to the rest of the paradigm: to take a concrete example, the attestation of future and conditional forms in *conéissar-* ('know'), with theme vowel /a/ rather than the expected /e/, might suggest a shift in conjugational class, but only access to additional paradigm forms can determine whether this shift is limited to the future and conditional, or whether it is a general shift involving the entire lexeme; likewise, where a novel stem appears in the future and/or conditional, such as *vénguer-* ('come'; one might expect *vendr-* or *vener-*) or *audr-* ('hear', for expected *aur-*), comparison with

the rest of the paradigm can show whether the new stem has propagated from elsewhere in the same paradigm, or whether it must be traced to a different source — perhaps another lexical item, or regular sound change. The inclusion of these additional forms is thus crucial to the analysis of the future and conditional forms obtained.

The initial questionnaire consequently included for each verb the infinitive, the past participle, the present participle, the entirety of the present indicative, and 3sg forms for the imperfect indicative, the present subjunctive, the preterite, the imperfect subjunctive, the future and the conditional, as a partial but representative paradigm.²⁴ As examination of existing published and unpublished data showed no examples of stem allomorphy within a screeve²⁵ outside the present indicative and subjunctive, it was considered sufficient to elicit one form for each screeve. I further added an entire future and conditional paradigm for *plànhher*, as a control, and future, conditional and infinitive forms for *anar* 'go', as a test for the atlas data on regional stem differences for this lexeme. The order in which items appeared was then randomised, with the aim of reducing automatism or influence from preceding items.²⁶

A pilot of this questionnaire showed that speakers had difficulty in retrieving individual word-forms out of context (presumably due to the pragmatically unnatural nature of the task), that the preterite resisted elicitation (whether in response to a simple or compound past in French, or strategies such as those employed in the ALLOc interviews cited above) although speakers habitually used it, and that the questionnaire overall was too long. The questionnaire was accordingly revised, omitting both the preterite, given the difficulties in elicitation, and the

²⁴ The imperative was omitted on the grounds that it is in the vast majority of cases syncretic with either the present indicative or the present subjunctive; though Maiden et al. (2009:102) note occasional cases of modern imperative forms which derive from a sequence of imperative + clitic.

²⁵ The term 'screeve' was initially coined for the description of Georgian, and refers to a set of verb-forms which differ only in their person and number features (see e.g. Cherchi 1997:10).

²⁶ While devising the full questionnaire I conducted a heuristic study eliciting future and conditional forms of conjugational classes I, II, IIIa and IIIb immediately after a future or conditional form of the same or a different class. The speaker did not appear perturbed (eg. no assimilations of IIIb to II or IIIa). In view of this finding, and the additional distraction provided by the alternation of lexical items in the questionnaire, and the different contexts, I concluded that it would not be necessary to include multiple instances of the same item as a control.

present participle, reported both by existing sources and by certain informants as vanishingly rare. The verb *pòner* was also omitted, as having been systematically replaced by a periphrasis of the type *faire l'uòu* 'lay (lit. make) an egg'; and the bare word-forms were replaced by sentences which situated each form in context, e.g. *s'ils avaient connu la guerre ils se plaindraient pas comme ça* 'if they'd been through the war, they wouldn't complain so much'²⁷ for *ils se plaindraient* (eliciting 3pl conditional form of *plànher*). This last development proved to have a number of advantages. Besides its original function of making the task less counterintuitive, it introduced distractions from the precise focus of the questionnaire, and as such not only reduced the potential influence of adjacent items, but could stimulate spontaneous speech, with informants recounting their own memories or daily life, or seizing on the translation of a particular lexical item: would *mens* or *pas tant* be a more natural rendering of 'pas autant'? It was striking that although informants sometimes recognised and commented on repetition of the same frame, the verb form elicited therein appeared much less salient to them; thus informants occasionally protested, on reaching item (98) 'ces jeunes, s'ils avaient connu la guerre ils se plaindraient pas', that they had already translated it, although the prior item was in fact (70) 'si vous aviez connu la guerre vous vous plaindriez pas autant'. Explicit comment on the verb was limited to its meaning, or the suitability of the context, e.g. insistence that only *sembler* could be used for French *paraître*='seem' in (2) 'il paraissait fatigué', or *aver peur* for French *craindre*='be afraid of'.

The use of context further served to signal more clearly which form was being elicited. For instance, the homophony between 1sg future and conditional forms in mine and my informants' variety of French could be resolved by adding an overt marker or placing the target in a subordinate clause where the TAM (tense, aspect, mood) value was forced by the main clause: thus [ire] in (91) 'j'irai au marché demain' is interpreted as future given the overt temporal marker, but in (137) 's'il faisait beau j'irais au marché' must be interpreted as conditional, since

²⁷ *Ne* is deliberately omitted, as it is generally absent in spoken French.

future in this context would be ungrammatical. Similarly, the potential homophony between *il croit* 'he believes' and the desired *il croît* 'he grows' could be avoided by specifying an overt, non-volitional subject *cette plante*, thus directly eliciting *créïsser* or (more frequently, since *créïsser* has often been entirely replaced) its synonyms.

Some adjustment was required during the interviews to accommodate the individual speaker. While it would be fallacious to assume that informants' linguistic capacity and knowledge of the world are exclusively determined by the activities which they experience, the questions on *mólzer* nevertheless proved problematic for certain informants, who had always lived in urban areas where they had never had occasion to talk about milking cows, and protested vigorously that they had no knowledge of this verb. *Córrer* varies in meaning between 'walk', 'walk fast' and 'run', and thus for any given speaker it had to be established whether this verb needed to be elicited with *marcher*, *marcher vite* or *courir*. Some items also had to be removed, such as personal forms of *paréïsser* for those speakers who used this verb only in the impersonal sense of 'it appears that'. The restriction of *paréïsser* to this usage further had a direct impact on attempts to elicit the future and conditional, since while the conditional remained productive as a means of further attenuation, the contrasting functions of this lexical item (used to signify non-assertion) and the future (which typically expresses assertion by the speaker) ruled the combination out on pragmatic grounds; it was not possible to find a context which could force a future for *paréïsser*.²⁸

The revised questionnaire overall proved more approachable to speakers, and reasonably successful in eliciting the requisite data, demonstrating inter alia that the low frequency of future and conditional forms in spontaneous speech should not be taken as indicative of a problem of speaker knowledge, since these forms were readily produced in the translation task.

²⁸ Note also that contexts which according to published descriptions should have forced an imperfect subjunctive sometimes did not. As a result, this form is sometimes missing from the data, though it is probable that the speaker knew and used it.

The production of present forms with future reference, and of go-futures, was notably rare, presumably due to the presence of the French synthetic future (rather than either present or go-future) in the questionnaire; where these forms were spontaneously produced, the synthetic future could usually be elicited by asking 'et après/après-demain/l'année prochaine?', although for some lexemes (e.g. *mólzer* just outside Venès) it proved impossible to obtain a synthetic future or conditional, and the use of the go-future appeared correlated with future/conditional defectivity. This last finding, together with the attestation of asymmetry for *valer* 'be worth' in La Rusa, might be adduced as further instances of the standard language providing a 'negative guarantee'. In French, the future and conditional of *traire* are not defective, nor is asymmetry attested for *valoir*; the fact that informants maintain these forms despite the presence of the standard language with its different structure argues persuasively for the reality and authenticity of the patterns observed in fieldwork interviews.

The full questionnaire is reproduced in Appendix ii. It should be noted that the data obtained through fieldwork interviews did not reveal any hitherto unattested patterns of stem distribution, and systematically confirmed existing data, such as, for instance, the asymmetry between future stem *valdr-* and conditional stem *valer-* noted by Laurent (2001:32) for *valer* 'be worth' in Massat, attested in a fieldwork interview in La Rusa, slightly further up the same valley.

1.4 Summary

The sources available to the present study are diverse, in their form, content, usefulness and accessibility; the data themselves display extensive variation from one region to another; and as a result it would clearly be unrealistic to expect to collate from these sources an exhaustive overview of all varieties, or an unbroken historical record for any one variety. However, while these limitations must be acknowledged, they do not preclude the present study from offering new and valid insight into the structure of verb paradigms in varieties of Occitan, and the changes which can take place therein.

Morphological data are available for a wide range of localities spanning the domain where Occitan is spoken. For the area covered by the *ALG*, *ALLOc* and *ALLOr* these data are reliable, fairly extensive, and directly comparable; some measure of historical depth is offered by textual sources, and by my own fieldwork, which is directly comparable to the atlas data. The data obtained through fieldwork serve to confirm data attested in existing sources, and thereby guarantee that such sources offer robust material to the present study. In the context of comparative Romance morphology, where the scale of investigation typically precludes working exclusively or even mainly from primary sources,²⁹ access to primary data and their use to confirm secondary data are relatively rare; the confirmation of existing data by the present study thus represents an important contribution to the field.

The resulting sample covers a large area, over which extensive variation persists: in the absence of substantial pressure towards dialect levelling or from a prestigious standard, change has proceeded freely, often with quite different outcomes from one locality to another. The data

²⁹ Witness discussion in the present study of data from other Romance languages, and varieties of Occitan for which I was unable to conduct fieldwork; compare also the section 'Origins of the data, and coverage' in the Introduction to the Oxford Online Database of Romance Verb Morphology (<http://romverbmorph.clp.ox.ac.uk/>).

presented here thus offer a diverse sample of morphological developments, some rare or unknown elsewhere in Romance.

The rigorous examination of the reliability of the source material ensures that the data are genuine, and that sound conclusions may be drawn from them.

2. Theoretical preliminaries

In this chapter I discuss a number of theoretical issues concerning the structure of morphological paradigms and the relationship between form and function. I present theoretical approaches including morpheme-based analysis, lexeme-based theories, markedness-based theories and the notion of autonomous morphology, and discuss the potential relevance of these different models for the Romance and particularly Occitan data with which this study is concerned.

As I discuss in §3.2 below, the nature of the semantic relationship between the Romance synthetic future and conditional is not uncontroversially established. The SF and SC are sometimes viewed as having in common the semantic value of futurity, in which case their similarity of form might be seen as directly correlated with their similarity of function. Alternatively, the SF and SC might be considered to have undergone significant functional divergence, a view under which this set of cells might be likened to the set of Romance forms whose Latin etyma had perfective stems — a set identified by Maiden (2000, 2001, 2005a, 2011a) as a ‘morphome’ — in as much as the members of each set retain a shared form despite the loss or attenuation of their originally shared function.

Over the course of the present study, it became clear that although the set of twelve paradigm cells comprising SF and SC appeared to present morphomic characteristics, this set also displayed both greater functional commonality and lesser formal coherence than might have been expected of a morphome, raising the question of whether the distribution of the characteristic SF/SC stem could be attributed in any measure to autonomously morphological phenomena, and if so, what further light its behaviour could cast on such phenomena. I review below existing theoretical approaches, before proceeding to consideration of the Occitan data and their consequences for morphological theory.

2.1 *The classical morpheme*

In structuralist theory, it is assumed that words are composed of 'morphemes', characterised by Anderson (1992:49) in his description of these theoretical approaches as a 'minimal same of form and meaning'. Like the Saussurean sign, the classical morpheme thus associates a signified with a signifier. However, while in Saussure's framework this pairing is held to operate at the level of an entire word, morpheme-based theories assume that individual parts of a word each associate a phonological form with a particular semantic content. Anderson (1992:50) distinguishes the following properties of the classical morpheme:

Morphemes are homogeneous and indivisible atomic units of linguistic form.
Each morpheme in a given word is phonologically represented by exactly one morph, and each morph represents exactly one morpheme.
The morphs themselves are consistently and uniquely (though not necessarily biuniquely) related to surface phonemic form.
[...]
Words are exhaustively composed of morphemes.

According to this theory, it should be possible to separate any given word into a number of constituent parts, each of which links specific and distinct phonological content with specific and distinct semantic content, and which cannot be further dismantled without comprising the relation of form and meaning. The morpheme-based approach is thus compositional, as it assumes that both the form and the meaning of the whole are obtained through addition of the forms and meanings of the constituent parts.

However, while the notion of relationship between elements of form and elements of meaning is intuitively appealing, in practice morpheme-based theories encounter significant problems in accounting for the phenomena of natural language. For inflectional morphology, Carstairs (1987:14-17) proposes a typology of four major deviations from the one-to-one relationship assumed for form and meaning, in which relations may be one-to-many or many-to-one, and may concern exponents within a single word-form (syntagmatic) or across the inflectional

paradigm (paradigmatic). Almost all of these may be exemplified from the sample paradigm given below for the verb *florir* 'flower' in Occitan varieties of the Lengadòc (Alibèrt 1976:122-27).

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	flu'risi	fluri'sjɔ	flu'riskɔ	fluri'gɛri	fluri'gɛsi	fluri'raj	fluri'rjɔ
2sg	flu'rises	fluri'sjɔs	flu'riskɔs	fluri'gɛres	fluri'gɛses	fluri'ras	fluri'rjɔs
3sg	flu'ris	fluri'sjɔ	flu'riskɔ	fluri'gɛt	fluri'gɛse	fluri'ra	fluri'rjɔ
1pl	fluri'sen	fluri'sjan	fluris'kan	fluri'gɛren	fluri'gɛsen	fluri'ren	fluri'rjan
2pl	fluri'sets	fluri'sjats	fluris'kats	fluri'gɛrets	fluri'gɛsets	fluri'rets	fluri'rjats
3pl	flu'risun	fluri'sjɔn	flu'riskɔn	fluri'gɛrun	fluri'gɛsun	fluri'ran	fluri'rjɔn

Table 1. *Florir* 'flower'.

In Carstairs' Deviation I ('one-to-many syntagmatic'), termed 'extended exponence' (Matthews 1972, 1974) a single inflectional property is realised by several different exponents within a given word-form; such is the case for the forms of the prs.sbjv, which is distinguished not only by its inflectional desinences (/ɔ/,/ɔs/ etc. in contrast to prs.ind /i/, /es/ etc. or impf. ind /jɔ/, /jɔs/ etc.) but also by its stem /flu'risk/, found nowhere else in the paradigm. The feature 'mood' with value 'subjunctive' is thus marked both on the stem and on the desinence.

Deviation II ('one-to-many paradigmatic') concerns cases in which the same property or combination of properties has different exponents in different cells of the paradigm. For example, in the preterite and impf.sbjv, the exponent of 1pl is /en/, while in the prs.ind it is /ɛn/ and in the prs.sbjv /an/.³⁰

Indeed, this example additionally illustrates Carstairs' Deviation III ('many-to-one syntagmatic'; Matthews' 'cumulative exponence'), in which a single morph realises several inflectional properties: in the paradigm above, it is not possible to isolate the exponent of person from the

³⁰1pl is, strictly speaking, a combination of two properties, person and number. However, even such combinations may not be compositional. 1sg, for instance, can be argued to have the single meaning 'speaker', while 1pl does not represent a plurality of 1sgs, but the union of 1sg with one or more second and/or third persons.

exponent of number. A more extreme case is that of the desinence /aj/ in the 1sg future form, which is at once the exponent of person, number and TAM features.³¹

Lastly, Carstairs identifies a Deviation IV ('many-to-one paradigmatic', more commonly termed syncretism) in which a single form occurs in multiple cells of the paradigm. Syncretism may operate at the level of the entire word-form, as with the 1sg and 3sg prs.sbjv, which are identical, or at the level of a single formative; in an analysis which considered the stem of the imperfect indicative to be /fluris/ and the stem of the conditional to be /flurir/, it would be possible to speak of syncretism between the desinences of the imperfect indicative and the conditional.

One might conceivably add two further deviations to Carstairs' typology. The first concerns those cases where a feature has no phonological exponent in a given word-form, as in the 3sg prs.ind. While it would be attractive to make the generalisation that the stem in the prs.ind is systematically /fluris/, under this analysis there would remain no phonological content to isolate as a morph for 3sg, forcing the conclusion either that this semantic content has no exponent, or that its exponent is a 'zero morph', that is, a morph without phonological content. The other concerns cases of 'empty morphs', in which a given piece of phonological content lacks semantic content: Anderson (1992:53-54) gives the example of Romance thematic vowels (e.g. /i/ in the fut and cond of *florir* above), which he treats as 'simply necessary morphological glue' since they do not contribute information on any grammatical category expressed by the verb.³²

It may accordingly be seen that the properties ascribed to the classical morpheme are, in a number of cases, at variance with the observed behaviour of Romance inflectional morphology;

³¹See §3 below for discussion of the TAM values associated with the 'future'.

³²Or, indeed, its lexical meaning. Note however that the theme vowel may contribute abstract morphological information, as discussed under §2.2.1.

and I will claim in the present study that the stem distributions found across future and conditional forms rank among those phenomena which cannot be satisfactorily captured within a morpheme-based analysis. Traditional accounts of the western Romance future and conditional have tended to identify a common morpheme assumed to have the meaning 'future': since the synthetic future and synthetic conditional can be analysed as sharing a distinctive morph (whether the segment /r/ or a distinctive root allomorph found only in these two screeves), and both are argued to express futurity, the morph which they share is treated as a morpheme associated with the meaning of future. However, as I discuss in §3 below, the extent to which it is justified to claim functional commonality between the future and conditional is not as straightforward an issue as the traditional assumption of both being futures might suggest; while the Occitan data discussed in §6 below, in which future and conditional show formal divergence acting independently of their functional relationship, are highly problematic for a morpheme-based analysis which seeks to establish a consistent relationship between form and function.

2.2 *Word and Paradigm approaches*

Romance inflectional verb morphology is potentially better handled within an approach of the type labelled Word and Paradigm (Hockett 1954, Robins 1959) or Extended Word and Paradigm (Anderson 1982), which treats as fundamental the lexeme with its complete array of forms. In these approaches, relationships of form and meaning are assumed to hold at the level of the word, rather than applying to individual morphemes within the word.

Stump (2001) characterises such theories as inferential and realisational, in the context of a typology of theories of inflectional morphology defined on the basis of two oppositions, lexical vs. inferential and incremental vs. realisational.

In a lexical theory, affixes are assumed to be stored in the lexicon labelled with the list of morphosyntactic properties they signify (e.g. in the lexicon of English there is a form *-s* signifying 3sg.prs.ind); in an inferential theory, the list of properties is associated not with an object but with a rule (*-s* can be suffixed to a root *X* and this process is correlated with the presence of features 3sg.prs.ind). In an incremental theory, it is the addition of inflectional exponents which causes a word to bear the relevant morphosyntactic features (a verb acquires the features 3sg.prs.ind by virtue of the suffix *-s* having been added); in a realisational theory, it is the fact of a word bearing those features that licenses the appearance of their exponent (if a verb bears features 3sg.prs.ind then the suffix *-s* can legitimately be attached to it).

Since the two distinctions are independent, four types of theory can logically be envisaged — lexical-incremental, lexical-realisational, inferential-incremental and inferential-realisational — and in fact all four have been proposed. Stump contends that it is the inferential-realisational type of theory — Word-and-Paradigm approaches, in which the set of morphosyntactic features associated with a given word allow rules to be applied to it, realising the formal exponents of those features — which can offer the most satisfactory account of inflectional morphology.

In particular, realisational theories are better placed to handle extended exponence (in an incremental theory, the base assumption is that morphosyntactic properties should have at most one exponent, since one should suffice to contribute the relevant information and hence it would be difficult to motivate the addition of more) and instances where not all the morphosyntactic properties of a word have formal exponents (since these functional properties are associated with the word right from the start, rather than it being necessary to acquire them from whatever inflectional material is added). Stump argues that these theories also allow potentially unmotivated theoretical distinctions to be dispensed with. They do not require a distinction to be made between concatenative and nonconcatenative inflectional processes, nor between properties which form part of the content of an affix and properties which specify the

context(s) in which it can occur, and they do not assume that all words must have an internal hierarchical structure.

Furthermore, the fact that Word and Paradigm theories recognise the inflectional paradigm means that these theories allow for description of distributions which are more readily characterised in terms of the paradigm cells they involve than in terms of conventional functional or phonological criteria — the 'autonomously morphological' distributions identified by Aronoff (1994).

2.2.1 *Autonomous morphology*

Aronoff (1994) discusses a number of cases in which word-forms within an inflectional paradigm systematically share a stem, but in which the functions associated with these word-forms are sufficiently disparate that it is impossible to assign any particular meaning to the given stem, beyond its lexical content. A particularly salient example is that of the Latin formative which Aronoff terms the 'third stem', and for which he identifies 'nine reasonably productive form types' (1994:37). The third stem appears in the perfect participle, supine, and future participle³³; with three nominalising derivational suffixes³⁴; and in three types of derived verb forms. Aronoff argues that there is no semantic property common to these forms, and hence that the formal identity of their stem cannot be motivated on functional grounds; he rejects previous analyses which have tried to claim that certain of these forms are directly derived from others, notably attempts to derive the future participle from the past participle or supine. To capture the systematic distribution of the third stem without appealing to functional commonality or derivation of one form from another, Aronoff suggests that syntactic values are

³³ With a number of exceptions, to which Aronoff pays relatively little attention (1994:32,177n9).

³⁴ Agentive -OR, and abstract -IO(N)- and -UR- in Aronoff's presentation; also verbal nouns in -TUS and adjectives in -ORIOUS.

mapped onto phonological forms not directly, but via an abstract level of purely morphological structure — the 'morphomic' level (1994:25).

In this framework, it becomes possible to envisage a specific set of paradigmatic cells mapping systematically to the same morpheme, and hence to explain morphological phenomena (such as patterns of formal identity) which make reference to this set of cells, without needing to appeal to processes of derivation for which there is little if any evidence.

Maiden's work on the Romance verb has since confirmed, from diachronic evidence, that morphomic distributions, despite their lack of functional³⁵ motivation, nevertheless have psychological reality for speakers. Contrary to any expectation that they should be eliminated in the interests of increased regularity or functional coherence, morphomic patterns in the Romance verb are not only maintained but also reinforced, and can further serve as productive templates for the distribution of forms within the paradigm (see e.g. Maiden 2011a:245 for examples of this last phenomenon).

Among the morphomic patterns identified by Maiden is that which he labels PYTA,³⁶³⁷ and which comprises the reflexes of Latin perfective forms. In the Latin verb system, the functional distinction of imperfective and perfective aspect is diagrammed by a formal distinction of stem allomorphs; perfective forms thus display formal identity motivated by functional commonality. However, in the transition to modern Romance, the functional commonality is lost: in most varieties of Occitan, for example, Latin perfectives have variously become the preterite and the imperfect subjunctive while some areas additionally present a conditional deriving from the

³⁵ In the sense of semantic or (morpho-)syntactic. Arguably, autonomous morphology is not entirely devoid of function, witness the case of thematic vowels which, although without semantic content, provide information on the inflectional behaviour of the rest of the paradigm.

³⁶ Abstract label, derived from the acronym *perfecto y tiempos afines* used in traditional Spanish grammar to denote the relevant forms.

³⁷ PYTA is chosen for the purposes of illustration as the closest potential analogue to Fuèc, both being in Smith's (2010) typology 'TAM morphemes', as opposed to 'person/number morphemes' such as the N-, L- and U- patterns also identified by Maiden (see eg. 2005a, 2011a for an overview).

Latin pluperfect indicative (see §3.2.7 below). Maiden argues that there is no sense in which this group of screeves could be considered to form a natural class.

In the Spanish examples given by Maiden (2011a:179), neither perfectivity nor past temporal reference now constitutes a common semantic value uniquely diagramming the distribution of the PYTA stem. The preterite is alone in retaining exclusively perfective aspect and indeed exclusively past temporal reference; the so-called 'imperfect' subjunctive is at most aspect-neutral, and certainly not confined to past reference. The traditional term of 'past' participle is likewise misleading: this form, which may conserve a distinct root or alternatively pattern with the preterite and imperfect subjunctive as part of PYTA, is not intrinsically past or perfective.³⁸

Nevertheless, despite this significant functional divergence, Romance forms deriving from Latin perfectives consistently preserve the formal identity of their stem (Maiden 2005a, 2011a), even in cases of analogical change; Maiden cites among other examples data from Alibèrt (1976:110-11) in which the inherited PYTA root has been supplanted in both the preterite and imperfect subjunctive by a non-PYTA root (e.g. *jonhèri, jonhèsse* for older *jois* 'join, yoke'), and in which the root of the present subjunctive has been analogically extended, but, far from diagramming the natural class prs.sbjv+impf.sbjv, has spread throughout PYTA (e.g. *agèri, agèsse* on *aja* 'have'). Crucially, only the root is affected; the inflectional endings do not pattern together (Maiden 2011a:182).

Consideration of the Romance data leads Maiden to identify two symptoms of the psychological reality of putative morphemes, which he labels 'coherence' and 'convergence'.

In 'coherence', the outcomes mentioned above [e.g. identity of forms derived from Latin perfectives] show persistent resistance to any morphological change liable to disrupt their peculiar paradigmatic distribution. If an analogical change affects one 'cell' of the paradigm in which the relevant allomorph occurs, it affects

³⁸Compare Aronoff's (1994) discussion of the English perfect participle, which occurs in passive as well as perfective constructions.

all the others in the same way. The relationship of mutual implication between 'cells' always survives intact. (2005a:139)

In 'convergence', the set of paradigmatic cells affected by the original change tends over time to acquire certain common phonological characteristics across all verbs in which they occur — a development akin to classic analogical levelling of the 'one meaning — one form' type, except that here there is no 'meaning' outside the morphomic pattern itself. (2005a:139-40).

Thus, for a given lexeme, the paradigmatic distribution of a morphomic identity remains constant, and, across lexemes, stems corresponding to a given morphome come to resemble one another.³⁹ Both types of development involve the treatment of the morphome as a unit; in convergence, this unit is hypercharacterised.

2.2.2 *Weakly morphomic phenomena*

The examples which Aronoff (1994) adduces to illustrate the concept of 'morphome' present systematic formal regularity entirely without functional or phonological underpinning. However, it should be noted that he explicitly labels these as the 'clearest' cases of autonomously morphological phenomena (1994:167). In Aronoff's model, all morphological mappings between syntactic features and phonology must pass via the morphomic level, including cases of what appear to be direct mappings between form and function. The model thus allows for the possibility of the morphomic level interacting with phonological or syntactic (and by implication semantic) factors, and although Aronoff does not identify any cases of such interaction, he predicts that they exist:

not all mappings from syntax to morphology are necessarily so indirect. It is possible to have a singleton morphosyntactic set mapped onto a singleton morphomic set, which itself is mapped onto a singleton morphophonological set [...]. It is also possible to have cases intermediate in complexity between the two extremes. (1994:25).

³⁹It should be noted that, since morphomic patterns do not always involve identity, morphomes do not invariably display coherence and convergence (Maiden 2011c, discussed in §2.2.2 immediately below). This does not, however, detract from the usefulness of the concept with respect to cases of stem identity.

The existence of such phenomena, in which the autonomously morphological interacts with the functional or phonological, might *prima facie* be assumed to undermine the concept of autonomous morphology. However, it is crucial to consider the nature of the interaction. Phenomena which present an element of extramorphological motivation, but which are underdetermined by such factors, must constitute further evidence for the existence of autonomous morphology, since extramorphological motivation is manifestly insufficient to account for these cases. The possibility of interaction may thus be viewed as not reducing but on the contrary extending the range of instances where autonomous morphology may potentially be involved, such that it encompasses many more cases than those for which all suspicion of semantic, syntactic or phonological motivation has been excluded. As a result, the existence of 'intermediate' cases leads to a far wider general implication: if we find a functional or phonological motivation which appears to explain a given phenomenon, we are no longer justified in automatically considering it sufficient in isolation, but must look at it more critically to ascertain whether any further (e.g. formal) motivation is also at work.

'Weakly morphomic' phenomena of the type at issue, though predicted by the initial theoretical model, have until recently received very little attention; this is likely to be due to superficial attribution of such patterns to extramorphological factors alone. However, a case of interaction between phonological and purely morphological factors is documented for Daco-Romance by Maiden (2011c), who sees in it an example of a 'phonologically conditioned morpheme'.

Maiden's study concerns the stem distributions which he terms L- and U- pattern, both of which result from ancient and now extinct sound changes (see Maiden 2005a, 2011a for details). For the Daco-Romance varieties under discussion here, the two distributions are near identical. In the L-pattern, a distinctive stem alternant is found in the 1sg.prs/sbjv, the 3sg.sbjv, the 3pl.sbjv and the gerund, while in the U-pattern, the distinctive stem alternant additionally occurs in the 3pl.prs, though not in fourth-conjugation gerunds (Maiden 2011c:63, 65):

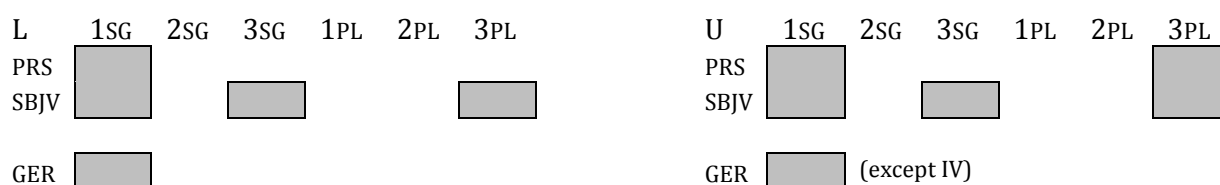


Figure 16. L- and U-pattern distributions (after Maiden 2011c).

Neither of these formal distributions can be considered to diagram a natural class. However, as Maiden (2011c:66-71) shows, both patterns are analogically extended in Daco-Romance to affect verbs in which they were not historically present: moreover, it is clear that the analogical model is the abstract distribution rather than the individual pairs of alternants, since certain of the analogical extensions involve entirely novel alternations for which there is no precedent. These patterns persist over a long time-span, presenting entire formal coherence.

However, it is striking that, in subsequent instances of analogical levelling which eliminate the distinctive stem alternant, the formal coherence observed is much less systematic. The L-pattern is much more susceptible to levelling than the U-pattern; verbs with root-final dental stops undergo levelling more often and in a wider range of localities than verbs with a root-final nasal or /r/; and, most crucially for the point at issue here, many cases of levelling are asymmetric (in Maiden's terms 'incoherent'), affecting only some of the cells of the thus far morphomic distribution. Not only is there variation as to the cells which levelling affects — only the gerund, all except the gerund, only the 1sg forms or only the 3.sbjv forms — but such variation exists between lexemes in any single variety.

It should further be noted that non L-pattern cells which as a result of more recent sound change display a stem alternant resembling or identical with the distinctive L-pattern alternant are not affected by levelling; that while levelling is coherent across finite members of the L-pattern for verbs with root-final dental stops, these are precisely the verbs whose gerunds are *not* levelled; and that where the L-pattern alternant is evicted from the gerund it is in several

instances replaced by an entirely novel form rather than the alternant found in the cells of the 'L-pattern complement', i.e. those cells of the paradigm which do not participate in the L-pattern.

Taken together, the complex and detailed data presented by Maiden resist explanation in either purely phonological or purely morphological terms. Instead, both types of motivation appear to have played a role.

For instance, it may be noted that there is some degree of correlation between the cells in which the specific alternant occurs, and cells which present inflectional desinences with a non-front vowel; the correlation is significantly better in the U-pattern cases. Correspondingly, the U-pattern (involving velar alternants), is, unlike the L-pattern, not susceptible to analogical levelling, which suggests that phonological context may have a role in supporting morphological coherence.

However, phonology is not sufficient to account for all the patterns observed in these data from Romanian. Synchronically, the correlation between the presence of the L-pattern stem alternant and of non-front vowels is both imperfect and stable, with the result that any attempt to capture the distribution in terms of phonological criteria must also have recourse to morphological specification: the alternant occurs 'before non-front vowels except for the 3rd person plural present, and except for the preterite, pluperfect and past participle', or 'wherever, in the present, subjunctive, or gerund, a back vowel turns up' (Maiden 2011c:83). Furthermore, L-pattern allomorphy is sometimes extended into one or two first-conjugation verbs, where there is no historical precedent for it, and where the hypothesis of phonological conditioning by non-front vowels would predict quite a different distribution of the stem alternant. In the case of the U-pattern, Maiden argues that the gerund /fugɨnd/ of fugi 'run' can only be explained by assuming that the original palatal stem consonant is first replaced by a velar on the analogy of

all other U-pattern verbs, and that the identity of the following vowel is subsequently adjusted; the reverse ordering is, if not impossible, highly implausible, since the replacement of one vowel by another in the gerund ending would be ad hoc and unmotivated. This change is genuinely morphomic and reflects the distributional pattern of velars found in other verbs, but at the same time confirms that speakers sense a correlation between the phonological identity of the consonantal alternant and that of the following vowel.

Thus, while the Romanian data presented here are not entirely coherent, and in some respects show a correlation with phonological context, the alternations involved cannot be described as context-sensitive, since the very context appears sensitive to the phenomenon it would be invoked to condition. Maiden (2011c:86) argues that '[w]hat is actually at issue is a set of forms having in common the property of possessing a non-front vowel', and that this set of forms thus constitutes 'an arbitrary *morphological class*'. The observed distributions and analogies argue for an irreducible core of purely morphological motivation. It is not merely the case that the L- and U-patterns have no semantic underpinning; even their phonological underpinning is a rather abstract one, since the phonological features of the observed alternants are not congruent with those which a following back vowel might be expected to induce, whether in the light of universal tendencies or of the particular phonotactics of Daco-Romance.

On the precise nature of the observed distributions, Maiden (2011c:85) concludes:

The evidence is that speakers of these varieties really have made a 'morphomic' generalisation across a synchronically arbitrary set of paradigm cells, but that, unlike the 'canonical' examples of morphemes, involving stem identity, what the western Daco-Romance data suggest is a probabilistic implicational hierarchy between cells [...] What is also clear from the diachronic evidence is that all these implicational bonds are greatly reinforced, in all directions, if there is also a phonologically specifiable cue in the form of a non-front vowel at the beginning of the inflectional ending.

What Maiden's data show is that a degree of phonological motivation may accompany a purely morphological distribution: just as Aronoff initially predicted, there exist 'weakly morphomic' phenomena in which morphological and extramorphological factors interact. The fact that such

phenomena can exist on the interface of morphology and phonology opens up the theoretical possibility of finding weak morphemes on the interface of morphology with semantics, and I explore in the following chapters the possibility that the set SF+SC constitutes precisely such a case.

2.2.3 *Paradigm Function Morphology*

Stump (2001) proposes under the name of Paradigm Function Morphology (henceforth PFM) a theory within the Word and Paradigm type, which seeks to make explicit the nature of the separation of form and function, and how the two may be linked.

Central to Stump's approach is the assumption that the paradigm is crucial in the organisation of a language's inflectional morphology, given that the behaviour of word-forms frequently depends on, or makes reference to, the paradigm cell which they occupy (e.g. the word-form for one cell may be systematically the same as, or deducible from, the word-form in another cell). Stump introduces the concept of the paradigm function, which he defines as 'a function which, when applied to a lexeme L, paired with a set of morphosyntactic properties appropriate to L, determines the word form occupying the corresponding cell in L's paradigm', and contends that defining the paradigm function and defining the inflectional morphology of the language concerned are one and the same operation.

The paradigm function itself consists of 'realizational rules' which map a pairing of root + set of morphosyntactic properties onto an inflected form;⁴⁰ the basic condition is that a cell which associates a word-form W and a set of morphosyntactic properties σ is well-formed if there are rules in the paradigm function which can relate the word-form to the root of the lexeme at issue.

⁴⁰The nature of these rules is not entirely clear: while the paradigm function, and thus its constituent elements, is described as a static wellformedness condition (2001:33), the frame of the rules relating roots to stems and to whole forms might suggest a process of generating the requisite form.

It is assumed that each lexeme has only one root, but may have multiple stems; the roots are covertly indexed as to which lexeme they are associated with.

The set of morphosyntactic properties is tightly constrained. Each property is the pairing of a feature (e.g. voice, mood, gender) with a given value (e.g. active, indicative, masculine respectively): thus the feature must be a possible feature for the lexeme concerned, and the value must be a possible value for that feature. For any given cell a feature may have only one value. The set of possible features, the set of possible feature-values, and the set of properties which can co-occur for a given cell are defined for the individual language as part of its paradigm function.

The set of paradigm cells is defined by the set of complete well-formed property sets (such a set being one to which no further feature or value may be added without compromising its wellformedness): to each complete σ corresponds a paradigm cell.

The word-form occupying the cell is chiefly determined by the application of realizational rules. Each realizational rule is indexed for the class of lexemes to which it can apply, the set of properties which it realises, and the rule-block of which it forms part (prototypically, a 'block' corresponds to an affixal slot, all rules which may realise material in the given affixal slot occupy the same block, and which one of them is applied in a particular case is decided on the criterion of narrowness, that is to say that the most specific rule wins); these rules are of similar form to the paradigm function, but unlike the paradigm function they are not restricted to applying to a root pairing and mapping to a whole word-form — a realizational rule can have a stem + property set pairing as its input or output.

The class of realizational rules can be divided into rules of exponence (as discussed above) and rules of referral (which capture syncretism at the level of inflectional exponents or of the whole

word-form). Alongside these realizational rules, PFM admits morphomic rules — rules of stem formation and stem indexing — which explicitly address arbitrary patterns of stem distribution.

The assumption is that a lexeme may have multiple stems, and that these stems can be designated with abstract indices. Informally, these indices correspond to labels such as 'first stem'/'second stem', as Stump uses for Bulgarian, and 'strong stem'/'weak stem' as used for Sanskrit; the crucial point is that the index does not make direct reference to any morphosyntactic property. Realizational rules can then be specified for the index of the stem to which they apply; rules which do so are labelled 'stem selection rules'. The index of the stem is stipulated either in the lexicon or by a stem-indexing rule.

By introducing this discontinuity between the phonological form of a stem and the morphosyntactic properties with which the stem is associated, PFM admits a purely morphological level of structure; Stump frames the theoretical assumption underlying this approach as the 'Indexing Autonomy Hypothesis', which states that '[t]he determination of a stem's index is in principle independent of the determination of its form', i.e. there is no a priori link between a given contrast in phonological form and a contrast in stem indexing. However, while PFM does not proceed from the assumption that phonological form is correlated with stem indexation, it does not *exclude* the possibility of such correlation either. Where correlation exists, it can be captured as part of a stem formation rule; these last are the rules which account for the inventory of stems presented by a given lexeme, and may encode phonological generalisations about stem formation or specify a suppletive form.

Since the PFM model is explicitly structured in such a way that it accommodates a morphomic level, this theory is well-equipped to describe autonomously morphological distributions, just as well as the apparently functionally motivated ones. However, it is best-equipped to do so at a synchronic level, since the object of this model appears to be to describe one inflectional system

at a given point in time. Stump certainly admits diachronic data, discussing, for example, the processes of reanalysis involved in word-to-stem derivatives and how this series of processes would correspond to redefinition of rules within his model (2001, ch. 6). Nevertheless, such a redefinition of rules is implicitly presented as an instantaneous and definitive change; it is unclear what place, if any, this rigorous and precise formalism would leave for modelling the variation observed in natural language, where even a single speaker (a priori, a single inflectional system) may vary between forms over a period of time.

It is also interesting to consider the mechanics of the realisational rules, and the division of wordforms into constituent formatives. Although PFM belongs to the Word-and-Paradigm type of approach, which a priori takes the wordform as its basic unit of analysis, the building up of words from roots and affixes is not without resemblance to the concatenative processes of morpheme-based theories. As Blevins (2006:534) points out, 'most contemporary "word and paradigm" approaches are more accurately described as "stem and paradigm" models', since these are 'constructive' approaches in which words are derived individually from minimal forms. Blevins contends that such derivations in isolation are less psycholinguistically plausible than 'abstractive' approaches, which assume that the lexicon contains full forms, and that a speaker may make abstract generalisations across these forms while continuing to store the forms themselves: abstractive approaches are better placed to account for patterns of analogy and for frequency effects involving a set of related forms. Rather than the relations of derivation proposed by theories such as PFM, Blevins' study suggests that for speakers the crucial relation between forms in a paradigm is instead one of predictability.

2.3 *Markedness-based approaches*

2.3.1 *Natural Morphology*

The Natural Morphology approach, associated with a group of scholars including prominently Wurzel, Dressler and Mayerthaler, seeks to account for linguistic phenomena in terms of markedness theory. This approach posits a number of principles, each of which favours change increasing the 'naturalness' of the system (i.e. decreasing its markedness⁴¹) with respect to a given criterion. Some of the principles are universal, founded in the cognitive base and communicative function of language (see Dressler 1987:11-12), while others are language-specific and seem essentially to reduce to a question of frequency, 'natural' corresponding more or less to 'majority pattern'. These ideals of naturalness are not all mutually compatible; Natural Morphology represents an attempt to establish a principled account of which are satisfied when, and why.

The original hierarchy as set out by Wurzel (1987) recognises five principles, three which refer to universal criteria of naturalness, and two which refer to language-specific criteria. To account for examples (Wurzel 1987:60-61) where morphological systems undergo changes contrary to universal principles of naturalness, it is assumed that the principles referring to language-specific criteria must rank above the others. Wurzel's first two principles, of apparently equal ranking (the question is not raised by Wurzel himself, and is explicitly avoided by Wheeler (1993)) are hence :

⁴¹The term 'markedness' in linguistics is a vague and ill-defined one. Haspelmath (2006) finds twelve distinct senses of the term, ranging from phonological or semantic distinction through phonological or morphological complexity to restricted distribution or crosslinguistic rarity. For the cases discussed by the Natural Morphologists, Haspelmath argues that their concept of morphological unnaturalness is in fact a manifestation of frequency of use (itself directly determined by cognitive and communicational factors), and thus that there is no need to invoke an intermediate and probably redundant level of 'markedness' or 'naturalness'.

- SYSTEM CONGRUITY, which 'favours inflectional systems which are structured typologically in a uniform and systematic way with respect to the main parameters of the respective system'
- CLASS STABILITY, which 'favours inflectional systems whose inflectional classes are independently motivated and whose paradigms follow implication patterns that are as general as possible'

The principle of system congruity tends towards eliminating minority inflectional patterns. By way of illustration, Wurzel (1987:66) cites the example of the instrumental case in Old High German, which 'occurs only in the singular of a few inflectional classes'. The presence of a distinct instrumental case form is thus a rarity which contrasts with the majority pattern within the OHG system (namely, that of a paradigm with only 4 different possible values for case); in Wurzel's terms, it is not system-congruent. The form later disappears, a change which, for Wurzel, operates to restore system-congruity by bringing the 5-case inflectional classes into line with the 4-case ones. In essence, system congruity is a question of frequency: low frequency patterns within a system are eliminated in favour of high frequency patterns. (Wurzel's example implies type frequency, but token frequency is also plausible).

The principle of class stability is concerned with how items with given extramorphological properties (phonological shape or semantic features) are organised into inflectional classes; a stable inflectional class is one which comprises all or most items with a given property (e.g. plural nouns, feminine nouns, modal verbs...). Again, this is to a large extent a question of frequency — Wurzel is suggesting that the most common inflectional pattern for a given set of items will be generalised at the expense of patterns which only concern a few items in the set. However, class stability is also linked to predictability: the closer a language is to a biunique relation between extramorphological property and inflectional class, the more predictable, and hence learnable, class membership will be.

Wurzel then posits three universal principles:

- UNIFORMITY AND TRANSPARENCY, favouring 'inflectional systems which are structured according to the formula 'one function - one form'
- CONSTRUCTIONAL ICONICITY, favouring 'inflectional systems which encode unmarked categories as non-feature-bearing and marked categories as feature-bearing'
- PHONETIC ICONICITY, favouring 'systems in which certain categories are encoded by congruous phonetic means'

The principle of phonetic iconicity is concerned with phenomena such as the presence of high front vowels in diminutives. Wurzel observes in a footnote that its effects are likely to be confined to derivational rather than inflectional morphology, and Wheeler (1993) that it is in any case of limited scope since there are far fewer phonemes than categories; both agree on its position at the bottom of the hierarchy.

The principle of uniformity and transparency favours biunique relationships, uniformity in the case of functions with a single exponent, and transparency in the case of forms with a single function.

The principle of constructional iconicity is concerned with the reflection of meaning by form: the more marked a function, the more marked the corresponding form. (Markedness of function consistently evades definition, but can be diagrammed by frequency; markedness of form typically corresponds to having more phonological substance).

Wheeler (1993:103-04) proposes a slight modification of Wurzel's hierarchy, on the basis of data from a number of Romance languages in which countericonicity due to regular sound change is repaired, but without respecting the principle of uniformity and transparency.

Wheeler presents data from old Catalan (Table 2) in which the first person singular form of the present subjunctive is no more marked in form than either the third person singular present subjunctive or the first person singular present indicative; while the third person singular present indicative is formally more marked than the third person singular present subjunctive.

	prs.ind	prs.sbjv
1sg	<i>cant</i>	<i>cant</i>
2sg	<i>cantes</i>	<i>cants</i>
3sg	<i>canta</i>	<i>cant</i>

Table 2. Prs.ind and prs.sbjv in Old Catalan.

The countericonicity is repaired diachronically.⁴² However, although Wurzel's ranking of uniformity and transparency over constructional iconicity leads us to expect that such a repair would not increase deviations from biuniqueness, in modern NW Catalan (Table 3) the outcome of the repair is syncretism of present indicative and present subjunctive in both 2sg and 3sg.

	prs.ind	prs.sbjv
1sg	<i>canto</i>	<i>cante</i>
2sg	<i>cantes</i>	<i>cantes</i>
3sg	<i>cante</i>	<i>cante</i>

Table 3. Prs.ind and prs.sbjv in modern NW Catalan.

On the basis of these data, Wheeler concludes that avoidance of countericonicity must rank above uniformity and transparency. However, he also notes that in a number of other Romance varieties, repair of countericonicity does respect uniformity and transparency. As a consequence, neither possible ranking of Wurzel's two principles will furnish correct

⁴²How countericonic these data actually are is open to question. While in a framework such as Bybee's (eg. 1985) the 3sg present indicative is assumed to be intrinsically unmarked, Croft (2003:160-61) makes the point that the hierarchy of person markedness can vary according to context, and it is obvious from first principles that text type will have a significant effect on relative frequency. One might also argue (see eg. Maiden 2005b) that the subjunctive is, from a semantic point of view, less marked than the indicative, since it carries less information. As a result, however intuitively appealing Wheeler's assumption that the 3sg present indicative is functionally less marked than the 3sg present subjunctive, and the 1sg present subjunctive functionally more marked than either the 3sg present subjunctive or the 1sg present indicative, it should not be taken for granted.

predictions for all the data. Wheeler's solution is to split out, from constructional iconicity in general, a principle which he terms 'avoidance of countericonicity', and rank it above both Wurzel's original principles.

Wheeler further adds a seventh principle, ranked between this last pair (and hence fifth overall in his new hierarchy), which he labels the principle of 'markedness in syncretism', and which 'favours the syncretism of morphosyntactic categories in the context of association with other semantically marked rather than semantically unmarked categories'. Wheeler appeals to this principle as an explanation for why, in the Catalan data above, the distinction of indicative and subjunctive is maintained in the first person but not in the (less marked) third person.

The approach as a whole is intuitively appealing, but not without its shortcomings; Maiden (1996b, 1997) adduces a number of examples which appear problematic.

Among them is an example used by Wurzel to illustrate system congruity, namely that of inflectional changes in the neuter noun in Old High German. In isolation, this example appears to demonstrate Wurzel's point straightforwardly: roughly 75% of OHG neuter nouns are invariable between singular and plural, while 25% have zero inflection in the singular and an affix in the plural; by analogical change this remaining 25% come to be invariable too. However, this change flies in the face of the *overall* majority patterns present in the language, since masculine and feminine nouns in OHG have distinct forms for singular and plural. The explanation in terms of frequency also raises the question of how great a majority a pattern needs to have in order to replace less common patterns. 75% unequivocally represents a majority, but, as Maiden (1997) asks, what of 65%, or yet 51% ? Whatever cut-off point is drawn — and surely there must be one, since to speak of majority and minority patterns implies a quantitative difference — risks being uncomfortably arbitrary.

Maiden (1997) further presents the example of a vowel alternation in Romanian which 'is of analogical origin in all but two of the lexemes in which it now appears', and is without precedent either in the form which the alternation takes (alternation of stressed vowels) or in the class of words which it affects (certain feminine nouns) — not at all the sort of innovation which the principle of system congruity would be expected to favour. In similar vein, a development affecting the gerund of certain Romance varieties (Maiden 1996b, 1997) occurs such that an identity arising by phonological accident between the gerund and the L-pattern cells in a handful of verbs — and hence not a majority pattern in the system — is extended into lexemes where it was not historically present; and a development in the Occitan varieties of Roègue (Maiden 1996b) whereby a passing similarity between the present subjunctive+gerund complex and the preterite in certain verbs has extended the present subjunctive/gerund root right through PYTA. As Maiden argues, these are not changes which Wurzel's principles would lead us to expect:

The problem with the Romance gerund is that it violates the third principle [...] and fails the first two (it is not structured in a uniform and systematic way in accord with the main parameters of the system and it does not follow a maximally general implicational pattern. (1996b:195)

Nevertheless, since such changes take place, they must be accounted for. Maiden suggests that speakers are chiefly concerned with predictability: there may not be a precedent in the system for a given identity or alternation, but its inclusion in the system is not necessarily problematic provided it can be given a coherent, predictable distribution.

2.3.2 *Work of Joan Bybee*

The work of Joan Bybee resembles that of the Natural Morphologists in seeking to explain the direction of morphological change in terms of markedness. However, Bybee is chiefly concerned with the single factor of frequency, which she examines in detail. She argues that

while there is a link between the frequency and the productivity of a given pattern, the two do not enter into a simple proportional relationship: in particular, type and token frequency, which behave differently, must be distinguished from one another.

Type frequency is closely correlated with productivity, firstly because it emphasises the pattern at stake (the more first-conjugation verbs a speaker hears, the more they hear the inflections a first-conjugation verb takes) and secondly because the higher the type frequency, the higher the likelihood of coming across items of this type which have medium and low token frequency; Bybee argues that items of lower token frequency are more likely to have their structure analysed by the speaker⁴³. As a result, not only is the inflectional pattern commonly heard, but the speaker is aware of its existence as a pattern. The type acquires lexical strength through frequent repetition (2001:120).

High token frequency, on the other hand, can decrease productivity. High token frequency items are more likely to be lexically autonomous and hence more likely to be perceived not as members of a class but as individual items. Correspondingly, a pattern found in a high token frequency item may well be perceived not as a pattern which can be generalised, but as an isolated phenomenon affecting this single item, and where a linguist might a priori suppose a class of two or three verbs which behave similarly, for the speaker there may simply be two or three individual verbs with no connection between them. Bybee suggests that a single verb is probably not enough to trigger analogical change, whatever its token frequency (2001:123-25).⁴⁴

High token frequency items are also more susceptible to phonological change: the more an item occurs, the more opportunities there are for it to undergo change resulting from articulation,

⁴³Neither the original research nor this presentation of it intends to suggest that this analysis is undertaken at a conscious level.

⁴⁴Though Bybee & Pardo's (1981) nonce-verb experiment demonstrates that a low type-frequency pattern can be generalised if it is the only solution available for a given stem shape.

hence items with high token frequency are liable to undergo idiosyncratic changes which are not attested elsewhere in the language (2001:58).

On the other hand, high token frequency items are less susceptible to analogical change: in Bybee's model, where lexical representations are assumed to be created and reinforced as the speaker hears tokens of a given phonological string, high frequency items will — precisely by virtue of their high incidence in speech — have lexically strong representations and thus be more resistant to analogical spreading of forms. Those forms most likely to undergo analogical change will be low-frequency irregulars — that is, those which have high type frequency to sustain a general inflectional pattern, nor high token frequency to reinforce a distinctive irregular pattern. Only a very high frequency paradigm can support a large number of irregular forms (1985:57-58).

Together, the frequency, semantic category and regularity of a word-form determine how likely it is to have its own lexical entry, a property which Bybee terms lexical autonomy. In her framework, frequent and irregular words are expected to have a high degree of lexical autonomy, since a frequent word is more likely to be learnt by rote and stored independently, and a word which cannot be regularly derived *must* be stored in the lexicon), while words which are derived or restricted in function are less likely to have a separate lexical entry (1985:57).

Bybee suggests that relative lexical autonomy determines the direction of change; she posits a 'basic-derived relation' holding between a more and a less autonomous form which are 'closely related morphologically, that is in both content and form' (1985:58) and claims that in change the 'derived' form is typically remodelled on the 'basic' form. Two main sources of evidence lead her to conclude that 3sg is the canonical 'basic' form in the verb paradigm:⁴⁵ she adduces data from language acquisition showing that 3sg is the first form acquired, and that the child

⁴⁵ Although there may be variation in the identity of the 'basic' form between lexical items.

initially attempts to construct the whole paradigm using the 3sg prs.ind as a stem (1985:51); and she also considers diachronic data from varieties of Occitan and Spanish in which an originally morphologically complex 3sg preterite form has been reanalysed as a stem with zero person/number marking, and spread to the other cells of the preterite, replacing their original stem (1980, 1985:56), as in the examples from Ronjat (1937:192-93) given below:⁴⁶

Foish		Clarmont ⁴⁷	
1sg	<i>cantègui</i>	1sg	<i>cantete</i>
2sg	<i>cantègues</i>	2sg	<i>cantetes</i>
3sg	<i>cantèc</i>	3sg	<i>cante</i>
1pl	<i>cantèguem</i>	1pl	<i>cantetem</i>
2pl	<i>cantèguetz</i>	2pl	<i>cantetetz</i>
3pl	<i>cantèguen</i>	3pl	<i>canteton</i>

Table 4. Preterite forms in the varieties of Foish and Clarmont.

⁴⁶ It might equally be argued, with reference to the spread of -r- in the Lengadòc preterite, that the higher lexical autonomy of the 3sg form causes it to resist a change which originates elsewhere.

⁴⁷ Both examples are cited in Bybee & Brewer (1980). For the Foissenc examples, in accordance with the general practice of the present study, I have retranscribed Ronjat's original data in *grafia classica*; however, for the Clarmont paradigm, I have been unable to identify which of the three incomplete data sets given by Ronjat has served as the basis for the forms given in the 1980 study, and have thus retained Bybee & Brewer's transcription. A further problem emerges from Bybee & Brewer's assertion (footnote 18) that Ronjat's data for Tolosa follow the pattern given for Clarmont. For the Clarmont data, Bybee & Brewer argue that /t/ was initially present in 3sg, subsequently extended to the rest of the paradigm, and then lost from 3sg by regular sound change. However, the pattern which Ronjat gives for Tolosa is of a 3sg preterite in -èc or -èt, but of other forms in -v-, hence *cantèvi*, *cantèves*, *cantèc/cantèt*, in which the 3sg form has clearly not been extended to other forms of the paradigm. The apparent inconsistency between the data as presented by Ronjat and as reported by Bybee & Brewer potentially weakens the conclusions of the latter study.

2.4 *Distributed Morphology*

A further distinct type of approach is represented by the theory of Distributed Morphology (henceforth DM), set out in Halle & Marantz (1993), and Marantz (1998). DM is explicitly articulated as a theory which combines attributes of both Word and Paradigm approaches, and of morpheme-based approaches, within a framework designed to be compatible with 'current practice in generative syntax' (1993:112), that is to say a principles-and-parameters transformational grammar. The term 'distributed' reflects this theory's central assumption — presented as a 'fact' — that there is no separate morphological component to the grammar, but that 'the machinery of what traditionally has been called morphology [...] is distributed among several different components' (1993:111-12). In practice, DM appears to constitute a reversion to the position of early generative grammar, in which morphology was handled in syntax. Although DM superficially introduces a level of 'morphological structure' (MS), the structures and processes available for handling morphology are directly dictated by the structures and processes already available within the existing syntactic theory assumed by Halle & Marantz (1993). MS is characterised as 'the interface between syntax and phonology' and 'a syntactic representation that nevertheless serves as part of the phonology', phonology itself being taken to mean 'the interpretive component that realizes syntactic representations phonologically' (1993:114).

Much of the presentation of DM is articulated as a reaction to and critique of the 'Extended Word-and-Paradigm' framework developed in Anderson (1992). Anderson treats inflection as a set of 'word-formation rules' (WFRs) which operate on phonological stem forms (all supplied by the lexicon) paired with sets of morphosyntactic properties, to derive a surface form by regular means of affixation, stem modification or 'other formally specifiable changes'; in his analysis, the inflectional paradigm and the word are considered theoretical primitives with psychological validity.

Although DM claims to share with WP morphology the view that syntactic feature bundles and phonological representations are not directly associated within the lexicon (in contrast to Lexicalist morphology as proposed by e.g. Lieber 1992), it rejects WP analyses such as Anderson's which are directly informed by this view. Halle & Marantz (1993:112-13) criticise Anderson's approach for its readiness to dispense with the notion of morpheme and of affix, and particularly for what they consider a fundamental imbalance between the ease of description of a given phenomenon, and its 'importance' in a given language. Taking the example of suppletion, they observe that Anderson's approach is well-equipped to describe this phenomenon, but that suppletion 'is not of central importance in the morphology of English or of any other language', and thus conclude that the approach is misdirected. Their choice of the vague and subjective term 'importance', though, is odd: is it to be understood in terms of type frequency, token frequency, or some other measure? While it is probable that suppletion does indeed affect relatively few lexical items, these lexical items tend to be among the most high-frequency in a given language, and, as discussed in the preceding sections, constitute influential templates for analogical change.

Halle & Marantz further raise the question of how the relationship between morphology and syntax is to be accounted for within a formal, theoretical framework. Anderson's (1992:37-42) discussion of the relationship between morphology and syntax is chiefly concerned with demonstrating a qualitative difference between lexical rules and syntactic rules. By contrast, Halle & Marantz are concerned with the mechanics of how to reconcile the WFRs of lexeme-based morphology with the standard assumptions of generative grammar, which has traditionally dealt with inflection via some form of affixation. Since Anderson does not explicitly address the question of the relationship between morphological theory and syntactic theory, Halle & Marantz (1993:112-13) construct a model of how they assume Anderson's WP analysis might interact with a generative syntactic framework. In this model, the morphosyntactic features associated with inflectional morphemes are transferred to stems prior to the insertion

of phonological forms, which is then handled by WFRs. Halle & Marantz present such an analysis as problematic, since they consider that many WFRs simply reintroduce inflectional affixes initially present in the syntax and subsequently deleted; in their view, the majority of cases where inflectional features are marked on a word can be satisfactorily accounted for by purely syntactic manipulations. For those remaining cases in which morphological structure does not always correspond exactly to syntactic structure, they propose an alternative solution: in their model, the MS level has the power to redistribute features between affixes, by fusing, fissioning, inserting or deleting morphemes, in order to comply with 'universal and/or language-specific well-formedness conditions' (1993:115-16). Once MS has determined which inflectional morphemes should be inserted, these are associated with phonological forms. In this respect, DM differs from 'Lexicalist' approaches (see e.g. Lieber 1992), in which the lexicon contains morphosyntactic feature bundles associated with phonological forms and subcategorisation rules, prior to any syntactic manipulation.

The majority of Halle & Marantz's paper is concerned with describing inflectional affixation as the implementation of syntactic and phonological rules. They have relatively little to say about stem allomorphy, aside from a brief discussion of certain irregular stem forms in English verbs (1993:127-29). For most of these verbs, they consider that the difference between the stems found in past participle, past and non-past forms is essentially phonological in nature, and can be handled by 'readjustment rules' triggered by the presence of a given suffix: these are in essence phonological rules sensitive to the morphological context. For the suppletive alternations *go/went* and *work/wrought*, however, a different approach is adopted, involving the specification of two separate items in the lexicon, one of which is labelled with the features [+past, - participle].

Interestingly, despite Marantz' apparent regret that 'no one listens to morphologists' (1998:2), neither the 1993 nor the 1998 paper addresses the data adduced by Aronoff (1994), the

manuscript of which is quoted in Halle & Marantz (1993). While both DM articles devote considerable space to providing alternative analyses of data described in Anderson (1992) and in Lexicalist approaches, no mention is made of the phenomena which lead Aronoff to postulate the existence of an autonomous level of morphological structure, and which constitute particularly strong evidence for the reality of the inflectional paradigm. Halle & Marantz' discussion of stem allomorphy is confined to two suppletive verbs in English, where the suppletive form diagrams a natural class; although the machinery invoked to describe this alternation appears somewhat contrived (brute stipulation, in contrast to the syntactic/semantic motivation found elsewhere throughout DM), the fact that the morphological alternation corresponds to a syntactic/semantic alternation means that these data are not fatally problematic for DM. The data discussed by Aronoff and Maiden, however, constitute a much more significant difficulty, as these are cases of extensive stem allomorphy which does not appear correlated with semantic or syntactic natural classes; moreover, ad hoc stipulation of stem allomorphs would fail to capture the abstract and general nature of individual morphomic patterns, which, although arbitrary, recur consistently across lexical items. Although it must be assumed that Halle & Marantz are aware of the data which Aronoff presents, they make no mention of how these data might be treated within DM, conceivably due to the potential difficulty of plausibly describing morphomic patterns in their approach.

The failure of DM to address morphomic phenomena seriously compromises the potential usefulness of this framework to the present study, in which description of the data is paramount (in contrast to Halle & Marantz' approach, which is at least partially motivated by theory-internal preoccupations). As I will show in the following chapters, the behaviour of future and conditional forms in Occitan cannot be explained entirely in terms of syntactic/semantic features, but requires reference to purely morphological structures; the data thus appear to rule out an account within DM.

2.5 *Conclusions*

The foregoing review presents a variety of theoretical issues concerning the structure of morphological paradigms and the relationship between form and function, in particular comparing morpheme-based approaches to Word and Paradigm approaches, and outlining the concept of morphological phenomena which are to a greater or lesser extent autonomous. This discussion serves as a background to the discussion of Romance and particularly Occitan future and conditional forms, which on the face of it present problems both for a morpheme-based analysis and for a morphome-based analysis.

I discuss in the next section a number of existing analyses of the Romance future and conditional, especially in French. Many of these are morpheme-based, and, working on the principle that form diagrams function, seek to determine a 'basic' value associated with the characteristic stem of the Romance synthetic future and conditional. However, as I will show, such analyses are inadequate to account for the patterns of distribution found in varieties of Occitan. Over the following sections, I outline the distribution of functions between the synthetic future, synthetic conditional and semantically related forms in Occitan, and describe formal developments affecting the characteristic stem of the synthetic future and synthetic conditional. While there appears to be some functional commonality between the synthetic future and the synthetic conditional, the data show that the distribution of stems in the verb paradigm and the distribution of semantic values in the same paradigm do not map directly onto one another, suggesting that this may be a 'weakly morphomic' distribution, partially determined, but underspecified, by extramorphological factors. I evaluate how satisfactorily these data may be analysed within the theoretical approaches discussed in the foregoing, and what light the data set may in turn throw on these approaches.

3. Future and conditional in 'western' Romance

While the terms 'future' and 'conditional' are superficially familiar from traditional Romance grammar, there is variation in the origin of the forms to which they refer, and in the semantic values associated with these forms. Moreover, the use of terms which designate semantic values to label morphological forms both obscures the detail of the semantic functions associated with any given form, and tends to present as axiomatic the (neither innocent nor theory-neutral) assumption that form and function are directly and indissociably linked.

I discuss in the following section the sources of the different 'future' and 'conditional' forms found in modern Romance varieties, including varieties of Occitan, and review a body of theoretical work on the functional values associated with 'future' and 'conditional' forms, both within Romance and in a wider cross-linguistic perspective. In the light of theoretical and descriptive work on other Romance languages, particularly French, I consider the available data and descriptions concerning the usage of the synthetic future and synthetic conditional in Occitan. I explore the relationship of the synthetic future, the synthetic conditional and their associated semantic values with categories (such as the reflex of the Latin pluperfect indicative) presenting similar semantic values, and sketch out the implications of these data for an analysis of the relationship between the synthetic future and conditional, as well as for theories of the association of form and function.

For the purposes of this discussion, it is necessary to introduce a number of arbitrary, abstract and opaque labels, in order to refer to forms or to sets of paradigm cells without implying any assumption as to functional content associated with those forms or cells. The use of 'SF' and 'SC' for the Romance synthetic future and conditional respectively, 'cond2' for the reflex of the Latin pluperfect indicative, and 'Fuèc' for the set SF+SC, allows the terminology of form to be clearly

dissociated from the terminology of function, and thus permits a clearer and less prejudiced discussion of the extent to which form and function correlate in reality.

The terms SF, SC and cond2 are obtained from abbreviations of familiar terms for these screeves; Fuèc was chosen as an existing word (the reflex of Latin FOCUS 'hearth' in eastern varieties of Occitan, where it has the meaning 'fire') which closely approximates to an abbreviation of Occ. *futur e condicional* 'future and conditional', but the lexical meaning of which is unrelated to any semantic content postulated for the cells at issue. All four are used here as opaque and arbitrary labels with no meaning beyond reference to a given form or set of forms.

3.1 *Origin and form of future and conditional forms in modern Romance*

3.1.1 *Future*

Although Latin had synthetic futures, none of these are continued into modern Romance languages⁴⁸, which retain instead futures deriving from a variety of periphrastic constructions, typically involving the infinitive and a modal verb or verb of motion.

Romansh presents reflexes of VENIRE (AD) 'come' + infinitive, which have acquired future meaning through the use of spatial reference as a metaphor for temporal reference. Intuitively, this might be explained in terms of the future approaching or being approached by the speaker. However, it would also be possible to adapt the account put forward for 'be going to' by Hopper & Traugott (2003:88-89), to describe VENIRE AD. Hopper & Traugott analyse the English example *I was/am going to be married* (glossed as 'I was/am going for the purpose of getting married') in terms of a double conversational inference: from the verb *go*, that the speaker later arrived at his/her destination, and from what they label 'purposive *to*', that someone intended the marriage to take place. They propose that the future meaning which the construction acquires is due to the combination of both these inferences, rather than that from *go* alone; an analogous argument could be made for VENIRE AD. Furthermore, they stress (2003:84) that an inference must be frequently occurring in order to be associated with a construction to the point of altering its meaning.

In Sardinian, the periphrastic future is derived from the construction DEBERE 'owe, have to' + infinitive, initially expressing obligation, and later acquiring an epistemic force (Fleischman 1982:51).

⁴⁸With the possible exception of *eres* 'be.PRS.IND.2SG' in Spanish, which may be a reflex of Latin ERIS (see eg. Griffin 1994 and Rini 1999:161-65 for discussion); even if it continues the form of the Latin synthetic future, however, this is not an example of a Latin synthetic future form surviving with the *function* of future.

A future originating in *volere + infinitive, originally with transparent volitional meaning, but developing temporal meaning by means of pragmatic inferencing, survives in Romanian, as well as in some varieties of Franco-Provençal (Stich 1998:133), French (Fleischman 1982:51) and Occitan (Lafont 1967a:209, ALG 1616). Most commonly, the grammaticalisation path of such futures is described as proceeding from volition, through intention, to future (see e.g. Bybee & Pagliuca 1987; Bybee, Perkins & Pagliuca 1994; Markopoulos 2009); the desire or intent to do something leads to the inference of that event taking place, but in future time, since desire and intent can only exist for so long as they have not been fulfilled, and the fulfilment must therefore take place after the desire.

The most widespread type, and that with which the present study is principally concerned, is the synthetic future type characteristic of 'western' Romance (following Lausberg 1965:53-55⁴⁹), deriving from a periphrasis involving the infinitive and the present indicative of HABERE 'have', which comes to express first necessity or obligation, and then future. Two types of pragmatic inference are involved in this development: firstly, events which are necessary or obligatory typically take place, and are thus perceived as certain or highly likely to occur; secondly, the expression of an event being necessary or obligatory implies that it has not yet taken place and that its realisation will occur at a later point in time, hence positioning the occurrence of the event in future time.

CANTARE HABET, etc. > *il chantera, ...*
canterà, ...
cantarà, ...
cantarà, ...

⁴⁹Note, though, that while Lausberg's 'western' group excludes varieties of southern Italy, Loporcaro (1999) presents evidence that the SF derived from CANTARE HABEO, etc. was originally found in these varieties, independently of influence from northern varieties. Loporcaro argues that contact with Tuscan did not introduce the SF into southern varieties, but merely influenced the phonological shape of existing SF forms: although in modern southern varieties the SF is frequently defective or confined to fossilised expressions (while the role of expressing temporal posteriority is associated instead with periphrastic forms), the phonological and morphological characteristics of those SF forms which persist indicate that they are of southern origin.

Fleischman (1982:58-59) illustrates the semantic shift involved with a series of equivalent examples from modern English and modern French, of which I quote the latter. In the case of *j'ai une lettre à poster*, 'I have a letter that ought to/is to be mailed', 'have' retains its full value as a lexical verb, since the letter is already in existence, and in the speaker's possession: it simply requires posting. By contrast, in the case of *j'ai une lettre à écrire* 'I have a letter to write', 'have' cannot express possession, as the letter is as yet unwritten, and thus inexistence: here the meaning of obligation predominates. In *j'ai à écrire une lettre* 'I have to write a letter', *avoir à* may be considered as a single lexeme expressing obligation, and indeed the overt object may be deleted without adverse effects on grammaticality, since the basic meaning here is no longer that of possessing an item which requires something to be done to it, but of obligation to do something, which in turn entails the near-certainty of the event taking place in future time, and thus the temporal value of future (see also Hopper & Traugott 2003:53-55). As Adams (1991) demonstrates, the meaning 'future' must develop from the meaning 'obligation/necessity': while HABEO + infinitive is initially attested with meanings of possibility or of obligation, infinitive + HABEO cannot express possibility, but only obligation.

The semantic bleaching of HABEO, etc. from the lexical meaning of possession to the TAM value of future verb is correlated with phonological reduction and change from auxiliary verb to bound suffix, yielding a new synthetic future form. Noting the tendency in the history of Latin and Romance for initially modal periphrases to grammaticalise in this way as futures, Fleischman (1982:75) suggests that analytic structures are characteristic of futures which are predominantly modal, and synthetic structures characteristic of futures which are predominantly temporal; I return below to the question of the temporal and/or modal values of the Romance synthetic future today.

3.1.2 Conditional

The modern SC derives from a construction involving the infinitive and the imperfect indicative (or, in the case of Italian, the preterite) of HABERE 'have':

CANTARE HABEBAT, etc.	>	<i>il chanterait, ...</i> <i>cantaría, ...</i> <i>cantariá, ...</i>
CANTARE HABUIT, etc.	>	<i>canterebbe, ...</i>

Although this form originates with the essentially temporal value of future in the past (henceforth FIP), a function to which I return in §3.2.1 below, it progressively acquires modal values (see e.g. Harris 1978:234-46 for French), a process which Fleischman argues to be crosslinguistically common given the irrealis value of future forms (1982:61)

Given the structural parallels between CANTARE HABEO, etc. and CANTARE HABEBAM, etc., it is generally assumed that one or other is the product of analogy, though there is less agreement as to the direction such analogy must have taken, and indeed the hypothesis of analogy is contingent on assuming that the two periphrases emerged sequentially.

The modern SC is often described as resulting from a straightforward analogy with the periphrastic future, to express FIP; this development is sometimes linked to typological shift and the replacement of the non-finite accusative + infinitive construction for reported speech with finite constructions, initially the periphrasis future participle + ERAM 'I was', etc., and later, CANTARE HABEBAM, both analogically modelled on existing periphrastic futures to fill a gap in the paradigm. However, Fleischman (1982:61) claims that attestations of the 'backshifted' periphrasis significantly predate attestations of the periphrastic future, and are also much more frequent, which might be taken to suggest that the periphrastic FIP arises before the periphrastic future. Fleischman (1982:66) thus proposes a pattern of analogy in which CANTARE

HABEBAM (FIP) gives rise to CANTARE HABEO (future) and in which each subsequently, and independently, develops modal values.⁵⁰ These new modal values associated with the SF and SC are clearly distinct from the original modal value of necessity or obligation associated with the periphrases infinitive + HABEO and infinitive + HABEBAM; the relationship between the modal (and other) values of the SF and the modal (and other) values of the SC in modern Romance is discussed in §3.2 below.

3.1.3 *The periphrastic go-future*

A number of those Romance languages presenting the SF also present one or more periphrastic future constructions, the most widespread and well-documented of which is the 'go-future' *aller/anar/ir* + infinitive. The construction 'go' + infinitive originates as a transparent expression of spatial movement towards a goal or purpose, as in the following examples cited by Fleischman (1982:81):

- (1) *l'empereres vait querre sun nevoid* (Roland)
quien quiere ir conmigo çercar a Valencia (Cid)

From the value of present intention implicit in these examples (and thus both commitment to the event taking place and certainty that it will do so) there develops a value of 'present prospective', and thence of temporal reference to the future, quite independent of spatial movement or volitional agents (Vetters & Lière 2009:28). Vet's (2007) treatment evidently considers the go-future of modern French so far grammaticalised as to have become a basic member of the verb paradigm, as have the compound perfects with *avoir* + pst.ptcp; while Fleischman (1982:82) insists on its prevalence in modern French, Spanish and Portuguese as a

⁵⁰Adams (1991) argues that neither periphrasis had developed as far as expressing futurity as early as Fleischman appears to claim. However, neither in this article, nor in Adams (2007) — in which he discusses the dating of future meaning for infinitive + HABEO in different regions — does he address the relative frequency or dating of the meaning 'posteriority/futurity' associated with the periphrases giving the SF and SC respectively.

'serious competitor' to the SF. The semantic values of the go-future in relation to those associated with the SF are further discussed in §3.2.6 below.

It should be noted in passing that the go-future appears to be absent from modern Italian. Rohlfs (1968, 1969) does not mention this structure, nor do Lepschy & Lepschy (1977), while Fleischman (1982:81) and Proudfoot & Cardo (1997:182) state that the construction *andare a* + infinitive is confined to expressing spatial motion.

In Catalan, although the construction *anar* + infinitive does exist, it serves not as a future but as a preterite (Badia i Margarit 1994:546-47; Wheeler, Yates & Dols 1999:342-43). The use of *anar* + infinitive as a preterite is equally found in mediaeval Occitan, and occasionally encountered to this day (Ronjat 1937:205-07), witness example (2), dating from the late twentieth century:

- (2) *Avieu citat aquel vèrs d'Audiberti a Linhaure, e vau téner silenci.* (Miniussi)
'I had quoted this line of Audiberti to Linhaure, and now fell silent'.

Most usually, however, *anar* + infinitive serves as a future, 'comme en français' (Ronjat 1937:212).

3.1.4 *The periphrastic then-future*

Some varieties of Occitan in the Valadas (La Torre, Pral, Prajalats, Val Germanasca, Val Pelís, lower Val Cluson, Ronjat 1937:213; Salbertrand, Baccon-Bouvet 2003; Bardonescha, Gleise Bellet 2003; Ols, Jayme 2003)⁵¹ present, alongside the SF and go-future, a different periphrastic type involving the present indicative and an adverb meaning 'then/after':

⁵¹And also some varieties of Franco-Provençal, see e.g. Chenal (1986:546).

- (3) Bardonescha *mi a ciantu poi* 'I will sing'
 Salbertrand *mi a ciantu pöü* 'I will sing'

Although these appear transparently to collocate a verb and adverbial adjunct, the summary information available suggests otherwise. It is, for example, striking that the single example of this construction provided by Ronjat is *manjo puei deman* 'I will eat tomorrow', in which an adverb of specific temporal reference grammatically co-occurs with the supposed adverb *puei*. While a construction such as *mangi puèi* is entirely possible in western varieties of Occitan (my own fieldwork in the Massat valley elicited *muelherà las vacas puèish* 'he will milk his cows later'), *mangi puèi deman* would be pragmatically odd, since the vague temporal reference of *puèi* 'later, afterwards' and the specific temporal reference of *deman* 'tomorrow' are incompatible. The fact that *puei* and *deman* in Ronjat's example from the Valadas do not display such incompatibility suggests that *puei* has undergone some degree of semantic bleaching and no longer functions as an adverb in its own right. I further adduce the evidence of informal fieldwork with a speaker from the Val Germanasca, who rejected as ungrammatical sentences in which an adverb or nominal was placed between the main verb and *poi*, suggesting that *poi* is also losing its status as a morphologically free item, and becoming grammaticalised as a marker of the future. Descriptions of the varieties in which the then-future is present suggest that this periphrasis is now supplanting the SF as a marker of temporal futurity, while the SF is becoming specialised as a marker of epistemic modality, a point to which I return under §3.2.7.2 below.

3.1.5 *The relation of SF and SC to the infinitive*

Due to the historical source of the SF and SC, many modern synchronic descriptions still associate the stem of these forms with the infinitive, more or less explicitly, an approach which might be termed the 'diachronic fallacy'.

The analysis of Spencer & Luís (2005)⁵² is unusual in formally separating the stem found in the SF and SC from the infinitive, all the more so since it concerns Portuguese. Not only does the SF/SC stem resemble the infinitive much more closely in Portuguese than in other Romance languages (Azevedo 2005:75-76 cites only three irregular SF/SC stems), but the SF and SC still allow mesoclisism, in contrast to languages such as French or Occitan, in which mesoclisism, though attested in mediaeval texts, is no longer possible today. Both these features suggest that the SF and SC may be more closely linked to the infinitive in Portuguese than in other Romance languages.

Spencer & Luís' (2005:191) approach is to define an abstract inflectional base which by default takes the form root + theme vowel + r, and which has no intrinsic meaning. This base constitutes a stem found in the infinitive (with no further addition), and by default in SF and SC forms (with the addition of person and number markers). This analysis thus captures the generalisation that the SF/SC stem and infinitive typically share a form, while avoiding the assumption that they are one and the same object, and allowing for lexical specification of irregular stems, whether involving a non-canonical theme vowel in the infinitive, or a distinctive stem restricted to the SF and SC.

Much more frequent, however, are descriptions which treat SF and SC forms as directly derived from the infinitive and the verb 'have'. This approach is commonly adopted by analyses within generative phonology (see e.g. Harris (1969:91-98) for Spanish, and Costabile (1971:197-204) for Italian), but also by normative grammars — Alibèrt (1976:102) describes the Occitan future as formed by juxtaposition of the infinitive and the present indicative of the verb *aver* 'have' — and many pedagogical grammars, such as that of Kattán-Ibarra & Pountain (2003:59), which

⁵²Since Spencer & Luís are primarily concerned with providing an account of mesoclisism within the PFM model (see §2.2.3 above), the relation of the infinitive to the SF and SC stem is not central to their discussion; this point is only touched on due to the necessity of establishing an analysis of stems and stem selection mappings in Portuguese conjugation before proceeding to more detailed formal argumentation concerning mesoclisism.

explicitly asserts that '[t]he future stem is the infinitive' and that SF and SC are both formed on the so-called 'future stem'.

Such segmentations clearly reflect the historical source of the forms involved. However, there is no a priori reason why, in the native speaker's mental representation of the synchronic paradigm, the SF and SC should continue to be associated with the infinitive.⁵³ Both semantically and formally, the infinitive presents characteristics which separate it from the SF and SC. In most Romance languages the infinitive may be treated as peripheral to the paradigm, carrying lexical meaning but little else (see Maiden 2011a:208-09); the cross-linguistic survey of Rémi-Giraud (1988) notes how readily the infinitive, unlike other forms, may be nominalised, and that the infinitive cannot bear marking for tense, aspect, person or number features, but can only acquire these contextually, from, for example, a matrix verb governing the infinitive clause.⁵⁴

Moreover, as Matthews (1982) points out, the semantics of the modern SF and SC are not transparently reducible to infinitive + 'have'. Indeed, although Harris (1969:92-93) appears to suggest that synonymy of *ha de cantar* and *cantarà* constitutes evidence in favour of the latter deriving directly from the former, he is forced to acknowledge that the two are not exact synonyms, a point which he subsequently ignores without further discussion. On a purely formal level, the proposed segmentation is not irrefutably convincing either. It is not strictly true, for instance, that 'the future endings are phonetically identical to the present indicative forms of *haber*' (Harris 1969:93), since the 2pl SF form of *cantar* in Spanish is not *cantar(h)abéis* but *cantaréis* (Matthews 1982:4). In particular, Harris' model struggles to account for irregular SF/SC stems, to the extent that he effectively gives up on *hacer* and *decir*, remarking that '[t]hese

⁵³Ironically, Harris (1969:91-92) insists that 'historical facts such as these [i.e. the emergence of SF and SC from infinitive + 'have'] do not constitute synchronic evidence', before proceeding to an analysis which appears almost crucially dependent on the fallacy he explicitly refutes.

⁵⁴With the notable exceptions of Portuguese (see e.g. Maurer 1968) and some southern Italo-Romance varieties (see e.g. Loporcaro 1986, Ledgeway 1998), where the infinitive may inflect for person and number.

verbs are so wildly idiosyncratic throughout their paradigms that little purpose would be served by examining them further at this point' (1969:98); this comment seems close to an admission that the derivation of the SF from *haber de* + infinitive is descriptively inadequate.

With regard to Italian, as Matthews points out, while the SF/SC stem often resembles the infinitive, this stem has a theme vowel distinct from that of the infinitive in first-conjugation verbs (e.g. *canterò, canterei* vs. *cantare*),⁵⁵ and a form entirely distinct from the infinitive in a number of irregular verbs (e.g. *verrò, verrei* vs. *venire*). The inflectional endings are originally derived from forms of *avere*, but of the four root alternants which Matthews (1982:7) recognises for this lexeme, *av-* and *abb-* are found in neither SF nor SC, *ebb-* is found in only two forms of the SC, and Matthews' postulated (*h*)- is null (raising the question of whether this can be considered a root at all; if consideration is extended from roots to entire wordforms, recognisable forms of *avere* can be found in four cells of the Italian SF paradigm, but this is still short of the full complement of six).

As Matthews demonstrates, while it is possible to construct generative rules to derive future and conditional from infinitive + 'have', this approach encounters morphological, phonological and semantic difficulties which render it neither elegant nor obviously justified, and he therefore questions whether a linguist coming to these data without knowledge of their diachronic context would posit such an analysis.

There is thus no a priori reason to posit a direct, synchronic morphological link between SF and SC on the one hand, and the infinitive on the other; and in my analysis further on I will have reason to question whether a superficial similarity between the SF/SC stem and the infinitive is indicative of any genuine morphological link (see e.g. §5.2.3, where I argue that the traditional

⁵⁵This difference originates from a phonological change raising unstressed a to e before r (Maiden 1995:44), but has since become morphologised.

account of certain SF and SC forms in Biarn and Bigòrra being remodelled on the infinitive is unnecessarily reductive).

By contrast, the SF and SC forms of any given lexeme in standard Romance languages are systematically reported as continuing to share a stem with each other. The formal parallelism of SF and SC has often been taken for granted; however, as suggested by Maiden (2011b:266), and discussed at more length in the following chapters, it is likely that their identity of stem is in fact much more remarkable than has previously been thought.

3.2 *The functional relationship between future and conditional*

It has frequently been assumed that there must be some degree of functional commonality between the Romance SF and SC, whether due to the formal similarity between the two, or to a perceived functional parallel⁵⁶ such as the role of the conditional as FIP.

While it is certainly true that the late Latin periphrases which give rise to the Romance SF and SC present some degree of functional commonality, since the SC is initially attested with the value of FIP, it is likewise generally held that the uses associated with the SC have since changed. Traditional grammars of modern French (e.g. Grévisse & Goosse 1995) and modern Occitan (e.g. Alibèrt 1976) subdivide the paradigm into a screeve 'future' and a screeve 'conditional', suggesting that the two are functionally different items, with little if anything in common. 'Future' is treated as intrinsically temporal, while the temporal value of FIP and the modal value of eventuality are lumped together under a third mood 'conditional', neither indicative nor subjunctive; and although traditional categories such as 'present indicative' or 'imperfect subjunctive' lead us to expect some intersection between tense and mood values, the position of the future 'tense' with respect to mood or of the 'conditional' with respect to 'tense' is rarely addressed explicitly.⁵⁷

In more recent studies investigating the underlying semantics of these problematic categories, it has been argued both that the SC is essentially temporal, and that the SF is essentially modal.

⁵⁶It is plausible that the perception of a functional parallel is motivated by the obvious parallel between the stems of the SF and SC; compare the preterite and impf.ind, which although both synthetic forms expressing past tense, do not systematically share a stem and are rarely if ever conflated.

⁵⁷Unlike the periphrasis SF + pst.ptcp, which is considered a variety of 'futur', the SC is often given a label entirely distinct from that of the SF: modern grammars term it 'conditionnel', while early grammars of French (e.g. the seventeenth-century *Grammaire générale et raisonnée de Port-Royal* and *Observations de Monsieur Ménage sur la langue françoise*) tend to label it as an imperfect subjunctive. As there was (and is) no a priori obstacle to labelling the SC as a type of future, it is possible that the choice of distinct terminology may indicate a sense on the part of grammarians that the SF and SC were/are not exponents of the 'same' basic meaning.

I discuss below a number of approaches to the semantic content of the future and of the conditional, and the semantic links which may exist between them.

3.2.1 *The SC as FIP*

The use of the SC as FIP is perhaps the most obvious candidate for evidence in support of a continued unique functional correlate between the SF and SC: a FIP should be, self-evidently, a type of future.

It should be pointed out that in formal models of tense, such as the Reichenbachian framework proposed by Hornstein (1990), the correspondence between ordinary future and FIP is not perfect. In Hornstein's model, tenses are described in terms of two relations: that between the utterance time or speech time 'S' and a reference point 'R', and between the event time 'E' and the reference point. Certain of Hornstein's schemas can be reduced to basic linear ordering (e.g. in Table 5 below, the description (S_R)·(R,E), in which the speech time precedes the reference point and the reference point is simultaneous with the event time, is strictly equivalent to a more traditional representation S_RE). However, his notion of tense as compositional is advantageous in describing values such as FIP, in which, although the relationships of R with S and E are known, the linear ordering of S and E is unspecified (FIP by definition refers to an event perceived as future with respect to a reference point in the past, but the event itself may be in the past, present or future).

future	FIP
(S—R)·(R,E) = S _R E	(R—E)·(R—S)
(S,R)·(R—E) = S _R —E (proximate)	

Table 5. Schematic representation of future and FIP

In Hornstein's framework, there is no single correlate between the FIP and the future, due to the two theoretically possible positions for the reference time when describing the future within

such a framework: either simultaneous with the event time, in which case Hornstein speaks of 'future' or simultaneous with the speech time, in which case he speaks of 'proximate future' (1990:118); the difference between these last in natural language is not made explicit.

'Future' and 'proximate future' have in common $S - E$, but only the 'proximate future' shares with the FIP the value $R - E$. As a result, the 'proximate' future may be linked with the FIP as both denoting events which occur after the reference time, the FIP being distinguished by the fact that its reference time precedes both the event time and the utterance time (it is important to note that the relative chronology of the event time and the utterance time is not stipulated). However, futures with their reference point in the future escape Fleischman's (1982:16) generalisation that 'futurity' $S - E$ is a subtype of 'posteriority' $R - E$.

It is perhaps not unjustified, however, to speculate on the usefulness of the reference point in describing futurity. In the case of past tenses, it is clearly advantageous to be able to distinguish the value of a true perfect with present relevance such as Occ. *èi fait* or Eng. *I have done*, from that of a preterite without present relevance, such as *fasquèri/I did*, and to distinguish both types from a more remote past *aviái fait/I had done*; here, a theoretical model involving the reference point R as well as the speech time and event time clearly has superior descriptive power compared to a model framed simply in terms of S and E . However, when applied to forms with future rather than past reference, the case for the reference point is less compelling.

The inclusion of the reference point permits the differentiation of a proximate future $S,R-E$, a non-proximate future $S-R,E$ and a 'future in the future' $S-R-E$; there is no principled theory-internal reason to exclude the reference point when describing forms with future reference, and thus Reichenbach's and similar frameworks appear to predict that these three different types of future should be found. However, as Vet (2007:12) points out, this prediction represents a case where the framework overgenerates: no natural language presenting a morphologically distinct

'future in the future' has yet been found.⁵⁸ While Touratier (1996:78) argues that 'future in the future' exists as a discourse meaning without ever having a distinct morphological exponent, the examples which he adduces in support of this claim do not argue convincingly for distinguishing 'future in the future' within a formal theory of tense. In (4) below it is clear that the opening of the door is posterior to the knocking on the door, which is in turn posterior to the finding of the door; but this sequencing conceivably stems simply from the nature of time, in which some things happen before other things, and does not require further formal specification. Compare (4'), in which the SF forms have been replaced by simple past forms: in (4') as in (4), the finding precedes the knocking, which precedes the opening; however, it would seem superfluous to introduce a multiplicity of reference points to describe the tense values involved, and certainly (4') in isolation does not constitute a convincing argument for the existence of pluperfect tenses the formal description of which would require a reference point.⁵⁹

(4) *Vous trouverez une porte d'argent toute constellée de croix noires [...] Vous frapperez, on vous ouvrira.* (Daudet, cited by Touratier).

(4') *Il trouva une porte d'argent toute constellée de croix noires. Il frappa, on lui ouvrit.*

Not only is the putative 'future in the future' problematic, but so too is the notion of temporal futures, whether remote or proximate. 'Future tenses' which would traditionally have been described as S—R,E are often argued to be not temporal, but modal (a point to which I return below), and as such should not properly form part of an exclusively temporal system. Moreover, while there is clearly a difference between e.g. French *il va pleuvoir* and *il pleuvra*, it is questionable whether this difference is satisfactorily captured by a purely temporal model which opposes S,R—E (with present relevance) to S—R,E. Recent work on French (see e.g.

⁵⁸Although Rebuschi (2009:130-31) claims that such a form existed in Basque from the 16th to the 18th century.

⁵⁹Touratier's other example, *Bacchis donne demain un dîner qui sera suivi d'une fête* (Louÿs), introduces a morphological contrast, but still fails to demonstrate convincingly the existence of future-in-the-future, as the *fête* is presented as an intrinsic part of the *dîner*; thus the giving of the *dîner* does not strictly or exclusively precede the taking-place of the *fête*.

Revaz 2009) suggests that *aller*+infinitive refers to an event which begins in the present and continues into the future (contrary to the S,R—E model in which the event is strictly posterior to the present moment), arguing that the difference between *aller*+infinitive and the SF is a difference less of temporality than of aspect and modality.

In the light of these data, one might therefore question the usefulness and even the plausibility of a reference point situated in the future. Excluding, as Vet does, the possibility of a reference point posterior to the speech time removes the proposed distinction of future and proximate future, and hence unifies future and FIP (henceforth FIP) as R—E.

The formal expression of FIP varies across Romance languages. In many varieties of Occitan, as in French, there is no formal difference between the word-form which expresses FIP (5) and that which is used in modal conditional contexts (6):

- (5) *Lo vilatge dins la matinada ja avançada èra tan pasible. Colors e bruches de fèsta, vrai. Cledas de fèrre per clausir las carrièiras quand i farián córrer los buòus.*
'The village was so peaceful even at this late hour of the morning. Festival colours and sounds, though. Iron barriers to close the streets for when they would send the bulls running that way. (Jean-Frédéric Brun, *Ciutats dans l'Azur* (henceforth CA), 2011, pp.163-64)
- (6) *Se ni Moïses, ni Josué, ni el, non tornavan dau grand sèrre, de qué farián ?*
'If neither Moses, nor Joshua, nor himself, came back from the mountain, what would they do?'(CA, p.213)

Italian, however, presents a rather different distribution, current since at least the seventeenth century (see Maiden 1996a), in which the synthetic conditional is restricted to modal contexts, while the FIP is expressed instead by what is in formal terms a conditional perfect — a periphrastic form involving the synthetic conditional of an auxiliary verb such as *avere* 'have' or *essere* 'be' with the past participle. Maiden (1996a) finds that the use of this periphrasis as FIP is typically associated with such contexts as promise, oath or threat, and temporal sequence: the crucial point appears to be that the periphrasis SC + pst.ptcp is used to assert the truth of a

proposition (1996a:160), in contrast to the SC which is retained for modal usages in which the speaker is less committed to the truth of the proposition. In (7) below, for example, the first instance of SC + pst.ptcp corresponds to a proposition presented as true (indeed, one which is explicitly described as necessarily certain), while the second instance is a promise (thus something which the speakers intend to carry out, or claim to so intend); the sole instance of the SC, however, refers to a proposition which is clearly presented as purely hypothetical, true of a possible world but not of the real world.

- (7) *li cesarei dissero doversi presupporre per certo che l'arciduca **averebbe seguito** il parer dell'imperatore; con tutto ciò se gl'**averebbe scritto**, ma che **anderebbe troppo in lungo** quando si aspettasse prima risposta da Gratz che scriver a Venezia.*
(Maiden 1996a:161)

This phenomenon has long been treated as unique to Italian, but data published by Field (2003) show that a similar split is also found in certain varieties of Occitan. In the varieties of both Bordèras and Campan, a synthetic conditional is present, but is restricted to modal usages, while the FIP is expressed by alternative means. In Bordèras (8), the choice is between a 'past go-future' — a periphrasis involving the imperfect indicative of the verb *anar* 'go' followed by the infinitive, analogous to the analytic go-future formed with the present indicative of *anar* and the infinitive — and the reflex of the Latin pluperfect indicative, traditionally termed 'conditional II' in Occitan grammar:

- (8) Bordèras *Que'm prometós qu'**anavas tornar**.*
 *Que'm prometós que **tornèras**.*
 'You promised me you would come back'

In Campan (9), by contrast, although the past go-future is equally a possibility, the alternative is not cond2 but the periphrasis SC+pst.ptcp, exactly as in Italian:⁶⁰

⁶⁰Field does not explicitly state whether a construction with cond2 is nonetheless possible in Campan, nor have I been able to determine this from any available source. Campan itself does not constitute a survey point for the ALG, but falls between 696S (Lespona, in a fork of the same valley) and 696 (Era Bòrda), in

- (9) Campan *Que pensavi qu'anava véner la maison.*
Que pensavi qu'auré venut la maison.
 'I thought he would sell the house'

Field's data are all the more striking in the light of the methodology used to elicit these data: translation of a list of sentences given in French. Since French not only has the SC, but uses it for the FIP, and since Field's informants have native or near-native competence in French, one might expect this language to have an effect on the data. Yet quite the reverse is true: no informant spontaneously produces a token of the SC with the function of FIP, and when Field suggests responses including an SC with this function, all informants systematically reject these as ungrammatical. The very prevalence of French serves as a guarantee for the authenticity of the Occitan data.

The immediate conclusion to be drawn is that the functional relationship between the SF and the SC may be different between a variety such as French, where the SC still serves as a temporal future, and a variety such as Italian, where it no longer can. If 'FIP' and 'modal conditional' are assumed to be two distinct uses of a single item, then it would follow that functional commonality between SF and SC should be stronger in French than in Italian. However, such a difference appears to have no bearing on the formal similarities of the SF and SC, since the identity of SF and SC stems in Italian is quite as strong and systematic as it is in French.

3.2.2 *A compositional view of the conditional*

Iatridou (2000) leaves aside the FIP, to claim instead a much more fundamental functional commonality between future and conditional forms. With the objective of identifying semantic

the next valley east). ALG map 1616 gives point 696 as a tiny enclave where cond2 is absent, while 696S falls within an area where cond2 is present (albeit only marginally, for between 1 and 3 of the 8 verbs requested). General descriptions for varieties of the Pirinèus give only FIP as a possible value for cond2 in subordinate clauses. While not conclusive, these data taken together invite the conjecture that the equivalent construction with cond2 is not found in Campan.

values which are crosslinguistically consistent for the category 'conditional', and thus arriving at a general theory of the meaning of this category, she argues that 'conditional' is not a basic meaning, but a composite one, and that one of the constituent parts of this meaning is futurity. If Iatridou's argument is valid, the issue of the FIP is largely incidental, since all 'modal' conditionals would inherently be futures.

The conditionals which interest Iatridou are of a type exemplified by sentences such as 'If he were smart, he would be rich' (2000:232) and 'If Fred was drunk, he would be louder' (2000:244), in which neither the antecedent nor the consequent holds at present. She labels these 'present counterfactual conditionals', giving a working definition of counterfactuality as 'refer[ring] to grammatical constructions that express or make reference to situations that are "contrary to fact"', and advancing the central assumption that counterfactuality is a conversational implicature.

Comparing examples of present counterfactual conditionals in English and Greek, Iatridou observes that they consistently appear to share certain morphological features. In both English and Greek, she identifies forms which have the appearance of future morphology and past morphology (and, in Greek, of imperfective aspect morphology); however, she finds that these forms do not appear to contribute the functional content with which she assumes them to be systematically associated. For instance, while Iatridou analyses present counterfactual conditionals as future oriented (since they may co-occur with adverbs denoting future time), she finds that they do not appear to carry past or imperfective meaning. Citing English examples such as 'If Fred was drunk, he would be louder', Iatridou argues that although the verbs display morphology which is conventionally labelled past tense and associated with past time-reference, the functional content 'past' is absent. In her analysis, this utterance in fact refers to present time, since it represents a belief that 'Fred isn't drunk *now*' (2000:244)

Since Iatridou implicitly assumes that there are real morphemes of the classical type which biuniquely associate a form with a meaning, word-forms usually associated with past tense but lacking a temporal past reading are somewhat problematic within her framework. However, she proposes an ingenious solution to account for what she labels 'fake' past, namely to assume that what appears to be past tense morphology is indeed a real morpheme, that is to say a morph systematically associated with a meaning, but that its basic meaning is *not* temporal past (and thus that temporal past is not a primitive). Instead, it 'has a certain meaning σ such that in certain environments E_1 , σ receives a temporal past interpretation and in certain other environments E_2 it receives a different one' (2000:245): in effect, the inherent meaning of this morpheme is underspecified, and is interpreted according to context either as past time reference or as counterfactuality. The underlying meaning which Iatridou proposes may be roughly formulated as: whatever x is the topic of the utterance, this x is not the x of the speaker; and more formally as 'T(x) excludes C(x)', termed the 'exclusion feature' (ExclF).

If ExclF is applied to time — the topic time is not the utterance time — Iatridou claims that it should be interpreted as temporal past, though this assumption is not unproblematic since her formulation seems rather to refer to non-presentness: the topic time might be in the future. Alternatively, ExclF may be applied to possible worlds — the topic world is not the speaker's (i.e. the actual) world — giving the interpretation of counterfactuality. Iatridou's overall contention is then that counterfactuality is an implicature which arises from the combination of real future morphology and ExclF, that is to say that futurity is a necessary element of the counterfactual conditional.

In the light of this hypothesis, Iatridou proceeds to an analysis of the Romance SC derived from the infinitive+HABERE construction, arguing that despite its usual name 'conditional' this screeve does not in fact constitute a separate mood, but is instead part of the indicative. Within her account counterfactuality arises from the combination of future and ExclF; in Greek, where the

future is analytic, these features may each have a distinct exponent, but in a language such as French, which has a synthetic future, Iatridou expects that both future and ExclF should be marked on the same wordform. As the French SC presents a stem alike to that found in the French SF, and desinences alike to those found in the imperfective past, Iatridou considers the forms of the SC 'excellent candidates for what a French verb would look like if, in the indicative, the future and past morphologies combined' (2000:267). Given this observation and her findings for Greek and English, she assumes that a segmentation into future stem (with future meaning) and imperfective past desinences (with ExclF meaning) can indeed be effected, leading to the conclusion that there is no need to invoke a third mood to account for the SC, which is merely another indicative form.

Iatridou's approach is certainly appealing in so far as it offers a crosslinguistic generalisation about counterfactuality and the meaning of conditional forms. However, it is difficult to assess how far it advances our understanding of these concepts, since her argument is at several points unconvincing. Among these is her initial definition of the constructions which she proposes to investigate:

when we compare the morphology of CF [counterfactual] conditionals to that of wishes, we must make sure we are dealing with CF wishing. [...] just as conditionals must contain past tense morphology in both antecedent and consequent to be CF, so CF wishes must contain past tense morphology in both clauses (2000:241-42).

While there is nothing problematic in defining counterfactual conditionals as those containing past tense morphology in certain positions, to use the corpus thus constituted as a means of determining the morphological properties of counterfactual conditionals creates a circularity, a problem which Iatridou does not appear to remark.

There are equally problems surrounding the segmentation of the SC discussed above. Iatridou assumes in her proposal that the stem of the SC is a 'future' stem with 'future' meaning, based on the observation that the stem of the SC is identical to that of the SF, and the implicit

assumption that the SF expresses future time reference. Yet neither of these points offers unqualified support for her argument. Not only is the relation between the SF and future time reference controversial, but the stem in question is not a distinctively 'future' [SF] stem, precisely because it is the stem both of the SF and of the SC. Indeed, this is not merely a synchronic, but also a diachronic fact, concerning all Romance languages with have-futures and have-conditionals: at no point in the history of these forms has there existed a distinctive 'future stem'. The choice of treating the SF as primitive and the SC as derived appears to arise less from any empirical observation than from an a priori assumption.

It might still be argued that deriving the SC from the SF is preferable to deriving the SF from the SC, since the formal mechanism of the derivation is more elegant. This is certainly true for French, where the SC may be straightforwardly derived by combining the stem found in the SF with the desinences found in the imperfect, whereas arriving at the SF from the stem found in the SC and a set of desinences resembling the present indicative forms of *avoir* 'have' requires a little more fiddling. An illustrative partial paradigm is given in Table 6 below.

<i>avoir</i> 'have', prs.ind	<i>venir</i> 'come', SF	<i>venir</i> , SC	<i>venir</i> , impf.ind
j'ai	je viendrai	je viendrais	je venais
tu as	tu viendras	tu viendrais	tu venais
il a	il viendra	il viendrait	il venait
nous avons	nous viendrons	nous viendrions	nous venions
vous avez	vous viendrez	vous viendriez	vous veniez
ils ont	ils viendront	ils viendraient	ils venaient

Table 6. Future, conditional and related forms in Standard French

However, while such a line of argument might be advanced for French (and many varieties of Occitan), it is less plausible to apply it to Italian, where the desinences found in the SC, derived

from the preterite of *avere* 'have', are similar but crucially not identical to those found in the preterite (see Table 7 below).⁶¹

<i>avere</i> 'have', prs.ind	<i>venire</i> 'come', SF	<i>venire</i> , SC	<i>venire</i> , pret.	<i>avere</i> , pret.
ho	verrò	verrei	venni	ebbi
hai	verrai	verresti	venisti	avesti
ha	verrà	verrebbe	venne	ebbe
(OIt. avemo)	verremo	verremmo	venimmo	avemmo
avete	verrete	verreste	veniste	aveste
hanno	verranno	verrebbero	vennero	ebbero

Table 7. Future, conditional and related forms in standard Italian

One may, in any case, question the (purely theoretical) assumption that either one of these forms must be derived from the other; there is no a priori reason why this should be the case, nor any compelling argument in the data to suggest it. Instead, the assumption must be imposed by the choice of a given theoretical framework: working within a morpheme-based theory is likely to require such a derivation, which would not be necessary within a Word-and-Paradigm approach.

While the theoretical problems with Iatridou's argument do not in themselves falsify her claim that futurity is part of the basic meaning of conditionals, they do render the evidence which she adduces to support this claim rather less convincing, as far as Romance is concerned. The idea should not be dismissed out of hand, but neither can it be accepted as established beyond reasonable doubt.

3.2.3 *The future as modal*

A different approach is offered by Jaszczolt (2008), who claims instead that all tense is ultimately modal. Basing herself on research in physics and philosophy, Jaszczolt argues that

⁶¹Italian is not, self-evidently, French or Occitan. However, as Maiden (2011e:37) argues, analyses from structurally similar cognate varieties can and do provide insights into the behaviour of other such varieties, and should not therefore be dismissed out-of-hand as automatically invalid or irrelevant.

real time and time as perceived by humans are crucially different: while real time proceeds as a series of events, we conceptualise it as a uniform flow. In particular, humans have a concept of the present moment, which Jaszczolt labels the 'now'; this concept is of high relative importance at a cognitive level, but resists definition in absolute terms and is much more prominent in the mind of the individual than in the external world.

In order to model the linguistic category of tense, which encodes time, it is surely more profitable to work from the concept of time as perceived by humans than from the concept of time as it exists in the external world. Jaszczolt consequently gives a central role to the concept of 'now', arguing that the concepts of past time and future time are not absolute (i.e. defined with respect to an objective present), but instead are defined with respect to the 'now': we have memories in the now which allow us to deduce that things happened before the now, and we can look ahead with greater or lesser certainty to what may happen after the now. In her view, both past and future tenses are to be considered expressions of modal detachment rather than expressions of temporal reference.

The concept of the future as essentially modal is not new. Fleischman (1982:23-24) remarks on the diachronic instability of future forms, and the propensity for futures 'to evolve from modals and [...] to be put to modal uses'. However, her argument crucially differs from Jaszczolt's in two respects.

First, Fleischman assumes an oscillation between modal and temporal values: modal forms 'at some point take on a temporal value', i.e. that of future reference, and by virtue of this 'then acquire modal colorations, which, if sufficiently pronounced, may eventually supersede the temporal value of the form' (1982:23). She proposes the mathematical notion of a whole as a metaphor for the relation of temporal and modal values: the whole is composed of two parts, the proportions of which may vary, but the sum of which remains constant. Thus all futures

have some modal values and some temporal values, but 'the more temporalized a given form becomes, the weaker its modal force, and vice versa' (1982:31). While Fleischman's model therefore admits a modal component to the future, it nevertheless retains the notion of tense, which is assumed to be present to a greater or lesser extent alongside the modal values of the future.

Second, Fleischman draws a distinction between future and non-future temporal values, future being considered 'a less primary category than past or present': crosslinguistically, dedicated morphology expressing the future is rare, and where it is present it is acquired later than forms with either past or present reference (1982:22). This position, which distinguishes future on one hand from past and present on the other, is quite different from Jaszczolt's claim that there is no qualitative difference between the future and the past, which is based on the argument that both constitute degrees of modal detachment, the essential distinction being between the 'now' and what precedes and follows it.

Jaszczolt's argument is plausible and persuasive, but is not without raising a number of further questions. Chief among these is the issue of the relationship between tense newly defined as modal detachment, and mood in its traditional sense. In traditional analyses of the Romance verb, it is assumed that screeves with the same modal value may have different values of aspect and time-reference; how might this interaction between properties, and the distinction of tense, aspect and mood, be captured in a framework where time-reference itself is considered to be a purely modal phenomenon? Jaszczolt says little of the potential consequences of her model of tense for the TAM system as a whole: it is unclear whether tense should still be considered distinct from existing concepts of mood (since the distinction appears to be useful in natural language, independently of the nature of the categories it distinguishes), or not (since both are linguistic means of encoding modality). As a consequence, it is difficult if not impossible to evaluate the consequences for the functional relationship of the SF and SC. Jaszczolt's

framework would clearly consider the SF to be modal, but does not determine whether the SC should be treated as modal in the same sense, or to the same degree.

3.2.4 *Modal and temporal future and conditional in French and Occitan*

Vet & Kampers-Manhe (2001:90) point out for the SC in French that, although the term 'conditional' is systematically used in French grammar, it is used indiscriminately to refer either to the form SC or to the semantic value associated with this form; they criticise the label 'conditional' for obscuring the temporal use of the SC parallel to the SF. Exactly comparable problems are associated with the label 'future' applied to the SF: this label, applied to both the form and its associated semantic value, obscures the distinction between form and function, and the fact that the SF, like the SC, also has usages recognised as being not temporal but modal.

Dendale (2001:09) identifies four canonical usages for the SC in French, for each of which Vet & Kampers-Manhe identify a corresponding usage of the SF. To Dendale's *conditionnel temporel* (FIP) corresponds the SF expressing temporal posteriority; to his *conditionnel d'éventualité* (10) expressing possibility, corresponds an SF expressing possibility (11).

(10) *Si la Martinique était envahie, vous **feriez** la même chose* (Le Nouvel Observateur, 1982)

(11) *Si Pierre a bien travaillé, on le **récompensera**.*

Vet & Kampers-Manhe characterise Dendale's *conditionnel évidentiel* (12) as expressing a reserve concerning the truth value of the proposition: the speaker in a case such as (12) below does not assert the truth of Raynaud belonging to a gang, but presents this proposition as information obtained from a separate source. They link this usage to the epistemic use of the SF (13): a speaker who produces an epistemic future is offering a conjecture concerning the

present moment, while signalling that they do not have sufficient information to assert the truth of this conjecture.

(12) *La police brestoise a demandé télégraphiquement à la Sûreté de Paris des renseignements détaillés sur Raynaud, qui **ferait** partie d'une bande et **aurait** des complices anarchistes* (Brunot 1922:532)

(13) *Pierre n'est pas là. Il **aura** manqué son train.*⁶²

Finally, they link to the *conditionnel d'atténuation* (14) such tokens of the SF as (15), arguing that these are examples of an illocutionary (rather than temporal or modal) value. For Vet & Kampers-Manhe, the attenuative conditional and its corresponding 'mitigating' future are not related to questions of truth value, or assertion of a proposition (unlike the epistemic future, the mitigating future is incompatible with hedges such as *du moins c'est ce que je pense*), but rather serve to mitigate the directness of an utterance.

(14) *J'**aimerais** vous dire combien je vous suis reconnaissant* (Chareaudeau 1992:473)

(15) a. *Je vous **ferai** remarquer que votre proposition ne résout pas tous les problèmes.*
b. *Ce **sera** tout ?*

I return below (§§3.2.5, 3.2.6) to the question of whether the four 'observed' usages correspond to distinct semantic values, or whether they can be unified as instantiations of a single underlying value.

For the SF in Occitan, examples of the same four broad categories can be found: temporal posteriority (16), possibility (17), conjecture (18), which is commonly associated with stative verbs (Barceló 2004:09) and attenuation (19).

⁶²This example is, strictly speaking, of the periphrasis SF + pst.ptcp, which Barceló (2004) finds to occur more commonly than the SF in this usage, and with a wider range of lexical items. Barceló & Bres (2006:108) cite an alternative example *Paul n'est pas là / il **sera** malade*, but claim that the SF is much more rarely used with epistemic meaning in French than in other Romance languages, and that instances are essentially confined to the verbs *avoir* and *être*.

- (16) *Demam me vendrà quèrre. Qué que faguèssem o que faguèssem pas. Es antau.*
 'Tomorrow he will come to fetch me. Whatever we do, or leave undone. That's how it is.' (Brun, CA, p.275)
- (17) *Mas benlèu se demòre aquí, a bèles paucs, aquel lengatge me vendrà mai familiar.*
 'But perhaps, if I stay here, this language will gradually become more familiar to me.'
 (Brun, CA, p.212)
- (18) *L'atencion pòrta mai que mai — e n'en siam aürós — sus lo periòdi contemporan, mau coneissut [...]. Serà qu'aicí la matèria es nòva e abondosa.*
 'Most attention — we are happy to see — is given to the modern period, which is poorly known [...]. This is surely because material here is new and abundant.'
 (Michel Miniussi, 'Cronicas', Oc 19, 1990, p.33).
- (19) *[R]ecomendam de fugir leis autors que serián jamai estats legits s'aguèsson agut l'onestetat d'escriure en francés, en luega d'estremar sa nullitat sota de pelhas dialectalas. Lei Niçards nos perdonaràn donc un juste mesprètz per son illustrisme Rancher.*
 'You should steer clear of those authors who would never have been read had they only had the honesty to write in French, rather than concealing their worthlessness beneath dialectal rags. The Niçards will hence forgive us a justified contempt for their über-illustrious Rancher.'
 (Miniussi, 'Per un art poètic occitan', Amiras 19, 1989).

Two further observations on the use of the SF are also worth noting. Piat (1911), citing examples (20) and (21) which I reproduce below with their original glosses, states that:

[d]ans une phrase interrogative, ou exprimant la surprise, la curiosité, etc., le dialecte auvergnat emploie volontiers le futur pour le présent de l'indicatif.

(20) *Tè! de qué farà ora ?*
 'Tiens ! que fait-il maintenant ?'

(21) *De qué diretz ora ?*
 'Que dites-vous là ?'

Piat's examples recall the epistemic use of the SF, since they appear to express a conjecture about the present moment. However, his description is distinguished from other attestations of the SF expressing epistemic modality, by the explicit mention of surprise and curiosity. In this respect Piat's data recall examples adduced by Aikhenvald (2004) of evidential markers which acquire a 'mirative' meaning. Aikhenvald characterises mirativity as 'a grammatical category whose primary meaning is speaker's unprepared mind, unexpected new information, and

concomitant surprise' (2004:209). On the basis of her crosslinguistic study, which shows that mirative meaning frequently arises from evidentials initially expressing non-first-hand information, she suggests a general semantic pathway for this development: non-first-hand forms are taken to signal that the speaker is not a participant, in control of the action described, or even aware of this action; and this in turn leads to an inference that the information is new or surprising to the speaker, i.e. of mirativity (2004:208).

Given the apparently restricted use of the SF in Occitan with epistemic value, and its continuing use to mark temporal posteriority and modal values other than epistemicity, it would be an overstatement to consider the SF as primarily an evidential (indeed, Aikhenvald (2004:146) finds that it is rare for an evidential to develop from a form expressing future or epistemic modality), from which a mirative category might emerge. However, the semantic parallel between the emergence of a mirative category from an evidential category, and the attestation of apparently mirative uses of a form known to express epistemic modality, is nevertheless striking.

Finally, Camproux (1958:240) notes that the SF may be used with the value of FIP in cases where the event time is perceived as posterior to the speech time; occasional examples of such usage are found in literature (22).

- (22) *Jean chifrava lei litres ja recampats e pensava que n'aurà pron en genier venent per donar ais amics una botelha.*
'Jean counted the litres [of olive oil] collected so far, and thought that there would (SF) be enough next January to give his friends a bottle.' (Miniussi, *Lei Passa-Temps*, p.93)

With regard to the SC, examples of temporal posteriority (5) and possibility (6) are given above, while attenuation is illustrated in (23).

- (23) *Per començar, siás ma convidada. T'ai fach alestir quicòm de requisit. **Deuriás** pausar lo grand cotèl aquí, **volriái** pas que te fagas mau.*
'For a start, you're my guest. I've prepared something exquisite for you. You should put the big knife down there, I wouldn't like you to hurt yourself.' (Brun, CA, p.26)

Reliable examples of the SC expressing conjecture are, however, much harder to find than in French. One possible explanation is that of text type: in French, the conjectural SC is strongly correlated with journalism, a genre for which there is relatively limited production in Occitan, and in which much of the available material is produced by non-native speakers. As a result, it is difficult not only to find attestations, but to establish whether these attestations reflect genuine native speaker usage or the influence of L1 French. The normative grammar of Romieu & Bianchi (2005:332) claims that the SC can be used with conjectural value in Gascon (24); however, in certain varieties of the Lengadòc this usage simply does not exist (Xavier Bach, p.c.).

- (24) *A çò qui pareish, que **seré** malaut.*
'It would appear he's sick.'

While most existing analyses identify such multiple distinct usages associated with the SF and SC, almost all argue that these usages are manifestations of a single underlying semantic value, either temporal posteriority or the rather less specific 'projection'.

3.2.5 *Analyses unifying the modal and temporal values of the SF and SC as essentially temporal*

Aronoff (1994) describes how in the case of the English perfect participle, a single morphological form is the exponent for two distinct and unrelated functions, perfective and passive. If either the SF or the SC were considered in isolation, one might envisage a similar approach, analysing, for example, the SC as a single screeve arbitrarily associated with the independent temporal and modal functions. However, the parallelism between the set of semantic values associated with the SF and that associated with the SC argues against such an analysis. If the set of values 'posteriority', 'possibility', 'attenuation' and 'non-assertion' were

indeed arbitrary and coincidental, one would not expect to find this exact same set associated with more than one screeve, or indeed to find instances in other languages where an identical set of values was associated with a single form. It accordingly seems more plausible to propose an analysis in which the temporal and modal values of the SF and SC are semantically related, either stemming from a common source, or being derivationally related.

In the literature specifically on modern French, it is most commonly assumed that the modal uses of the SF, and by implication those of the SC, are derived in synchrony from their temporal meaning. A typical example is that of Vet & Kampers-Manhe (2001), who assert that:

D'abord, il s'avère que le futur simple [SF] et le futur du passé [SC] connaissent les mêmes types d'emplois non temporels : l'emploi modal et l'emploi illocutionnaire. Ensuite il est plus facile de faire le lien entre leur emploi temporel et les emplois non temporels. Ainsi l'emploi modal du futur simple [...] s'explique-t-il par le fait qu'on situe l'évaluation de la valeur de vérité dans l'avenir [...] tandis que l'emploi illocutionnaire repose sur un déplacement, fictif bien sûr, de l'acte de langage dans l'avenir (2001:103).

Vet & Kampers-Manhe do not explicitly analyse the use of the SF to express possibility, but their analysis of the SC in this function suggests that it would be considered a subtype of posteriority, as the proposition in the apodosis may only occur after the fulfilment of the condition in the protasis. They are unusual in describing the mitigating future as illocutionary, but the underlying idea of the speaker metaphorically distancing himself from the proposition is a familiar one, as is the notion of ulterior verification commonly evoked to explain the epistemic use of the SF. Schäfer-Priess (2001:12-13) exemplifies ulterior verification as follows:

Le commentaire *ce sera le facteur* s'explique par une séparation de la proposition *c'est le facteur* et sa vérification qui n'a pas encore eu lieu. Le futur *sera* ne se réfère donc pas à la proposition, mais à la vérification. On pourrait paraphraser (24) [*ce sera le facteur*] par *si je vais à la porte, je verrai que c'est le facteur, donc je suppose maintenant que c'est le facteur*.

In Schäfer-Priess' analysis, both temporal and epistemic futures are concerned with future time; however, the distinction between them may be captured by dissociating the time of which the

proposition is true, and the time at which the proposition is verified. In temporal futures, the proposition and its verification are simultaneous, while in epistemic futures the proposition concerns the present, and it is the verification of the proposition which occurs at a later (future) time. A similar position is adopted by Borillo (2005:38), who describes the epistemic future as allowing the speaker to avoid committing himself to the truth of the proposition he puts forward, but also introduces the notion of ulterior realisation:

Le futur lui [the speaker] permet de ne pas avoir à se prononcer sur la vérité de ce qu'il énonce, et de laisser à son propos le statut d'une hypothèse (très) probable. Comme s'il lui fallait attendre de vérifier qu'elle [the proposition] se réalise dans le futur pour qu'il soit à même de formuler une véritable assertion.

In Borillo's analysis, the future event is hence not merely the verification of the speaker's conjecture, but the confirmation that the proposition has indeed occurred. As Revaz (2009:154) points out, Borillo's position is likely to be an overstatement; the crucial point appears to be that verification occurs in the future, regardless of whether it confirms or disconfirms the speaker's hypothesis.

What is most striking about all these analyses is that they present as axiomatic the assumption that the SF and SC have a basic value, and that that value is temporal rather than modal. The explanations given for the mitigating and epistemic futures are crucially reliant on this initial assumption: using the SF to indicate that the proposition will be verified at a later time, for example, is only possible if the SF intrinsically refers to later time, while using the SF to 'displace' the proposition into a time other than the moment of speaking is only an effective strategy if the SF intrinsically refers to non-present time.

Diachronically, although the data are inconclusive, it may be plausible to assume that the temporal value of the SF is primary, adopting a model in which the meaning of temporal futurity develops from a pragmatic inference of posteriority, and modal usages subsequently develop

from the temporal uses (as in Fleischman's presentation).⁶³ However, applied to the synchronic system of modern French or Occitan, it might conceivably constitute a further 'diachronic fallacy': there is as yet no conclusive evidence that temporal values of the SF are more basic than modal ones (or indeed vice versa) in the mind of the modern, linguistically naïve, native speaker.

Schäfer-Priess (2001), Barceló (2004), Borillo (2005) and Barceló & Bres (2006) all argue for French that the epistemic uses are both rarer than temporal usages, and lexically restricted, occurring mainly if not exclusively for *être* and *avoir*; certain of Loporcaro's data for varieties of southern Italy (1999:92) likewise suggest that the epistemic future is in some sense marginal.⁶⁴ Loporcaro notes that the epistemic future paradigm in the variety of Agnone presents defectivity such that only the 3rd person forms remain, and proposes that this is because speakers are relatively unlikely to make epistemic conjectures about discourse participants. In making this suggestion he follows Berretta (1994), whose corpus study on spoken Italian shows both that epistemic uses of the SF are rarer than temporal uses, accounting for between 15.7 and 19.1% of tokens, and that these tokens are predominantly third-person forms (including impersonal verbs, but excluding 'polite' forms of address, which were classed with second-person forms). Berretta cites studies conducted on corpora of modern spoken Italian (Bozzone Costa 1991) and Spanish literary texts (Cartagena 1981), which find a similar proportion of SF tokens with epistemic meaning.

Taken together, these findings appear to indicate that it is indeed the temporal use of the SF which is basic. However, acquisition data for Italian discussed by Berretta (1994:22) and

⁶³Loporcaro (1999:95) argues that modal values are primary, since in the diachronic development of future forms, temporal values develop from initial modal values (before modal values in turn emerge from those temporal values). However, the modal values involved are strikingly different: deontic modality gives rise to temporality, while epistemic modality appears to develop subsequently.

⁶⁴Although there are clearly cross-linguistic differences: Barceló (2004) finds Italian admits a wider range of lexical items in epistemic SF contexts than French does, while Squartini (2010) describes the Italian epistemic SF as covering a wider range of semantic values than its French counterpart.

Loporcaro (1999:95) suggest a different view, since the epistemic use of the SF in Italian is acquired several months before the temporal use (in contrast to what one might expect given the respective frequency of the two uses in adult speech).⁶⁵ One might also cite the crosslinguistic comparisons of e.g. Bybee & Pagliuca (1987), who find that temporal futurity is rarely the sole value associated with a given exponent, and that forms expressing this value typically also express one or more modal values.

Overall, in the absence of fuller empirical evidence, whether from typological, frequency or acquisition studies, it is difficult to resolve the issue of which (if either) value of the SF/SC is, in a synchronic perspective, primary. This point is well illustrated by the case of Vet & Kampers-Manhe: while the authors contend that an analysis treating the temporal value as primary 'présente un certain nombre d'avantages' (2001:103), and their analysis is certainly plausible and elegant, they provide no objective measure by which to judge how closely this analysis corresponds to the reality of the native speaker's grammar, and thus their approach can be neither confirmed nor falsified.

3.2.6 *Analyses unifying the modal and temporal SF/SC as essentially 'projective'*

An alternative unifying analysis is offered for French by Touratier (1996) and Revaz (2009), who consider that the modal and temporal values of the SF and SC represent contextual instantiations of a more general underlying value 'projection'.

⁶⁵Few, if any, studies appear to have investigated this point for French; Morgenstern, Parisse & Sekali (2009), for instance, are primarily concerned with the opposition SF vs. *aller* + infinitive, and their analysis classifies tokens of each type according to whether the process expressed by the SF or periphrasis is continuous or discontinuous with the child's current activity, making it difficult to establish which, if any, tokens represent epistemic rather than temporal uses.

Like Iatridou, Touratier adopts a strictly morpheme-based and compositional approach,⁶⁶ in which each verb form is assumed to consist of a stem and affixes, each associated with a distinctive meaning: the SC, for example, is analysed as lexical stem + future marker + imperfect marker + PN marker, making it a 'futur imparfait' and thus to be assigned to the indicative, as are the SF and imperfect indicative (1996:38). However, his discussion of both SF and SC is located under the heading of 'morphèmes de mode'; his argument for unifying the two originates in the assumption that the modal usages of the future should be treated not as incidental to, but on a par with its temporal usages.

For Touratier (1996:176-77), the basic meaning associated with the future morpheme is that of '*projection*', referring to an event which is envisaged, and its observed modal or temporal values result from context and interpretation: if the event is located relative to real time, the interpretation is temporal, while if the event is not thus located, the interpretation obtained is of a future traditionally considered modal, which Touratier prefers to label '*notionnel*' or simply 'non-temporal'. By redefining the future in this way, he proposes to offer a unified account of its otherwise apparently disparate usages: those which are clearly temporal, those which are clearly non-temporal, and those which appear to fall between the two categories.

Temporal usages are defined initially as those in which the speaker envisages the event time as later than the speech time, a usage considered '*le plus naturel et le plus immédiat*' (1996:177), though once again no evidence other than intuition is given for this characterisation. Touratier illustrates with examples such as those in (24), in which temporal reference is additionally signalled by another constituent:

⁶⁶Touratier (1996:11) is clearly aware that form and function are neither identical nor indissociable, as he explicitly makes the point that the traditional names of grammatical categories, while suggesting a semantic value, refer instead to morphological form. Nevertheless, his analysis endeavours to assign a consistent meaning to each form.

- (24) a. *Dans une minute je **saurai** si je suis encore un peintre.* (Sartre)
 b. *Attends un jour, attends un an, bientôt tu **seras** la plus forte.* (Anouilh)

However, he is aware that the reference point at which the event is envisaged does not necessarily coincide with the speech time, citing examples such as (25), in which the event denoted by the SF occurs in the past with respect to the writer, but in the future with respect to the other events related (1996:178).

- (25) [...] *quand le virtuose se rend en Russie, c'est sur recommandation de Balzac. Imprudence dont Balzac se **repentira**.* (Mercur de France)

Revaz (2009:150-53) offers a more detailed typology of such futures, exemplified from historical discourse. For futures referring to the 'à-venir du locuteur', S and R are one and the same, since the future time referred to is the writer's future (26):

- (26) *Sur ce qui s'est passé entre de tels hommes, il est difficile de rien accepter avec confiance, et il est impossible de rien affirmer. Qui oserait dire qu'un jour ne **viendra** pas où cette pièce capitale, sortant de quelque obscur réduit sera rendue à l'examen et au jugement de la postérité ?* (Pasquier)

For futures referring to the 'à-venir du texte', the reference point is instead the point in the text which the common situation of writing/reading has reached, and the future indicates the structure of the coming discourse (27):

- (27) a. *Il n'est pas possible ici de rapporter tous les épisodes du conflit, que nous **envisagerons** comme un tout, conformément à la conception de Thucydide* (Lefèvre)
 b. *Les ouvriers n'étaient pas plus satisfaits. Nous le **verrons** plus loin (chapitre VI).* (Ponteil)

Finally, for futures referring to the 'à-venir des événements', the reference point is the event being recounted, and the future is used to refer to subsequent events (28). Interestingly, the synthetic future occurs even when the narration is, as in the second example, in the simple past,

and might have been expected to force a synthetic conditional (FIP) through sequence of tense rules.

- (28) a. *Ainsi, au second siècle, Rome compromet le sort de l'hellénisme en Orient ; plus tard seulement, elle **s'apercevera** de son erreur et **s'alliera** à l'hellénisme pour lui assurer une survie.* (Piganiol)
b. *Le général Ott eut trois mille tués, et laissa cinq mille prisonniers entre les mains des Français. De cette bataille **sortira**, pour le général Lannes, le titre de duc de Montebello* (Bignon)

The 'temporal' uses of the synthetic future are thus more accurately described as expressing posteriority.

Touratier treats as 'non-temporal' instances of the SF which express conjecture, attenuation, protestation and possibility⁶⁷; his examples and typology are drawn largely from Imbs (1960). Conjecture (1996:179-80) refers to a hypothesis offered as an explanation for present circumstances (29):

- (29) a. *Pour qui a-t-on sonné la cloche des morts ? Ah ! mon Dieu, ce **sera** pour Mme Rousseau* (Proust)
b. *Il y a du nouveau!... Brunet hausse les épaules «Ce **sera** les Russes qui auront débarqué à Brême ou les Anglais qui auront demandé l'armistice».* (Sartre)

In these cases, Touratier argues that the SF cannot have a genuine temporal value, since the events referred to are located in the present or past; he rejects analyses in terms of ulterior verification as contrary to speaker perceptions, and adopts instead the view that such usages of the SF are non-temporal instances of projection.

In the future of attenuation (30), the SF is used with reference to a present action, metaphorically distancing the speaker from their utterance: Touratier analyses these cases as

⁶⁷In the present study, 'possibility' is generally taken to refer to use in conditional structures with either implicit or explicit protasis. Touratier, however, does not address this use of the SF, and uses the term *futur d'éventualité* ('future of possibility') to refer to a subclass of modal uses of the SF, discussed below.

attenuating the force of the utterance by presenting it as something merely envisaged (1996:180-81).

- (30) a. *Je ne vous **cacherais** pas que je ne suis guère satisfait* (Imbs)
b. *Je vous **demanderais** de vous taire.*

He equally cites a class which he terms futures of protestation (31), which, beyond merely presenting a conjecture, explicitly mark it as highly improbable. This may be clearly seen from the full context of (31), given in (31'): for Dubois, the notion of the woman not protesting is a theoretical possibility, but one which is intrinsically implausible. The 'future of protestation' thus contrasts with other modal uses of the SF, in which speakers, while expressing a reserve as to the truth value of each conjecture, nevertheless assert this conjecture as their own opinion: in (29a) the speaker does not know whether the bell does indeed toll for Mme Rousseau, but assumes this to be the case; in (32b), the speaker assumes that the hearer will indeed not disapprove; whereas in (31), the speaker evidently assumes quite the opposite of the proposition *cette femme ne criera pas*. It is striking, however, that the most recent examples which Touratier gives for the future of protestation date from the 17th century, casting doubt on its relevance for a description of modern French.⁶⁸

- (31) *Vous vous emparez de son bien, de son cœur, et cette femme ne **criera** pas !*
Marivaux)

- (31') DORANTE. *Araminte pourtant m'a dit que je lui étais insupportable.*
DUBOIS. *Elle a raison. Voulez-vous qu'elle soit de bonne humeur avec un homme qu'il faut qu'elle aime en dépit d'elle ? Cela est-il agréable ? Vous vous emparez de son bien, de son cœur ; et cette femme ne **criera** pas ! Allez vite, plus de raisonnement : laissez-vous conduire.*

Finally, he distinguishes a class of futures of possibility (1996:181), typically involving verba dicendi (32):

⁶⁸Interestingly, while Borillo's (2005) typology of modal uses of the SF identifies remarkably similar classes to Touratier (1996), Borillo makes no mention of the 'future of protestation' in modern French.

- (32) a. *C'était, **penserez-vous** peut-être, participer à l'erreur que je dénonçais au début (Europe)*
b. *On ne **trouvera** pas mauvais que je rappelle ceci (Europe)*

Since the objection is formulated at the moment of the utterance, generally for the purpose of refuting it, these are not temporal futures either, but rather represent objections which may be envisaged; although Touratier presents these as a separate category, they might reasonably be considered to belong to the class of conjectural SFs.

Overall, Touratier argues that given the difficulty of explaining the modal usages in terms of a basic temporal value, the future is better described as having the single value 'projeté', which may be interpreted in accordance with context.

Revaz (2009:153) further develops Touratier's analysis, as offering a more elegant and more plausible account of uses of the future, such as modal uses and uses in historical writing, which had previously been considered marginal. She rejects accounts of ulterior realisation and ulterior verification, as detracting from the central point that the epistemic modal use of the SF expresses a hypothesis concerning the present moment; whether the hypothesis is later verified or not is irrelevant at the moment when the speaker puts it forward. (One might object that Revaz is here brushing aside the question of *why* the SF should be capable of encoding epistemic modality; however, this objection rests on the unverifiable assumptions that the SF is inherently associated with one basic semantic value, and that that value is temporal future).

Revaz characterises the feature 'projective' and its temporal and modal instantiations as follows:

Si, dans un emploi temporel, la projection se fait par rapport à un point de repère (moment de l'énonciation, moment de l'événement, moment de déroulement du texte), dans un emploi modal, la projection se fait, par rapport à la situation d'énonciation, dans un monde possible (plus ou moins probable)' (2009:154).

[...] le sème "projeté" en langue a deux actualisations possibles en discours : a) la projection temporelle dans un "à-venir" (de l'énonciateur, des événements ou du texte) ;

b) la projection dans un monde possible (hypothétique, avec le futur conjectural, ou simplement mis à distance, dans le cas d'emplois dits "atténuatifs"). [...] [L]e SF est un temps "projectif", ce qui comprend une projection autant dans un "à-venir" (factuel ou non) que dans un monde possible (non factuel).' (2009:155)

Revaz points out that this approach offers the advantage of tying together the temporal and modal values of the future, which seem semantically close given the unknowable/non-factual nature of future time, and can be difficult to distinguish from each other in practice.

Interestingly, Touratier and Revaz differ in their analysis of the 'gnomic' future expressing universal truths (e.g. *Qui vivra verra*). Touratier assigns this usage to the class of temporal futures (assuming that it expresses advice drawn from experience for use thereafter, and that the universal bearing of the statement arises not from the SF but from universal or generic constituents such as *ne...jamais*), while Revaz considers it essentially modal. The disparity in their analyses might be taken to suggest that the difference between 'temporal' and 'modal' values associated with the SF is entirely one of contextual instantiation, and that the 'gnomic' cases constitute a grey area for which the context is simply not sufficient; thus rather than two discrete classes of values, the uses of the SF constitute a continuum within a single value 'projective'. It is, however, striking that many of the examples adduced are concerned with a form of temporal sequencing — Revaz gives examples such as *Aide-toi, le ciel t'aidera*, where the pragmatic inference is that help from Heaven follows helping oneself, and proverbs concerning the weather, which concern predictions for the speaker's future as much as general truths — from which one might conclude that these uses of the SF do in fact express posteriority.

Revaz' study then proceeds to a comparison of the SF with the periphrasis *aller*+infinitive, and notes that while both may be used as temporal futures, the periphrasis cannot occur in modal contexts (33):

(33) *Paul n'est pas là / il sera/*va être malade*

For Revaz, this asymmetry of function is attributable to aspectual differences: the go-future ('protensif') describes a process prior to the process beginning, while the SF ('en tension') presents the process as an entirety. The difference is illustrated in (34):

(34) *On dirait qu'il va pleuvoir / *pleuvra*

Here, the go-future is acceptable because it presents a progression from the circumstances of the utterance to the future event: all the conditions necessary in order for it to rain are fulfilled. By contrast, the SF presents the necessary conditions and the raining as indissociable — infelicitous in this context since the speaker is remarking upon the fulfilment of the conditions without as yet the fulfilment of the raining.

On the basis of such examples, Revaz argues for a difference of assertion between the go-future (entailing a greater degree of assertion by the speaker) and the SF (entailing a lesser degree of assertion by the speaker), and for the chief distinction between the two being not proximity in time, but relative certainty of the event taking place (2009:157). The grounding of the go-future in the present, with a strong assertive value, serves to explain why it is incompatible with conjectural usages.

With regard to the SC, since this form may serve as FIP, and since it formally resembles the stem found in the SF and the desinences found in the imperfect indicative, Touratier attributes to the SC the values 'projection' (synthetic future) and 'non actuel' (imperfect indicative; the description of 'non actuel' (1996:111-12) is remarkably close to that of Iatridou's Exclusion Feature). The modal and temporal uses of the SC are therefore assumed to be unified as they are for the future (1996:182-83): the FIP results from temporal interpretations of both these values, while the modal conditional results from non-temporal interpretations.

While the argument for the FIP and modal conditional resulting from the same basic meaning is new, the argument for functional commonality of the SF and SC is not significantly different from that proposed by Iatridou: since form and meaning are assumed to be systematically associated, the shared stem of the SF and SC is assumed to indicate shared meaning.

3.2.7 *Conditional 2*

While many modern varieties of Occitan may be analysed in similar manner to French, in certain areas the parallelism of SF and SC is disrupted by the presence of a third term, the reflex of the Latin pluperfect indicative. This form is well attested in mediaeval Occitan, grammars of which traditionally refer to it as 'conditional 2';⁶⁹ I adopt this label (henceforth abbreviated to cond2) as an abstract and arbitrary designation for the form concerned, independently of the semantic values associated with the form.

The mediaeval attestations of cond2 include occasional tokens which appear to retain the original temporal value of pluperfect (Jensen 1994:245), but such uses are rare;⁷⁰ the overwhelming majority of tokens are associated with a modal value close to that of the SC.

Both SC (35) and cond2 (36) may appear in the apodosis of a potential condition:

(35) *Domna, si vos m'amavatz / voluntiers vos **amaria***
'Lady, if you loved me / I would gladly love you'
(Albertet, *Mos coratges s'es cambiatz*, v. 09-10, in Ricketts 2005)

(36) *Si nos lo laissessam el nos **laichera** en patz.*
'If we left him, he would leave us in peace'.
(*La Canso de la crosada*, laisse 204, v. 110-11, cited by Quint 1997:06)

Both SC (37) and cond2 (38) are likewise acceptable in cases of potential conditions with implicit protases:

⁶⁹Wolff (1885) is unusual in using the term 'conditional II' to refer to the SC.

⁷⁰The example given by Jensen is taken from a sermon, and may simply be the result of strong Latin influence in the Church.

- (37) *Et yeu non poyria ges retrayre / las laus que comenset a fayre*
 'And I could not recapture / the praise she began offering' (ie, even if I tried)
 (*La vida de Santa Enimia*, v. 509-10, in Ricketts 2005)
- (38) *Melhor conselh dera na Berengera que vos no me donatz*
 'Lady Berengera would give me better advice than you do' (ie, if I asked her)
 (Giraut de Bornelh, *Si'us quer conselh*, v. 39-40, cited by Jensen 1994:246)

The value of attenuation may also be expressed by either SC (39) or cond2 (40):

- (39) *per Deu et per la Verge vos voldriam preguar*
 'in the name of God and the Virgin we would like to beseech you'
 (Guilhèm Anelier, *Histoire de la Guerre de Navarre*, v. 574, in Ricketts 2005)
- (40) *vos degratz intrar, senher, ab vostres palafres*
 'you should come in, lord, with your palfreys'
 (*La Canso de la crosada*, laisse 171, v.35, cited by Quint 1997:10)

However, SC and cond2 are not exact equivalents. In potential conditions, cond2 is correlated with an imperfect subjunctive in the protasis, while the SC is more frequent with an imperfect indicative in the protasis (Henrichsen 1955:56). In counterfactual conditions, cond2 is possible (41), whereas the SC is not; the value associated with cond2 is in these constructions equivalent to the value of the periphrasis SC + past participle (42).

- (41) *S'el agues ara derochat/En un tornei .C. cavalliers / E gasainatz .VC. destriers / Non agra joia tan perfecha.*
 'If he had unhorsed a hundred knights in a joust, and won five hundred chargers, he would not have known such joy.' (Henrichsen 1955:56)
- (42) *s'ieu agues brui volgut / maintas vetz auria perdut / ioi d'amor*
 'If I had wanted renown I'd many times have lost the joy of love'
 (Lanfranc Cigala, *Lafranc, digatz vostre semblant*, v. 45-47, in Ricketts 2005)

The most striking difference between the SC and cond2, though, is with respect to the expression of posteriority. The SC is known to express FIP (43), although a heuristic study on the *Concordance de l'Occitan Médiéval* ('COM', Ricketts 2005) suggests that it is much less frequently associated with this value than with modal eventuality or attenuation.

- (43) *mon frayre Paul, l'angel m'a dich / que vous vendria*
 'my brother Paul, the angel told me that he would come to you'
 (*Mystères provençaux du XVe siècle*, v. 2473-74, in Ricketts 2005)

It is, however, much less certain that *cond2* may express FIP at all. Quint's (1997) study gives no example of *cond2* as FIP; Jensen (1994:245) claims that *cond2* is essentially modal, but may in very rare cases serve as FIP, giving the single example (44) with only a partial gloss:

- (44) *et enquer se'n loingna ades, e fera, tro seaz feniz*
 '...et il le ferait jusqu'à ce que tu sois mort'
 (*Amics Marchabrunns*, v. 47-48, cited by Jensen 1994:245)

Jensen's example, though, is problematic: the context (44') is that of a general truth, rather than of a real past circumstance, meaning that *fera* might equally be interpreted as expressing eventuality. The uncertainty surrounding the interpretation of *fera* makes this a weak example on the basis of which to argue for *cond2* having indeed been used as FIP.

- (44') *Catola, anc de ren no fo pres / un pas qe tost no s'en loignes / et enquer s'en loingna ades / e fera, tro seaz feniz.*
 'Catola, love was never so close to anything that it did not at once distance itself, and it still is distancing itself, and so it will do, until you have finished'
 (*Amics Marchabrunns* v. 45-48, in Simon Gaunt, Ruth Harvey & Linda Paterson, *Marcabru: A Critical Edition*, 2000, p.102; their translation)

Sant-Guilhem (1989:61-62), however, finds at least two examples of *cond2* used unambiguously as FIP in a collection of religious texts from Biarn which he considers to date from the late fourteenth century; I reproduce these in (45) and (46) below, with Sant-Guilhem's glosses.

- (45) *Aquetz es lo qui jo dixu que apres mi bengore un homi.*
 'Voilà celui dont j'ai dit qu'après moi viendrait un homme.'
- (46) *Sent Jayme jura que no mynyare ni begore entro que agos vist.*
 'Saint Jacques jura qu'il ne mangerait ni ne boirait jusqu'à ce qu'il eût vu.'

In summary, while in mediaeval Occitan *cond2* shares the values of possibility and attenuation found for the SC, it differs from the SC in expressing a greater degree of irrealis (Jensen

1994:246), and in its use to express temporal posteriority: cond2 is very rarely attested as FIP, while the only known attestations appear relatively late, and in a restricted geographic area.

In modern varieties of Occitan, cond2 survives only marginally: it is attested in only three areas, from one of which it may now have disappeared. Chabaneau's (1876) grammar notes the presence of cond2 in a cluster of localities around Nontron in the Lemosin, but this description clearly indicates that cond2 is progressively falling out of use. According to Chabaneau (1876:283-84), cond2 is no longer associated with distinctive modal values of eventuality, but is an exact semantic equivalent of the imperfect subjunctive (reflex of the Latin pluperfect subjunctive), by which it is being supplanted; moreover, cond2 is reported to be partially defective, lacking forms for 1sg and 3sg. More recent grammars of Lemosin (e.g. Benoît 1932, Tintou 1982), although considerably less detailed than Chabaneau's description, do not mention cond2; taken together with Chabaneau's observations, this absence suggests that the modern varieties no longer present a reflex of the pluperfect indicative.

3.2.7.1 Cond2 in the Pirinèus

Cond2 is well attested in a number of modern varieties of the Pirinèus; however, the primary semantic value associated with this form is now the temporal one of FIP (45), to the extent that modern descriptions typically label cond2 'futur deu passat' or 'imparfait du futur'.

- (47) *Que m'avè dit que **vienora** dab nosautes mès ne l'a pas vagat.*
'He said he would come with us, but he didn't go.'
(Romieu & Bianchi 2005:333)

Romieu & Bianchi (2005:333) and Birabent & Salles-Loustau (1989:101)⁷¹ both describe cond2 as retaining modal values in certain contexts: counterfactuality in main clauses (48), and eventuality in concessive clauses introduced by *quan* 'when' (49).

⁷¹ The examples in these sources are presented as generally valid for the Pirinèus and south Gasconha.

(48) *Era Espuga d'Arròda, que **disóren** era demora d'ua encantada.*
'La Grotte d'Arrode, on aurait dit la demeure d'une fée.'
(Birabent & Salles-Loustau 1989:101)

(49) *Quan **parlèri** hòrt, non m'enteneretz.*
'Même si je parlais fort, vous ne m'entendriez pas.'
(Birabent & Salles-Loustau 1989:101)

This last context admits either cond2 (50) or the SC (51), but with a difference of meaning, as cond2 conveys a stronger degree of irrealis than the SC:

(50) *Quan t'i **botèras** adara, que seré tròp tard.*
'Quand bien même tu t'y mettrais, ce serait trop tard.'
(Romieu & Bianchi 2005:333)

(51) *Quan **parlarés** adara, que seré tròp tard.*
'Même si tu parlais maintenant, ce serait trop tard.'
(Birabent & Salles-Loustau 1989:101)

Only the SC, however, is acceptable in the protasis of a potential condition (52), and only the periphrastic form SC + pst.ptcp is possible in the protasis of a counterfactual condition with an explicit apodosis (53).

(52) *Si èra talhat coma cau, aqueth pomèr **daré** pomas a pièlas.*
'If it was pruned properly, that apple tree would produce loads of apples.'
(Romieu & Bianchi 2005:332)

(53) *Si n'avèm pas avut ua mapa, que'ns **serem poduts** pèrder.*
'Si nous n'avions pas eu une carte, nous aurions pu nous perdre.'
(Romieu & Bianchi 2005:332)

Cond2 is present in an area extending over the départements Pirinèus Atlantics and Hauts Pirinèus, together with a few localities in Gèrç and Garona Nauta (ALG 1616), and Allières (1997:20) claims that for the majority of this area the principal function associated with cond2 is FIP. Although Allières' general description does not explicitly address the issue of whether the SC can be used as FIP over this area, the inference is that it cannot, a conjecture in agreement with Bouzet (1975:69) and with Field's (2003) data for Bordèras.

Allières (1997:20) notes in particular two varieties which differ from the basic pattern. In the variety of Harrèra-Arrens, both cond2 and SC are possible in the protasis of a potential condition, but only cond2 may be used as FIP; while in the variety of Barèja (see also §6.7 below and Massourre 2006), the SC is entirely absent, and cond2 is associated with both temporal and modal values. A further distribution is given by Field (2003) for the variety of Bordèras in which the SC has been restricted to modal usages, while the value of FIP is expressed either by cond2 or by a periphrasis of the form *anavi* 'I was going' + infinitive:

- (54) *Que'm prometós qu'anavas tornar.*
Que'm prometós que tornèras.
 'Tu m'as promis que tu reviendrais' (Bordèras)

The periphrastic type *anavi* + inf results from analogy with the 'prospective present' *vau* + inf; the use of the prospective auxiliary *anar* 'go' in the imperfect indicative transparently diagrams the temporal sense of FIP. As mentioned above, Revaz (2009:161) notes for French that the prospective present cannot express projection into a possible world, leading to the impossibility of it expressing epistemic modality;⁷² the same appears true of *anavi* + inf (a 'prospective past?'), which can express FIP but not the modal values of eventuality or evidentiality associated with the SC.

Fig.17 provides a schematic representation of the different distributions of form and function found in varieties of the area which preserves cond2, as compared to those found in French and in the varieties of Occitan described in §3.2.4 above.

	temporal future	modal future	FIP	conditional possibility of
Barèja	SF		cond2	
Harrèra-Arrens	SF		cond2	SC
general cond2 area	SF		cond2	SC
Bordèras	SF		cond2/ <i>anavi</i> +inf	SC
Campan	SF		SC+pst.ptcp/ <i>anavi</i> +inf	SC
other vars, French	SF		SC	

Figure 17. Distribution of functions across forms in the Pirinèus.

⁷²Cf. *Paul n'est pas là / il sera malade* vs. *Paul n'est pas là / *il va être malade* (Revaz 2009:155).

3.2.7.2 Cond2 in the Valadas

Cond2 also survives in the Valadas, where it has become specialised, not as a temporal marker, but as a marker of epistemic modality. Vignetta (cited in Sibille 1997:16) considers it directly equivalent to the Italian future perfect — strongly associated with modal conjecture (Barceló 2004) — and glosses *mi aguéro* (have.COND2.1SG) as *io avrò avuto*; while dialect descriptions typically gloss cond2 as the equivalent of an imperfect indicative plus an adverb meaning 'perhaps' or 'probably', as in the examples below (55-57) taken with their original orthography and glosses from Jayme (2003:55).

- (55) *I l'aougueiron nhënca in sooû a la pocchë*
'Ils avaient probablement même pas un sou à la poche'
- (56) *I l'aougueiron tro minjà*
'Ils avaient peut-être trop mangé'
- (57) *ou fourë ancâ pchi = montû ou l'éрэ ancâ pchi*
'perhaps he was still a small boy then'

Descriptions of these varieties frequently analyse cond2 as among the exponents of a distinct mood labelled 'dubitative' or 'conjectural', which, like the indicative and subjunctive, occurs in four tense/aspect values: present, imperfect, perfect and pluperfect. The exponents of these values are, respectively, the SF, cond2, the periphrasis SF + pst.ptcp, and the periphrasis cond2 + pst.ptcp, as shown below with their original Italian glosses for the variety of Bardonescha.

present	<i>mi a ciantarèi</i>	'forse canto'
imperfect	<i>mi a ciantéru</i>	'forse cantavo'
perfect	<i>mi oréi ciantà</i>	'forse ho cantato'
pluperfect	<i>mi ughéru ciantà</i>	'forse avevo cantato'

Table 8. Dubitative forms for chantar 'sing', Bardonescha (Gleise-Bellet 2003:42-44)

Analyses of this type consider that the principal function associated with the SF is now that of marking conjecture, while temporal posteriority is now expressed by periphrastic then-futures

of the type *mi a chanto pòi* (see §3.1.4 above). One might speculate, given its origin, that the then-future is in fact a form of prospective present,⁷³ which can express temporal futurity but not conjecture (compare Revaz' (2009) analysis of the French go-future); however, in the absence of more substantial data, particularly attestations in context, this must remain a speculation. Furthermore, one example given by Jayme (2003:48) for Ols presents the SF and then-future as direct equivalents:

- (58) *A lh'anarei quand a l'aurei fenit.*
A lhi vau puei quand a l'ei puei fenit.
 'ci andrò quando avrò finito'

Sibille (1997) argues that the SF still retains to some degree the possibility of marking temporal futurity, citing the following examples given by Pons (1973:LXXX) with their original glosses:

- (59) *a venrè amont deman*
 'viene forse su domani'

- (60) *quant il aurèn finit*
 'quando avranno finito'

Pons' own analysis, cited by Sibille, posits that the SF has the double function of dubitative modality and temporal ulteriority:

'[i]l presente e il passato prossimo del dubitativo hanno dunque una doppia funzione o, per meglio dire, le forme del futuro che le rappresentano mantengono talvolta in questa accezione anche il loro primitivo significato.'

More than an inherently temporal future, though, his comments and examples recall Touratier's analysis, in which the SF is associated with the value 'projection' and obtains its temporal or modal reading from contextual elements. It is notable that both of Pons' examples contain

⁷³Few sources explicitly mention whether or not the go-future is present in the varieties of the Valadas; Jayme (2003), who cites both in the variety of Ols, is an exception.

temporal referents, *quand* 'when' and *deman* 'tomorrow', to which the temporal interpretation of the SF is conceivably due.⁷⁴

Among the rare sources offering direct information on the respective roles of *cond2* and the SC is the collection of fieldwork data published by Hirsch (1978), comprising versions of the parable of the Prodigal Son, translated by the informants from Italian into the local variety of Occitan. The Italian text contains two instances of the SC, in the phrases *Per sfamarsi avrebbe voluto mangiare le ghiande nei trogoli*, and *ed io dovrei morire qui come un cane*. In most cases, these are both rendered by an SC in Occitan; but in three out of the 22 points within the area over which *cond2* is still present, *cond2* was obtained, replacing the SC as auxiliary in the periphrastic construction: in Thures, for example, *au aguèra vorgot* translates *avrebbe voluto*. The second occurrence was systematically translated by an SC. These data suggest that *cond2* may in some localities express eventuality in addition to conjecture.

Both eventuality and attenuation are certainly associated with the SC:

- (61) *A pensou qu'ou l'acceptèri vourountî* (Jayme 2003:51)
Je pense qu'il accepterait volontiers [si quelqu'un le lui demandait]
- (62) *S'ou l'aouguëssë loû mouion, ou l'achtëri* (Jayme 2003:53)
S'il avait les moyens, il l'achèterait
- (63) *Ä vudríu mek ëd pan e 'd ciocolà* (Gleise Bellet 2003:08)
Je voudrais seulement du pain et du chocolat

There is, regrettably, no explicit information on the function of FIP, though as this is not mentioned among the values of the 'dubitative' mood, one may assume that it is not associated with *cond2*.

⁷⁴ See e.g. Klum (1961) for detailed discussion of the interaction of verb and adverb in French.

In summary, although the value at stake is different — epistemic modality as opposed to temporal posteriority — the varieties of the Valadas, like those of the Pirinèus, present a strong *semantic* link between the SF and cond2, contrasting with the *formal* link which persists between the SF and SC.

3.3 *Conclusions: form and function*

The unifying analyses proposed by Iatridou, Barceló & Bres, Touratier and Revaz all have in common a morpheme-based framework which assumes a direct association of form and function, and thus distributions of form which reflect natural classes. However, many of the patterns of distribution discussed in this chapter are problematic for such a view. While the formal identity between the stems of the SF and SC is in most cases preserved, it is not always mirrored by functional commonality.

In many varieties of Biarn and Bigòrra, the value of temporal futurity/posteriority is expressed by the SF (Fuèc stem) and by cond2 (PYTA stem) — items with significantly different etyma and phonological shape — while the SF and SC, despite their common origin and continuing stem identity present much reduced functional commonality.

In the variety of Campan, as in standard Italian, the values of temporal future, modal future and modal conditional are likewise grouped together, but the value of FIP is assigned to the periphrasis SC + pst.ptcp, the usual exponent of counterfactuality. The aspect-neutral, temporal FIP and the modal conditional perfect hardly seem to form a semantically defined natural class, nor indeed do the temporal instantiation of the SF and the modal instantiation of the SC.

In the Valadas, meanwhile, the SF and cond2 are once again grouped together semantically, this time with a common modal rather than temporal value.

In all these varieties, therefore, the distribution of the Fuèc stem conspicuously does not correspond to a natural class of futures.

Finally, while the formal stem identity of SF and SC is systematically preserved in these areas where their functional commonality is significantly reduced, it is common to find cases of formal differentiation between SF and SC in varieties in which the two forms present robust functional commonality. Where asymmetrical stem distributions occur, moreover, they affect a given form in all its functions: there is no reported case of asymmetrical stem distribution involving a formal split between the FIP and the modal conditional, or between modal and temporal future.⁷⁵

In the light of these data, it appears difficult to explain the distribution of stems in the paradigm in terms of semantic values, or of the distribution of values in terms of morphological forms; the patterns observed suggest that form and function are to a significant extent independent.

⁷⁵This last finding might be claimed to support analyses which posit a single underlying value for all 'uses' of the SF or SC. However, such an argument is crucially based on the assumption of form diagramming function, and upholding this assumption would oblige one to argue at one and the same time that asymmetry within Fuèc demonstrates a lack of functional commonality between SF and SC, a position which is at odds with the aim of most unifying analyses to establish commonality between SF and SC. It may be objected that a difference in function is not necessarily expected to induce a difference in form; however, where two concurrent forms exist, the possibility of these forms being redistributed to diagram an existing difference in function is not unreasonable.

4. Future and conditional within the Occitan verb paradigm

It is beyond the scope of the present study to provide a comprehensive analysis of inflection in Occitan; for detailed discussion of inflectional endings in different varieties the reader is referred to Ronjat (1937) and to the individual dialect descriptions cited in this study. However, in order to place in context the developments discussed in §5 and §6 below, it is useful to provide a brief sketch of typical conjugational systems.

To this end, I reproduce below a selection of illustrative paradigms taken from the regional standard grammars for Gasconha, Lengadòc and Provença, namely the regions for which I have most dialect data available; in the context of the present study, these 'standard' paradigms are chosen merely as a convenient sample with which to demonstrate common recurrent inflectional types in the relevant regions, and major points of variation between regions.

Each conjugational class is exemplified by one verb from each of these three regional standards, for which the paradigm is given both in *grafia classica*, taken directly from the source material, and in broad IPA transcription based on the general phonological information given by each source.

In accordance with common practice, the screeves are labelled following the Leipzig glossing conventions, with the exception of the synthetic future and conditional, for which the abstract labels SF and SC are maintained. However, it should be stressed that although the standard labels are explicitly termed 'glosses', implying a direct and indissociable link between a form and a semantic value, no assumption is made in the following section as to the semantic values associated with these forms. The presentation of word-forms below is precisely that, a presentation of *forms*.

4.1 *Conjugational types*

Varieties of Occitan have traditionally been described as having three major conjugational classes (see e.g. Ronjat 1937, Alibèrt 1976, Wheeler 1988), which continue the Latin conjugational classes I, III and IV, and for the purposes of the present study I propose to adopt this broad division. However, there is considerable variation among existing descriptions, not only in the labels which they attach to these classes, but to the subclasses which they distinguish. While often merely a question of labelling, this variation can equally reflect genuine regional variation, since not all varieties present the same set of inflectional classes; and indeed for those eastern varieties which appear to be progressively neutralising conjugational class, it may be argued that a division into three inflectional types is excessive for a synchronic analysis (see e.g. Dalbera 1994). In the interests of clarity, I outline below the classification which I propose to follow in the present study, giving details of the regional differences encountered.

4.1.1 *First conjugation*

The first conjugation continues Latin conjugation I. It is in all varieties of Occitan the class with the highest number of members, and unequivocally productive. The first conjugation is distinguished by an infinitive in *-/a/*, a past participle in *-/at/*, and forms of the imperfect indicative in *-/aβ/-* or *-/av/-* directly continuing the Latin first-conjugation imperfect indicative. First-conjugation verbs systematically present a theme vowel continuing Latin A in the stem of SF and SC forms; most commonly, this vowel is realised */a/*, though in some areas, due to regular phonological change, it is realised */ɔ/* (typically Lemosin and northern Lengadòc) or */e/* (south Gasconha). The majority of first conjugation verbs present no stem allomorphy;

exceptions are limited to verbs presenting N-pattern⁷⁶ vowel alternation, and the suppletive irregular *anar* 'go'.⁷⁷

Gasconha (Romieu & Bianchi 2005:296)

I : *cantar* /kan'ta/ 'sing'

prs.ptcp *cantant* /kan'tan/, pst.ptcp *cantat* /kan'tat/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>canti</i>	<i>cantavi</i>	<i>canti</i>	<i>cantèi</i>	<i>cantèssi</i>	<i>cantarèi</i>	<i>cantari</i>
2sg	<i>cantas</i>	<i>cantavas</i>	<i>cantes</i>	<i>cantès</i>	<i>cantèsses</i>	<i>cantaràs</i>	<i>cantarés</i>
3sg	<i>canta</i>	<i>cantava</i>	<i>cante</i>	<i>cantè</i>	<i>cantèsse</i>	<i>cantarà</i>	<i>cantaré</i>
1pl	<i>cantam</i>	<i>cantàvam</i>	<i>cantem</i>	<i>cantèm</i>	<i>cantèssem</i>	<i>cantaram</i>	<i>cantarem</i>
2pl	<i>cantatz</i>	<i>cantàvatz</i>	<i>cantetz</i>	<i>cantètz</i>	<i>cantèssetz</i>	<i>cantaratz</i>	<i>cantaretz</i>
3pl	<i>cantan</i>	<i>cantavan</i>	<i>canten</i>	<i>cantèn</i>	<i>cantèssen</i>	<i>cantaràn</i>	<i>cantaren</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'kanti	kan'taβi	'kanti	kan'tei	kan'tesi	kanta'rei	kanta'ri
2sg	'kantɔs	kan'taβɔs	'kantes	kan'tes	kan'teses	kanta'ras	kanta'res
3sg	'kantɔ	kan'taβɔ	'kante	kan'te	kan'tese	kanta'ra	kanta're
1pl	kan'tam	kan'taβɔm	kan'tem	kan'tem	kan'tesem	kanta'ram	kanta'rem
2pl	kan'tats	kan'taβɔts	kan'tets	kan'tets	kan'tesetz	kanta'rats	kanta'rets
3pl	'kantɔn	kan'taβɔn	'kanten	kan'ten	kan'tesen	kanta'ran	kanta'ren

⁷⁶The term 'N-pattern' refers to a distribution of stem allomorphy in the inflectional paradigm of the Romance verb 'such that the present tense first, second and third persons singular, the second person singular imperative, and the third person plural share a root distinct from that of the remainder of the paradigm' (Maiden 2011b:241).

⁷⁷ The verbs *far* 'do', *dar* 'give' and *estar* 'be' are present in some varieties with infinitives of first-conjugation type, but are not unequivocally first-conjugation in their inflectional pattern.

Lengadòc (Alibèrt 1976:116-21)

I : *parlar* /par'la/ 'speak'

prs.ptcp *parlant* /parlan/; pst.ptcp *parlat* /par'lat/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>parli</i>	<i>parlavi</i>	<i>parli</i>	<i>parlèri</i>	<i>parlèssi</i>	<i>parlarai</i>	<i>parlariá</i>
2sg	<i>parlas</i>	<i>parlavas</i>	<i>parles</i>	<i>parlères</i>	<i>parlèsses</i>	<i>parlaràs</i>	<i>parlariás</i>
3sg	<i>parla</i>	<i>parlava</i>	<i>parle</i>	<i>parlèt</i>	<i>parlèsse</i>	<i>parlarà</i>	<i>parlariá</i>
1pl	<i>parlam</i>	<i>parlàvem</i>	<i>parlem</i>	<i>parlèrem</i>	<i>parlèsem</i>	<i>parlarem</i>	<i>parlariam</i>
2pl	<i>parlatz</i>	<i>parlàvetz</i>	<i>parletz</i>	<i>parlèretz</i>	<i>parlèsetz</i>	<i>parlaretz</i>	<i>parlariatz</i>
3pl	<i>parlan</i>	<i>parlavan</i>	<i>parlen</i>	<i>parlèron</i>	<i>parlèsson</i>	<i>parlaràn</i>	<i>parlarián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'parli	par'laβi	'parle	par'lèri	par'lèse	parla'rai	parla'rjɔ
2sg	'parlɔs	par'laβes	'parles	par'lères	par'lèses	parla'ras	parla'rjɔs
3sg	'parlɔ	par'laβɔ	'parle	par'let	par'lèse	parla'ra	parla'rjɔ
1pl	par'lan	par'laβen	par'len	par'lèren	par'lèsen	parla'ren	parla'rjan
2pl	par'lats	par'laβets	par'lets	par'lèrets	par'lèsets	parla'rets	parla'rjats
3pl	'parlɔn	par'laβɔn	'parlen	par'lèrun	par'lèsun	parla'ran	parla'rjɔn

Provença (Martin & Moulin 1998:88-89)

I : *parlar* /par'la/ 'speak'

prs.ptcp *parlant* /par'lân/; pst.ptcp *parlat* /par'la/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>parli</i>	<i>parlavi</i>	<i>parli</i>	<i>parlèri</i>	<i>parlèssi</i>	<i>parlarai</i>	<i>parlariáu</i>
2sg	<i>parles</i>	<i>parlavas</i>	<i>parles</i>	<i>parlères</i>	<i>parlèsses</i>	<i>parlaràs</i>	<i>parlariás</i>
3sg	<i>parla</i>	<i>parlava</i>	<i>parle</i>	<i>parlèt</i>	<i>parlèsse</i>	<i>parlarà</i>	<i>parlariá</i>
1pl	<i>parlam</i>	<i>parlaviam</i>	<i>parlem</i>	<i>parleriam</i>	<i>parlessiam</i>	<i>parlarem</i>	<i>parlariam</i>
2pl	<i>parlatz</i>	<i>parlaviatz</i>	<i>parletz</i>	<i>parleriatz</i>	<i>parlessiatz</i>	<i>parlaretz</i>	<i>parlariatz</i>
3pl	<i>parlan</i>	<i>parlavan</i>	<i>parlen</i>	<i>parlèron</i>	<i>parlèsson</i>	<i>parlaràn</i>	<i>parlarián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'parli	par'lavi	'parli	par'lèri	par'lèsi	parla'rai	parla'rjew
2sg	'parles	par'lavɔs	'parles	par'lères	par'lèses	parla'ras	parla'rjes
3sg	'parlɔ	par'lavɔ	'parle	par'let	par'lèse	parla'ra	parla'rje
1pl	par'lã ^ɔ	parla'vjã ^ɔ	par'lê ^ɔ	parle'rjã ^ɔ	parle'sjã ^ɔ	parla'rê ^ɔ	parla'rjã ^ɔ
2pl	par'las	parla'vjas	par'les	parle'rjas	parle'sjas	parla'res	parla'rjas
3pl	'parlɔ ^ɔ	par'lavɔ ^ɔ	'parlê ^ɔ	par'lèrun	par'lèsũ ^ɔ	parla'rã ^ɔ	parla'rjê ^ɔ

4.1.2 *Second conjugation*

Following Alibèrt (1976), I label 'second conjugation' the class which continues the Latin fourth conjugation (note that both Ronjat 1937 and Wheeler 1988 label this class III). This class is of low token frequency in texts, but retains marginal productivity through derivational processes and shift of certain originally third-conjugation verbs into the second conjugation. Second-conjugation verbs present an infinitive in *-/i/*, a past participle in *-/it/*, and Fuèc stems with the thematic vowel */i/*. In a number of Gascon varieties, including the standard illustrated here, second-conjugation verbs also present distinctive inflectional endings in the imperfect indicative.

4.1.2.1 *Second conjugation, type (a)*

Many verbs of this class are additionally distinguished by the presence in certain paradigm cells a semantically empty augment deriving from the Latin inchoative infix *-isc-*. The exact distribution of this augment and its allomorphs is subject to regional variation, but common patterns are shown below. In almost all varieties, the augment is absent from the future and conditional, as well as from the infinitive and past participle, while in some (generally western) areas, the augment is not found in the 1pl and 2pl *prs.ind* and *prs.sbjv* forms (Romieu & Bianchi 2005:257; see also Maiden 2004). At maximum, the augment presents three separate allomorphs: *-isc-* in the *prs.sbjv*, *-ig-* in the preterite and *impf.sbjv*, and *-iss-* elsewhere, while in certain varieties, such as those of Provença outside the valley of the Ròse, these have all been levelled to *-iss-*. Examples of this augmented type, which I label IIa, are given below.

Gasconha

Ila : *causir* /kau'zi/ 'choose' (Romieu & Bianchi 2005:300-01)

prs.ptcp *causint* /kau'zin/, pst.ptcp *causit* /kau'zit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>causeishi</i>	<i>causivi</i>	<i>causesqui</i>	<i>causii</i>	<i>causissi</i>	<i>causirèi</i>	<i>causirí</i>
2sg	<i>causeishes</i>	<i>causivas</i>	<i>causescas</i>	<i>causis</i>	<i>causisses</i>	<i>causiràs</i>	<i>causirés</i>
3sg	<i>causeish</i>	<i>causiva</i>	<i>causesca</i>	<i>causí</i>	<i>causisse</i>	<i>causirà</i>	<i>causiré</i>
1pl	<i>causeishem</i>	<i>causívam</i>	<i>causescam</i>	<i>causim</i>	<i>causíssem</i>	<i>causiram</i>	<i>causirem</i>
2pl	<i>causeishetz</i>	<i>causívatz</i>	<i>causescatz</i>	<i>causitz</i>	<i>causíssetz</i>	<i>causiratz</i>	<i>causiretz</i>
3pl	<i>causeishen</i>	<i>causivan</i>	<i>causescan</i>	<i>causín</i>	<i>causissen</i>	<i>causiràn</i>	<i>causirén</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>kau'zeifí</i>	<i>kau'ziβi</i>	<i>kau'zeski</i>	<i>kau'zii</i>	<i>kau'zisi</i>	<i>kauzi'rei</i>	<i>kauzi'ri</i>
2sg	<i>kau'zeifes</i>	<i>kau'ziβos</i>	<i>kau'zeskos</i>	<i>kau'zis</i>	<i>kau'zises</i>	<i>kauzi'ras</i>	<i>kauzi'res</i>
3sg	<i>kau'zeif</i>	<i>kau'ziβo</i>	<i>kau'zesko</i>	<i>kau'zi</i>	<i>kau'zise</i>	<i>kauzi'ra</i>	<i>kauzi're</i>
1pl	<i>kau'zeifem</i>	<i>kau'ziβom</i>	<i>kauzes'kam</i>	<i>kau'zim</i>	<i>kau'zisem</i>	<i>kauzi'ram</i>	<i>kauzi'rem</i>
2pl	<i>kau'zeifets</i>	<i>kau'ziβots</i>	<i>kauzes'kats</i>	<i>kau'zits</i>	<i>kau'zisetz</i>	<i>kauzi'rats</i>	<i>kauzi'rets</i>
3pl	<i>kau'zeifen</i>	<i>kau'ziβon</i>	<i>kau'zeskon</i>	<i>kau'zin</i>	<i>kau'zisen</i>	<i>kauzi'ran</i>	<i>kauzi'ren</i>

Lengadòc

Ila : *florir* /flu'ri/ 'blossom' (Alibèrt 1976:122-27)

prs.ptcp *florissent* /fluri'sen/, pst.ptcp *florit* /flu'rit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>florissi</i>	<i>florissia</i>	<i>florisca</i>	<i>floriguèri</i>	<i>floriguèssi</i>	<i>florirai</i>	<i>floriria</i>
2sg	<i>florisses</i>	<i>florissias</i>	<i>floriscas</i>	<i>floriguères</i>	<i>floriguèsses</i>	<i>floriràs</i>	<i>floririás</i>
3sg	<i>florís</i>	<i>florissia</i>	<i>florisca</i>	<i>floriguèt</i>	<i>floriguèsse</i>	<i>florirà</i>	<i>floriria</i>
1pl	<i>florissèm</i>	<i>florissiam</i>	<i>floriscam</i>	<i>floriguèrem</i>	<i>floriguèsseem</i>	<i>florirem</i>	<i>floririam</i>
2pl	<i>florissètz</i>	<i>florissiatz</i>	<i>floriscatz</i>	<i>floriguèretz</i>	<i>floriguèssetz</i>	<i>floriretz</i>	<i>floririatz</i>
3pl	<i>florisson</i>	<i>florissian</i>	<i>floriscan</i>	<i>floriguèron</i>	<i>floriguèsson</i>	<i>floriràn</i>	<i>floririán</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>flu'risi</i>	<i>fluri'sjo</i>	<i>flu'risko</i>	<i>fluri'geri</i>	<i>fluri'gesi</i>	<i>fluri'rai</i>	<i>fluri'rjo</i>
2sg	<i>flu'rises</i>	<i>fluri'sjos</i>	<i>flu'riskos</i>	<i>fluri'geres</i>	<i>fluri'geses</i>	<i>fluri'ras</i>	<i>fluri'rjos</i>
3sg	<i>flu'ris</i>	<i>fluri'sjo</i>	<i>flu'risko</i>	<i>fluri'get</i>	<i>fluri'gese</i>	<i>fluri'ra</i>	<i>fluri'rjo</i>
1pl	<i>fluri'sen</i>	<i>fluri'sjan</i>	<i>fluris'kan</i>	<i>fluri'geren</i>	<i>fluri'gesen</i>	<i>fluri'ren</i>	<i>fluri'rjan</i>
2pl	<i>fluri'sets</i>	<i>fluri'sjats</i>	<i>fluris'kats</i>	<i>fluri'gerets</i>	<i>fluri'gesets</i>	<i>fluri'rets</i>	<i>fluri'rjats</i>
3pl	<i>flu'risun</i>	<i>fluri'sjon</i>	<i>flu'riskon</i>	<i>fluri'gerun</i>	<i>fluri'gesun</i>	<i>fluri'ran</i>	<i>fluri'rjon</i>

Provença

Ila : *finir* /fi'ni/ 'finish' (Martin & Moulin 1998:92-93)

prs.ptcp *finissent* /fini'sē^o/, pst.ptcp *finit* /fi'nit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>finissi</i>	<i>finissiáu</i>	<i>finissi</i>	<i>finissèri</i>	<i>finissèssi</i>	<i>finirai</i>	<i>finiriáu</i>
2sg	<i>finisses</i>	<i>finissiás</i>	<i>finisses</i>	<i>finissères</i>	<i>finissèsses</i>	<i>finiràs</i>	<i>finiriás</i>
3sg	<i>finisse</i>	<i>finissiá</i>	<i>finisse</i>	<i>finissèt</i>	<i>finissèsse</i>	<i>finirà</i>	<i>finiriá</i>
1pl	<i>finissèm</i>	<i>finissiam</i>	<i>finissem</i>	<i>finisseriam</i>	<i>finissessiam</i>	<i>finirem</i>	<i>finiriam</i>
2pl	<i>finissètz</i>	<i>finissiatz</i>	<i>finissetz</i>	<i>finisseriatz</i>	<i>finissessiatz</i>	<i>finiretz</i>	<i>finiriatz</i>
3pl	<i>finisson</i>	<i>finissián</i>	<i>finissen</i>	<i>finissèron</i>	<i>finissèsson</i>	<i>finiràn</i>	<i>finirián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	fi'nisi	fini'sjew	fi'nisi	fini'seri	fini'sesi	fini'rai	fini'rjew
2sg	fi'nises	fini'sjes	fi'nises	fini'seres	fini'seses	fini'ras	fini'rjes
3sg	fi'nise	fini'sje	fi'nise	fini'set	fini'sese	fini'ra	fini'rje
1pl	fini'sē ^o	fini'sjā ^o	fini'sē ^o	finise'rjā ^o	finise'sjā ^o	fini'rē ^o	fini'rjā ^o
2pl	fini'sēs	fini'sjas	fini'ses	finise'rjas	finise'sjas	fini'res	fini'rjas
3pl	fi'nisū ^o	fini'sjē ^o	fi'nisē ^o	fini'serū ^o	fini'sesū ^o	fini'rā ^o	fini'rjē ^o

4.1.2.2 Second conjugation, type (b)

In some varieties, such as those of the eastern Lengadòc, only type Ila is present. In others, however, the second conjugation presents a further subtype, without the augment, which I label IIb. Class IIb is a closed class, with a low number of members — Alibèrt (1976:127) lists 28, Moulin & Martin (2008:95) just over 30 — which appear to be progressively becoming assimilated to Ila. Examples of class IIb verbs are given below; it will be seen that they differ from Ila verbs only by the absence of the augment.⁷⁸

⁷⁸Verbs of class IIb also occasionally differ from Ila in presenting an irregular past participle, eg. *cubèrt* 'cover.pst.ptcp', *mòrt* 'die.pst.ptcp', and/or N-pattern vowel alternation, eg. *duèrmi* 'sleep.prs.ind.1sg' vs. *dormèm* 'sleep.prs.ind.1pl'.

Gasconha

Ilb : *sentir* /sen'ti/ 'feel' (Romieu & Bianchi 2005:298)

prs.ptcp *sentint* /sen'tin/; pst.ptcp *sentit* /sen'tit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>senti</i>	<i>sentivi</i>	<i>senti</i>	<i>sentii</i>	<i>sentissi</i>	<i>sentirèi</i>	<i>sentirí</i>
2sg	<i>sentés</i>	<i>sentivas</i>	<i>séntias</i>	<i>sentis</i>	<i>sentisses</i>	<i>sentiràs</i>	<i>sentirés</i>
3sg	<i>sent</i>	<i>sentiva</i>	<i>séntia</i>	<i>sentí</i>	<i>sentisse</i>	<i>sentirà</i>	<i>sentiré</i>
1pl	<i>sentim</i>	<i>sentívam</i>	<i>sentiam</i>	<i>sentim</i>	<i>sentíssem</i>	<i>sentiram</i>	<i>sentirem</i>
2pl	<i>sentitz</i>	<i>sentívatz</i>	<i>sentiatz</i>	<i>sentitz</i>	<i>sentíssetz</i>	<i>sentiratz</i>	<i>sentiretz</i>
3pl	<i>senten</i>	<i>sentivan</i>	<i>séntian</i>	<i>sentín</i>	<i>sentissen</i>	<i>sentiràn</i>	<i>sentirén</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'senti	sen'tiβi	'senti	sen'tii	sen'tisi	senti'rèi	senti'ri
2sg	'sentés	sen'tiβɔs	'sentjɔs	sen'tis	sen'tises	senti'ras	senti'res
3sg	'sen	sen'tiβɔ	'sentjɔ	sen'ti	sen'tise	senti'ra	senti're
1pl	sen'tim	sen'tiβɔm	sen'tjam	sen'tim	sen'tisem	senti'ram	senti'rem
2pl	sen'tits	sen'tiβɔts	sen'tjats	sen'tits	sen'tisets	senti'rats	senti'rets
3pl	'senten	sen'tiβɔn	'sentjɔn	sen'tin	sen'tisen	senti'ran	senti'ren

Lengadòc

Ilb : *sentir* /sen'ti/ 'feel' (Alibèrt 2000:127-28)

prs.ptcp *sentent* /sen'ten/, pst.ptcp *sentit* /sen'tit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>senti</i>	<i>sentíá</i>	<i>senta</i>	<i>sentiguèri</i>	<i>sentiguèssi</i>	<i>sentirai</i>	<i>sentiriá</i>
2sg	<i>sentés</i>	<i>sentíás</i>	<i>sentás</i>	<i>sentiguères</i>	<i>sentiguèsses</i>	<i>sentiràs</i>	<i>sentiriás</i>
3sg	<i>sent</i>	<i>sentíá</i>	<i>senta</i>	<i>sentiguèt</i>	<i>sentiguèsse</i>	<i>sentirà</i>	<i>sentiriá</i>
1pl	<i>sentèm</i>	<i>sentiam</i>	<i>sentam</i>	<i>sentiguèrem</i>	<i>sentiguèsse</i>	<i>sentirem</i>	<i>sentiriam</i>
2pl	<i>sentètz</i>	<i>sentiatz</i>	<i>sentatz</i>	<i>sentiguèretz</i>	<i>sentiguèssetz</i>	<i>sentiretz</i>	<i>sentiriatz</i>
3pl	<i>senton</i>	<i>sentían</i>	<i>sentan</i>	<i>sentiguèron</i>	<i>sentiguèsson</i>	<i>sentiràn</i>	<i>sentirián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'senti	sen'tjɔ	'sentɔ	senti'gèri	senti'gesi	senti'rai	senti'rjɔ
2sg	'sentés	sen'tjɔs	'sentɔs	senti'gères	senti'geses	senti'ras	senti'rjɔs
3sg	'sent	sen'tjɔ	'sentɔ	senti'gèt	senti'gese	senti'ra	senti'rjɔ
1pl	sen'tèn	sen'tjan	sen'tan	senti'gèren	senti'gesen	senti'ren	senti'rjan
2pl	sen'tèts	sen'tjats	sen'tats	senti'gèrets	senti'gesets	senti'rets	senti'rjats
3pl	'sentun	sen'tjɔn	'sentɔn	senti'gèrun	senti'gesun	senti'ran	senti'rjɔn

Provença

IIb : *partir* /par'ti/ 'leave' (Martin & Moulin 1998:94-95)

prs.ptcp *partent* /par'tẽᵛ/, pst.ptcp *partit* /par'tit/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>parti</i>	<i>partiáu</i>	<i>parti</i>	<i>partèri</i>	<i>partèssi</i>	<i>partirai</i>	<i>partiriáu</i>
2sg	<i>partes</i>	<i>partiás</i>	<i>partes</i>	<i>partères</i>	<i>partèsses</i>	<i>partiràs</i>	<i>partiriás</i>
3sg	<i>parte</i>	<i>partiá</i>	<i>parte</i>	<i>partèt</i>	<i>partèsse</i>	<i>partirà</i>	<i>partiriá</i>
1pl	<i>partèm</i>	<i>partiam</i>	<i>partem</i>	<i>parteriam</i>	<i>partessiam</i>	<i>partirem</i>	<i>partiriam</i>
2pl	<i>partètz</i>	<i>partiatz</i>	<i>partetz</i>	<i>parteriatz</i>	<i>partessiatz</i>	<i>partiretz</i>	<i>partiriatz</i>
3pl	<i>parton</i>	<i>partián</i>	<i>partan</i>	<i>partèron</i>	<i>partèsson</i>	<i>partiràn</i>	<i>partirián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'parti	par'tjew	'parti	par'tèri	par'tèsi	parti'rai	parti'rjew
2sg	'partes	par'tjes	'partes	par'tères	par'tèses	parti'ras	parti'rjes
3sg	'part	par'tje	'parte	par'tèt	par'tèse	parti'ra	parti'rje
1pl	par'tẽᵛ	par'tjãᵛ	par'tẽᵛ	parte'rãᵛ	parte'sjãᵛ	parti'rẽᵛ	parti'rjãᵛ
2pl	par'tets	par'tjats	par'tes	parte'rjas	parte'sjas	parti'res	parti'rjas
3pl	'partũᵛ	par'tjẽᵛ	'partõᵛ	par'terũᵛ	par'tesũᵛ	parti'rãᵛ	parti'rjẽᵛ

2.1.3 Third conjugation

The class which I label third conjugation for Occitan continues the Latin third conjugation; Latin second-conjugation verbs were typically assimilated either to this class or to the /i/-class by the mediaeval period (see e.g. Ronjat 1937:143, Koschwitz 1973:113), and there is thus no distinct inflectional class which continues the Latin second conjugation. The Occitan third conjugation is a closed class; Camproux' remark that it is something of a *fourre-tout* (1962:411) refers to the striking diversity of its members rather than to any possibility of further items joining this class.

The lexemes involved range from 'regular' third-conjugation verbs, which present no stem allomorphy and are individually of relatively low token frequency, to high-frequency irregular verbs displaying extensive stem allomorphy. The varying stem distributions and phonological shapes of third-conjugation lexemes mean that the conjugational type as a whole is less amenable to characterisations such as those made for the first and second conjugations in terms

of the shape of the infinitive and past participle. Nevertheless, the following generalisations may be made: the desinences of third-conjugation verbs are identical to those found in IIb verbs in the *prs.ind*, *impf.ind* and *prs.sbjv*, and to those found in first-conjugation verbs in the preterite and imperfect subjunctive; the infinitive (generally ending in *-/e/* or *-/re/*) is in most cases rhizotonic; and the past participle is often in *-/yt/*. The SF and SC typically do not present a theme vowel.

The similarities of inflectional desinence between III and II are striking: as Dalbera (1994:619-20) points out for several eastern varieties, these classes are almost undifferentiated. Indeed, there would be no a priori barrier to an analysis grouping both these types into a single conjugational class, for the varieties described by Dalbera and for Occitan more generally (with the possible exception of many varieties of Gasconha, which present theme vowels unique to class III in the *impf.ind* and PYTA). However, as the detail of the description would nevertheless require distinguishing several subclasses, I submit that for the purposes of the present study there is no significant advantage in grouping II and III into a single class, and therefore propose to maintain the traditional division into three classes.

Within the third conjugation, I distinguish two major subclasses: IIIa, which presents SF and SC forms with no theme vowel, and IIIb, which presents SF and SC forms with theme vowel */e/*. For most varieties considered in this study, IIIb represents a small subset of the third conjugation,⁷⁹ and its members (chiefly verbs with palatal-final stems, many of them low-frequency items) are particularly susceptible to heteroclisis or wholesale shift of conjugational class, thus eliminating the distinctive IIIb type; however, in certain areas, notably parts of Gasconha, it is the IIIa type which is almost if not entirely absent, while the IIIb type predominates.

⁷⁹For instance, consultation of Alibèrt's (1965) dictionary of Lengadocian varieties yields approximately 70 IIIb items, a significant proportion of which are derivationally related forms.

Gasconha

IIIa : not illustrated by Romieu & Bianchi (2005)

IIIb : *bàter* /'bate/ 'beat' (Romieu & Bianchi 2005:302)

prs.ptcp *batent* ; pst.ptcp *batut* /ba'tyt/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>bati</i>	<i>batèvi</i>	<i>bati</i>	<i>batoi</i>	<i>batossi</i>	<i>baterèi</i>	<i>baterí</i>
2sg	<i>bates</i>	<i>batèvas</i>	<i>bàtias</i>	<i>batós</i>	<i>batosses</i>	<i>bateràs</i>	<i>baterés</i>
3sg	<i>bat</i>	<i>batèva</i>	<i>bàtia</i>	<i>bató</i>	<i>batosse</i>	<i>baterà</i>	<i>bateré</i>
1pl	<i>batem</i>	<i>batèvam</i>	<i>batiam</i>	<i>batom</i>	<i>batóssem</i>	<i>bateram</i>	<i>baterem</i>
2pl	<i>batetz</i>	<i>batèvatz</i>	<i>batiatz</i>	<i>batotz</i>	<i>batóssetz</i>	<i>bateratz</i>	<i>bateretz</i>
3pl	<i>baten</i>	<i>batèvan</i>	<i>bàtian</i>	<i>batón</i>	<i>batossen</i>	<i>bateràn</i>	<i>baterén</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'bati	ba'tɛβi	'bati	ba'tui	ba'tusi	bate'rei	bate'ri
2sg	'bates	ba'tɛβɔs	'batjɔs	ba'tus	ba'tuses	bate'ras	bate'res
3sg	'bat	ba'tɛβɔ	'batjɔ	ba'tu	ba'tuse	bate'ra	bate're
1pl	ba'tem	ba'tɛβɔm	ba'tjam	ba'tum	ba'tusem	bate'ram	bate'rem
2pl	ba'tets	ba'tɛβɔts	ba'tjats	ba'tuts	ba'tusets	bate'rats	bate'rets
3pl	'baten	ba'tɛβɔn	'batjɔn	ba'tun	ba'tusen	bate'ran	bate'ren

Lengadòc

IIIa : *batre* /'batre/ 'beat' (Alibèrt 2000:128-32)

prs.ptcp *batent* /ba'ten/, pst.ptcp *batut* /ba'tyt/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>bati</i>	<i>batiái</i>	<i>bata</i>	<i>batèri</i>	<i>batèssi</i>	<i>batrai</i>	<i>batriá</i>
2sg	<i>bates</i>	<i>batiás</i>	<i>batas</i>	<i>batères</i>	<i>batèsses</i>	<i>batràs</i>	<i>batriás</i>
3sg	<i>bat</i>	<i>batiá</i>	<i>bata</i>	<i>batèt</i>	<i>batèsse</i>	<i>batrà</i>	<i>batriá</i>
1pl	<i>batèm</i>	<i>batiam</i>	<i>batam</i>	<i>batèrem</i>	<i>batèsse</i>	<i>batrem</i>	<i>batriam</i>
2pl	<i>batètz</i>	<i>batiatz</i>	<i>batatz</i>	<i>batèretz</i>	<i>batèssetz</i>	<i>batretz</i>	<i>batriatz</i>
3pl	<i>baton</i>	<i>batián</i>	<i>batan</i>	<i>batèron</i>	<i>batèsson</i>	<i>batrà</i>	<i>batrián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'bati	ba'tjɔj	'batɔ	ba'teri	ba'tesi	bat'raj	bat'rjɔj
2sg	'bates	ba'tjɔs	'batɔs	ba'teres	ba'teses	bat'ras	bat'rjɔs
3sg	bat	ba'tjɔ	bat	ba'tet	ba'tese	bat'ra	bat'rjɔ
1pl	ba'ten	ba'tjan	ba'tam	ba'teren	ba'tesen	bat'ren	bat'rjan
2pl	ba'tets	ba'tjats	ba'tats	ba'terets	ba'tesets	bat'rets	bat'rjats
3pl	'batun	ba'tjɔn	'batɔn	ba'terun	ba'tesun	bat'ran	bat'rjɔn

IIIb : *plànher* /'plape/ 'pity' (Alibèrt 2000:176)

present participle *planhent* /pla'nen/

past participle *planhut* /pla'nyt/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>planhi</i>	<i>planhiá</i>	<i>planha</i>	<i>planhèri</i>	<i>planhèssi</i>	<i>planherai</i>	<i>planheriá</i>
2sg	<i>planhes</i>	<i>planhiás</i>	<i>planhas</i>	<i>planhères</i>	<i>planhèsses</i>	<i>planheràs</i>	<i>planheriás</i>
3sg	<i>planh</i>	<i>planhiá</i>	<i>planha</i>	<i>planhèt</i>	<i>planhèsse</i>	<i>planherà</i>	<i>planheriá</i>
1pl	<i>planhèm</i>	<i>planhiam</i>	<i>planhem</i>	<i>planhèrem</i>	<i>planhèsse</i>	<i>planherem</i>	<i>planheriam</i>
2pl	<i>planhètz</i>	<i>planhiatz</i>	<i>planhetz</i>	<i>planhèretz</i>	<i>planhèssetz</i>	<i>planheretz</i>	<i>planheriatz</i>
3pl	<i>planhon</i>	<i>planhián</i>	<i>planhan</i>	<i>planhèron</i>	<i>planhèsson</i>	<i>planheràn</i>	<i>planherián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'plapi	pla'pjɔ	'plapɔ	pla'pɛri	pla'pɛsi	plape'raj	plape'rjɔ
2sg	'plapes	pla'pjɔs	'plapɔs	pla'pɛres	pla'pɛses	plape'ras	plape'rjɔs
3sg	plap	pla'pjɔ	'plapɔ	pla'pɛt	pla'pɛse	plape'ra	plape'rjɔ
1pl	pla'pɛn	pla'pjan	pla'pan	pla'pɛren	pla'pɛsen	plape'ren	plape'rjan
2pl	pla'pɛts	pla'pjats	pla'pats	pla'pɛrets	pla'pɛsets	plape'rets	plape'rjats
3pl	'plapɔn	pla'pjɔn	'plapɔn	pla'pɛrun	pla'pɛsun	plape'ran	plape'rjɔn

Provença

IIIa : *batre* /'batre/ 'beat' (Martin & Moulin 1998:100-01)

prs.ptcp *batent* /ba'tɛn/ ; pst.ptcp *batut* /ba'tyt/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>bati</i>	<i>batiáu</i>	<i>bati</i>	<i>batèri</i>	<i>batèssi</i>	<i>batrai</i>	<i>batriáu</i>
2sg	<i>bates</i>	<i>batiás</i>	<i>bates</i>	<i>batères</i>	<i>batèsses</i>	<i>batràs</i>	<i>batriás</i>
3sg	<i>bate</i>	<i>batiá</i>	<i>bate</i>	<i>batèt</i>	<i>batèsse</i>	<i>batrà</i>	<i>batriá</i>
1pl	<i>batèm</i>	<i>batiám</i>	<i>batem</i>	<i>bateriam</i>	<i>batessiam</i>	<i>batrem</i>	<i>batriám</i>
2pl	<i>batètz</i>	<i>batiatz</i>	<i>batetz</i>	<i>bateriatz</i>	<i>batessiatz</i>	<i>batretz</i>	<i>batriatz</i>
3pl	<i>baton</i>	<i>batián</i>	<i>batan</i>	<i>batèron</i>	<i>batèsson</i>	<i>batràn</i>	<i>batrián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'bati	ba'tjew	'bati	ba'tɛri	ba'tɛsi	bat'rai	bat'rjew
2sg	'bates	ba'tjes	'bates	ba'tɛres	ba'tɛses	bat'ras	bat'rjes
3sg	'bat	ba'tje	'bate	ba'tɛt	ba'tɛse	bat'ra	bat'rje
1pl	ba'tɛn	ba'tjã	ba'tɛn	bate'rã	bate'sjã	bat'rɛn	bat'rjã
2pl	ba'tɛts	ba'tjats	ba'tɛs	bate'rjas	bate'sjas	bat'res	bat'rjas
3pl	'batũ	ba'tjẽ	'batũ	ba'tɛrũ	ba'tɛsũ	bat'rã	bat'rjẽ

IIIb : *plànher* /'plape/ 'pity' (Martin & Moulin 1998:110-11)⁸⁰

prs.ptcp *planhent* /pla'ɲẽ^ɔ/; pst.ptcp *planhut* /pla'ɲyt/

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>planhi</i>	<i>planhiáu</i>	<i>planhi</i>	<i>planhèri</i>	<i>planhèssi</i>	<i>planherai</i>	<i>planheriáu</i>
2sg	<i>planhes</i>	<i>planhiás</i>	<i>planhes</i>	<i>planhères</i>	<i>planhèsses</i>	<i>planheràs</i>	<i>planheriás</i>
3sg	<i>planhe</i>	<i>planhiá</i>	<i>planhe</i>	<i>planhèt</i>	<i>planhèsse</i>	<i>planherà</i>	<i>planheriá</i>
1pl	<i>planhèm</i>	<i>planhiam</i>	<i>planhem</i>	<i>planheriam</i>	<i>planhèssiam</i>	<i>planherem</i>	<i>planheriam</i>
2pl	<i>planhètz</i>	<i>planhiatz</i>	<i>planhetz</i>	<i>planheriatz</i>	<i>planhèssiatz</i>	<i>planheretz</i>	<i>planheriatz</i>
3pl	<i>planhon</i>	<i>planhián</i>	<i>planhan</i>	<i>planhèron</i>	<i>planhèsson</i>	<i>planheràn</i>	<i>planherián</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	'plapi	pla'ɲew	'plapi	pla'ɲeri	pla'ɲesi	plape'rai	plape'rjew
2sg	'plapes	pla'ɲes	'plapes	pla'ɲeres	pla'ɲeses	plape'ras	plape'rjes
3sg	'plap	pla'ɲe	'plape	pla'ɲet	pla'ɲese	plape'ra	plape'rje
1pl	pla'ɲẽ ^ɔ	pla'ɲã ^ɔ	pla'ɲẽ ^ɔ	plape'rã ^ɔ	plape'sjã ^ɔ	plape'rẽ ^ɔ	plape'rjã ^ɔ
2pl	pla'ɲets	pla'ɲats	pla'ɲes	plape'rjas	plape'sjas	plape'res	plape'rjas
3pl	'plapũ ^ɔ	pla'ɲẽ ^ɔ	'plapõ ^ɔ	pla'ɲerũ ^ɔ	pla'ɲesũ ^ɔ	plape'rã ^ɔ	plape'rjẽ ^ɔ

4.2 Stem distributions resulting from regular historical development

The paradigms given above are for regular verbs, with a single root common to all paradigm cells. For these verbs, Fuèc presents a stem based on this common root; the Fuèc stem appears in all and only all the cells of the SF and SC, and typically bears some resemblance to, but is not identical with, the infinitive.

For irregular verbs, regular historical change has often produced a distinct, lexicalised Fuèc stem: forms such as *serà*, *seriá* for *èstre* or *èsser* 'be'; *aurà*, *auriá* for *aver* 'have'; *poirà*, *poiriá* for *poder* 'be able'; *prendrà*, *prendriá* for *prene* 'take'; *vendrà*, *vendriá* for *venir* 'come'; *voldrà*, *voldriá* for *voler* 'want'. However, the distribution of this stem remains constant: as illustrated

⁸⁰Note that as Martin & Moulin do not provide a complete IIIb paradigm, I have had to reconstruct the forms in the shaded cells, based on the regular implicational relationships between forms which their presentation implies.

below for *poder* 'be able' in the Lengadòc (Alibèrt 2000:177), the distinctive Fuèc stem does not extend beyond the SF and SC, nor is it confined to a subset of SF or SC cells.

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	pòdi	podíá	pòsca	poguèri	poguèsse	poirai	poiriá
2sg	pòdes	podíás	pòscas	poguères	poguèsses	poiràs	poiriás
3sg	pòt	podíá	pòsca	poguèt	poguèsse	poirà	poiriá
1pl	podèm	podiam	poscam	poguèrem	poguèsssem	poirem	poiriam
2pl	podètz	podiatz	poscatz	poguèretz	poguèsssetz	poiretz	poiriatz
3pl	pòdon	podían	pòscan	poguèron	poguèsson	poiràn	poirián

These configurations, in which SF and SC systematically share a stem, whether this stem is unique within the paradigm or presents a root in common with other paradigm cells, are the direct product of regular historical change, and correspond to the pattern found elsewhere in the Romance continuum. In Occitan, they are frequent and widespread, forming the majority pattern in (almost) all varieties.

Over the following two chapters, I survey and analyse a number of innovative, chiefly morphological, developments which affect the SF and SC in Occitan, both those which preserve the inherited pattern of identity between SF stem and SC stem ('symmetrical' distribution), and those which introduce a disparity between the two ('asymmetrical' distribution).

5. Novel developments preserving identity between SF and SC stems

Examination of the available data shows that for the majority of verbs in virtually all varieties, new developments affecting the Fuèc stem respect the existing distribution of stem allomorphs in the paradigm: the identity of stem between SF and SC is preserved, whether the stem involved is unique to Fuèc, or whether the entire paradigm presents a common root. The developments encountered chiefly involve morphological analogy — cases of suppletion, analogical levelling, ‘convergence’ and partial shift of conjugational class, all of which apply to Fuèc as a ‘coherent’ set of paradigm cells in the sense of Maiden (2005). I argue that, taken together, these changes argue for the distribution Fuèc having psychological reality for speakers, whether motivated by the purely morphological consideration of the inherited distribution, or by extramorphological factors such as a common semantic value.

5.1 *Incursive suppletion*

The verb *anar* ‘go’ frequently presents a stem *anir-* (variant *nir-*) in the SF and SC. This development is extremely widespread: it is attested across a large — and coherent — area of the ALLOc survey region (see Fig. 18), as well as in dialect descriptions from Gasconha, Lemosin and Auvèrnha.

The *anir-* stem is most plausibly explained as a blend of **andare* with IRE (Ronjat 1937:296), a sporadic development conflating two verbs of similar lexical meaning. While the resulting Fuèc stem superficially resembles that of a second-conjugation verb with theme vowel *i*, the geographic distribution of the *anir-* stem is conspicuously not correlated with that of the assimilation of class IIIb Fuèc stems to class II. Furthermore, *anar* is the only known case of a first-conjugation verb presenting the theme vowel *i* in its Fuèc stem, an observation which likewise argues against treating this phenomenon as part of the general cases of heteroclis

discussed in §5.5 below. It is accordingly more accurate to consider the *anir*- stem as resulting from suppletion: in the typology of Corbett (2007), this is a case of ‘incursive’ suppletion, since the etymon of the element *-ir-* is distinct from that of the element *an-*. In many varieties it is also a case of ‘partial’ suppletion, since the Fuèc stem *anir-* typically shares some phonological material, usually the root *an-*, with stems encountered elsewhere in the paradigm.

In the vast majority of cases,⁸¹ the incursion of IRE is confined to all and only all the cells of the SF and SC. This fact is not in itself conclusive evidence in favour of considering Fuèc to be morphomic, but neither does it allow this hypothesis to be ruled out. As Maiden (2011b:253-58) finds, stem allomorphy arising from conflation of originally distinct lexical items is often assigned a morphomic distribution. The fact that such conflations can assume morphomic distributions does not entail that any distribution of stem allomorphy resulting from conflation must be morphomic: the exact match between the distribution of the *anir*-type stem within the paradigm and Fuèc therefore constitutes insufficient grounds on which to claim that Fuèc is a morphome. However, the examples adduced by Maiden constitute precedents which demonstrate that it is entirely possible for stem allomorphy arising from conflation to be mapped onto existing morphomic distributions, and that in some cases the distribution of such allomorphy does indeed diagram a distribution with psychological reality for the speaker: given the existence of these precedents, the possibility that the distribution of the *anir*-type stem diagrams a morphome Fuèc cannot be excluded.

At several of the ALLOc survey points, the Fuèc stem is blended with a stem present elsewhere in the paradigm. Att 47.22, the PYTA root *ang-* extends from all and only all the cells of the preterite and subjunctives into Fuèc, but the inherited theme vowel *i* is unchanged, resulting in a Fuèc stem *anguir-* (Table 9).

⁸¹With the exception of the Vath d’Aspa (Grosclaude & Nariò 1999), which presents a Fuèc stem *ir-*, but where the root *i-* is also present in the imperfect indicative, as in Castilian.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>vai</i> 'baj	<i>anau</i> a'naw	<i>angue</i> 'aŋge	<i>angót</i> ãŋ'gut	<i>angósse</i> ãŋ'guse	<i>anguirà</i> ãŋgi'ra	<i>anguiré</i> ãŋgi're

Table 9. 3sg forms *anar*, 47.22.

At 09.21, 09.22 and 09.31, by contrast, it is the v-stem characteristic of the N-pattern in the present indicative which spreads, extending to the SF, SC and present subjunctive to give forms such as *vanga*, *virà* and *virá* in place of expected **anga*, **(an)irà*, **(an)irá*.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>va</i> 'ba	<i>anava</i> a'naβo	<i>vanga</i> 'bãŋgɔ	<i>anèc</i> ã'nek	<i>anèssa</i> a'nesɔ	<i>virà</i> bi'ra	<i>virá</i> bi'rɔ

Table 10. 3sg forms *anar*, 09.21.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>va</i> 'ba	<i>anava</i> a'naβo	<i>vana</i> 'bano	<i>anèc</i> ã'nek	<i>anèssa</i> a'nesɔ	<i>virà</i> bi'ra	<i>virá</i> bi'rɔ

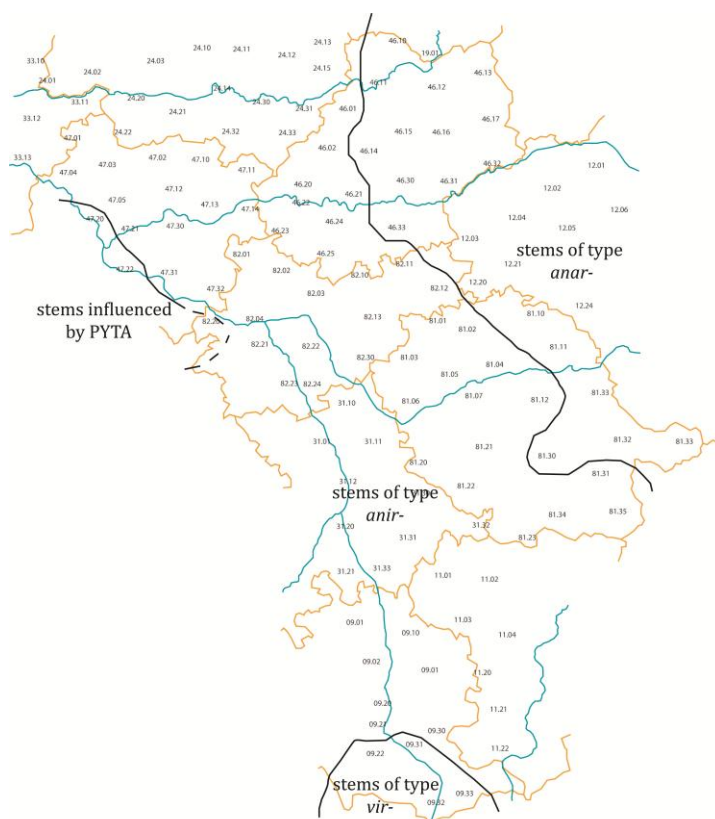
Table 11. 3sg forms *anar*, 09.22.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>va</i> ba	<i>anava</i> a'naβo	<i>vana</i> 'bãŋgɔ	<i>anèc</i> a'nek	<i>anès</i> a'nes	<i>anirà, virà</i> ani'ra, bi'ra	<i>anirà, virá</i> ani'rɔ, bi'rɔ

Table 12. 3sg forms *anar*, 09.31.

Incursive suppletion is rare, and, in the varieties considered here, appears confined to the single lexeme *anar*.

Figure 18. Fuèc stem types for *anar* 'go' in the ALLOc survey area.



5.2 Extension of a stem present elsewhere in the paradigm into Fuèc

5.2.1 Incursion of the PYTA root into Fuèc

For those verbs which present a distinctive PYTA root, this root is occasionally extended into Fuèc. This development is highly restricted, both lexically and geographically. It is chiefly found in Gasconha, the País Nissart, and the Valadas: in Gasconha, it may affect the verbs ‘go’, ‘take’, ‘come’ and ‘hold’, while in the País Nissart and Valadas it more commonly affects ‘want’ (‘be able’ and ‘see’ additionally show this development in the Val Vermenanha, ‘do’, ‘say’ and ‘see’ in Sospel).⁸²

The stem distributions involved may vary considerably between localities. Frequently, the change in the Fuèc stem forms part of a general process of paradigm levelling: in the Seronés, the PYTA root has spread to all paradigm cells of *tenguer* ‘hold’ and *venguer* ‘come’, a pattern endorsed by the standard grammar of Romieu & Bianchi (2005). Likewise, for *veire* ‘see’ in the Val Vermenanha (Jourdan 2009), the stem *veg-* has spread throughout the paradigm with the sole exception of the infinitive.⁸³

prs.ind	impf.ind	prs.sbjv	impf.sbjv	SF	SC
<i>vec</i>	<i>vèguia</i>	<i>vegue</i>	<i>vèguès</i>	<i>vègaré</i>	<i>vègaría</i>

Table 13. 3sg forms *veire*, Val Vermenanha.

Occasionally, the extension of the PYTA root is only partial; however, the resulting distributions show considerable variation. At ALLOc point 47.22, for example, the PYTA root of *tenguer* and *venguer* spreads to Fuèc but not to the present indicative or imperfect indicative; in the variety of Aulus the PYTA root of these verbs spreads into the present indicative and imperfect indicative, but not into Fuèc. For ‘want’ in the Val Vermenanha, the PYTA root colonises all

⁸²Cases in which the PYTA root propagates into either SF or SC but not both are discussed in §6.6 below.

⁸³Spread of a velar stem throughout the paradigm of reflexes of UIDERE is not uncommon in Piedmontese and northern Italian dialects (see eg. Castellani 2002 for the variety of Cascinagrossa).

forms except the N-pattern cells of the present indicative and present subjunctive; but for 'be able', the PYTA root is absent from the N-pattern cells of the present indicative and all cells of the present subjunctive. As a result, no overall conclusion may be drawn as to a stable relationship between Fuèc and other areas of the paradigm.

5.2.2 *Alignment of IIIa irregular Fuèc stems on IIIb*

In the varieties of central Provença, as in those of the Lengadòc (see §5.5.2 below), it is common for verbs of class IIIb to be partially or entirely assimilated to class II. Alongside this development, however, is found another, which appears to act in quite a different direction: the analogical creation of Fuèc stems in *-eir-* or *-seir-* for irregular verbs of class IIIa produces stems which appear characteristic of class IIIb (stems in *-er-* or *-eir-*), and thus seems to extend the IIIb pattern rather than eliminating it.

Claure 'close', *coire* 'cook', *foire* 'dig', *traire* 'throw, drag', and *plaire* 'please' present, alongside their historically expected Fuèc forms *claurà*, *coirà*, *foirà*, *treirà*, *pleirà* (realised *klaw'ra*, *kuj'ra*, *fuj'ra*, *trej'ra*, *plej'ra* respectively)⁸⁴ innovative forms of the type *clauseirà*, *coseirà*, *traseirà*, *plaseirà* (*klawzej'ra*, *kuzej'ra* etc.). These forms share a root with the imperfect indicative and certain forms of the present indicative — 1pl,2pl for *coire*, *foire*, and all except 3sg for *claire*, *traire* and *plaire*.

All five of these lexemes display stem allomorphy due to an originally productive phonological alternation between *z* in syllable-initial position and *i* or zero in coda position. While this process is no longer productive, it has left a pattern of stem allomorphy such that the infinitive, SF and SC share a vowel-final root (see previous paragraph for examples), while the imperfect indicative, most cells of the present indicative, and the PYTA cells where these do not have a

⁸⁴3sg SF forms are given for illustrative purposes.

distinct root, share a z-final root (e.g. *clausiá, cosiá, fosiá, trasiá, plasiá* 3sg.impf.ind; *clausèt, cosèt, fosèt, trasèt, plasèt* 3sg preterite). Extension of the z-final root into Fuèc aligns the SF and SC on the pattern of the majority of paradigm cells, but does not reduce overall stem allomorphy in the verb, since the vowel-final root persists in the high-frequency infinitive and (often) 3sg present indicative.

Potential models for the innovative Fuèc forms are offered by regular IIIb lexemes such as *plànher* 'pity' (SF *planheirà*, SC *planheiriá*) and *mouzer* 'milk [the cow]' (SF *mouzeirà*, SC *mouzeiriá*). As these verbs present no stem allomorphy, the root occurring in Fuèc (also the infinitive and the 3sg present indicative) is undifferentiated from that found elsewhere in the paradigm. The Fuèc forms of these verbs may thus be analysed by speakers as presenting the same root as e.g. the imperfect indicative, and this observed pattern be extended to additional lexemes, such as *claure* and *plaire*. The resulting, and unrepaired, dissociation of the Fuèc stem from the infinitive, which systematically retains its historically expected form, offers evidence that the historical link between Fuèc and the infinitive is no longer operative in synchrony.

The identity of the root found in Fuèc with the roots found in PYTA, the imperfect indicative and parts of the present indicative, is evidently not confined to verbs of class IIIb. However, it is also interesting to note that not all potential targets for the analogical remodelling described above actually present it. *Creire* 'believe' and *veire* 'see' display alternation of z and i distributed exactly as in *plaire, traire, coire* and *foire*; yet there are no attestations of either **creseirà* or **veseirà*. Likewise, although verbs such as *deure* 'have to, owe' and *viure* 'live' present alternation of v-final and w-final stem allomorphs, with identical distribution to that of the z- and i- forms discussed here, there is no evidence for forms such as **deveirà* and **viveirà*.

5.2.3 Wholesale paradigm levelling

In Gasconha, inflectional class IIIa is effectively absent, and third-conjugation verbs consistently follow the IIIb pattern of infinitives in *-er /e/*, and Fuèc stems in *-er- /er/*, hence *bàter* 'to beat', *baterèi* 'I will beat'.

In the northern part of this region (Bordelès, Bazadés, Lanas, Armanhac), some irregular Fuèc stems resulting from regular sound change are retained; thus *víver* 'live' forms its future and conditional on the stem *viur-* which is also found across Provença and the Lengadòc.

In the Pirinèus by contrast, this type is largely absent. With the exception of *aver* 'have', *èsser* 'be', and some asymmetrical cases (see §6.8 below), SF and SC stems appear to present identity with the infinitive (though note that since the final <r> of the infinitive has no phonological counterpart, the resemblance is in fact less striking than the written forms might suggest).

This development has typically been treated in the literature as a remodelling of the Fuèc stem to restore its historical identity with the infinitive (see e.g. Ronjat 1937:208,213). However, such a view appears unnecessarily reductive in looking only to the infinitive as a source of the innovative Fuèc stem. In most Romance languages (see e.g. Matthews 1982:07-08, 11-12 for Spanish and Italian) and in many varieties of Occitan, identity between SF stem and SC stem is maintained while this pair of screeves is formally differentiated from the infinitive: cases of SF, SC and infinitive sharing a stem found nowhere else in the paradigm are conspicuous by their absence. The comparative evidence thus shows that speakers do not tend to unify the stems of the SF and SC with the infinitive, meaning that restoring the historical identity is unlikely to be the true explanation for the innovative stems observed in the SF and SC.

Inspection of the wider paradigm reveals that in those cases where the SF and SC share a root with the infinitive, this root is also shared by other cells of the paradigm, typically the imperfect indicative and first and second plural present indicative, often more: a handful of verbs still preserve a distinctive stem in the reflexes of Latin perfective forms or the present subjunctive, but in the vast majority of cases stem allomorphy has been eradicated, such that all paradigm cells present the same, invariant stem.

I reproduce below partial paradigms for class III verbs in Est Biarn/Nòrd Bigòrra, taken from Grosclaude & Nariò (1999); *bàter* 'beat' is included as the prototype of a regular class III verb in this area. The SC is omitted, as in the source material all SC forms given for this area presented the same stem as the SF. The symbol <—> indicates that the form was not provided by the source; *caler* is the only verb in which such a gap results from genuine defectivity.

infinitive	prs.ind	prs.ind.1pl	impf.ind	prs.sbjv	pret	impf.sbjv	cond2	SF
<i>bàter</i> 'beat'	<i>bat</i>	<i>batem</i>	<i>batè</i>	<i>bàtia</i>	<i>bató</i>	<i>batosse</i>	<i>batore</i>	<i>baterà</i>
<i>valer</i> 'be worth'	<i>vau</i>	—	<i>valè</i>	<i>vàlia</i>	—	—	—	<i>valerà</i>
<i>voler</i> 'want'	<i>vòu</i>	<i>volem</i>	<i>volè</i>	<i>volha</i>	<i>voló</i>	<i>volosse</i>	<i>volore</i>	<i>volerà</i>
<i>caler</i> 'be necessary'	<i>cau</i>	—	<i>calè</i>	<i>calha</i>	<i>caló</i>	<i>calosse</i>	<i>calore</i>	<i>calerà</i>
<i>díser</i> 'say'	<i>ditz</i>	<i>disem</i>	<i>disè</i>	<i>diga</i>	<i>digó</i>	<i>digosse</i>	<i>digore</i>	<i>diserà</i>
<i>poder</i> 'be able'	<i>pòt</i>	<i>podem</i>	<i>podè</i>	<i>posca</i>	—	<i>podosse</i>	<i>podore</i>	<i>poderà</i>
<i>véder</i> 'see'	<i>ved</i>	—	<i>vedè</i>	<i>védia</i>	<i>vi</i>	<i>visse</i>	—	<i>vederà</i>
<i>créder</i> 'believe'	<i>cred</i>	<i>credem</i>	<i>credè</i>	<i>crédia</i>	—	—	—	<i>crederà</i>
<i>saber</i> 'know'	<i>sap</i>	<i>sabem</i>	<i>sabè</i>	<i>sàpia</i>	<i>sabó</i>	<i>sabosse</i>	<i>sabore</i>	<i>saberà</i>
<i>dever</i> 'owe/have to'	<i>déu</i>	<i>devem</i>	<i>devè</i>	<i>dévia</i>	<i>devó</i>	<i>devosse</i>	<i>devore</i>	<i>deverà</i>
<i>víver</i> 'live'	<i>viu</i>	<i>vivem</i>	<i>vivè</i>	<i>visca</i>	<i>viscó</i>	<i>viscosse</i>	<i>viscore</i>	<i>viverà</i>
<i>aver</i> 'have'	<i>a</i>	<i>avem</i>	<i>avè</i>	<i>aja</i>	<i>avó</i>	<i>avosse</i>	<i>avore</i>	<i>averà</i> <i>aurà</i>

Table 14. Partial paradigms for third-conjugation verbs, Biarn/Bigòrra. All 3sg unless otherwise indicated.

With the exception of the distinctive PYTA root preserved by a few verbs, certain present subjunctives which present a unique stem, and a handful of irregular present indicative forms, stem allomorphy has been virtually eradicated in this variety. In particular, almost all third

conjugation Fuèc stems are now entirely predictable, as being formed on the stem of the imperfect indicative and 1pl/2pl present indicative (which is in most cases also the stem of PYTA and the infinitive) with the theme vowel /e/. A similar distribution is found a little further west; and in the Coserans to the east, the present subjunctive additionally tends to align on the same stem as the rest of the paradigm.

While a resemblance between the infinitive and the stems of the SF and SC is evidently produced here, a teleological account which invokes restoration of identity with the infinitive as sole motivation for the remodelling of the SF and SC in these varieties fails to capture a key generalisation. The developments in the SF and SC form part of a general process of analogical levelling within paradigms, and it is potentially as well-founded to speak of remodelling on the stem of the imperfect indicative as it is to appeal to the infinitive. It should be noted that where there is a distinct PYTA root (e.g. for 'want' or 'say'), the innovative Fuèc stem is not modelled on this root; likewise, where the N-pattern and N-pattern complement present distinct roots (e.g. for 'want' and 'be able', in which N-pattern forms present a root vowel ɔ but N-pattern complement forms present u), the innovative Fuèc stem presents the root characteristic of the N-pattern complement.

5.3 Convergence

In the variety of Seta for the verbs 'have' and 'see' (Thérond 2002:146,173), the Fuèc stem displays a cluster -dr-, an innovative form the development of which recalls the cases of convergence described by Maiden for PYTA (see §2.2.1 above).

In Seta, two concurrent Fuèc stems are attested for the reflexes of HABERE and UIDERE:

lexeme	SF.3sg	SC.3sg
'have'	<i>aurà, audrà</i>	<i>auriá, audriá</i>
'see'	<i>veirà, veidrà</i>	<i>veiriá, veidriá</i>

Table 15. SF and SC forms for 'have' and 'see', Seta.

Forms such as *aurà* and *veirà* result from expected historical development, and indeed are found across the southern part of the Occitan-speaking region; the others represent a local innovation. For 'have', Thérond lists the stem with d in a footnote, observing that this form occurs 'assez souvent'; for 'see', however, the d-form is the first Fuèc stem listed, with the comment '[cette] forme se dit beaucoup'.

The d is evidently not etymological in the verb 'have', since there is no d anywhere present in the paradigm of HABERE. It is furthermore very unlikely that it is etymological in the verb 'see'. Although d is present in Latin UIDERE, by the mediaeval period it has either weakened to z or vocalised to i, giving *vezer* and *veire* in old Occitan (Romieu & Bianchi 2006:101); if the variety of Seta had preserved the etymological d of UIDERE, one would therefore expect to find SF **vedrà* rather than the attested *veidrà* or *veirà*.

For a number of verbs, d appears in the Fuèc stem as the result of an irregular but crosslinguistically common phonological development. In the SF and SC of such verbs as *voler* 'want', *prene* 'take', *valer* 'be worth', and *caler* 'be necessary', syncope of an unstressed vowel creates a cluster liquid+r, and for ease of articulation a stop is inserted into this cluster,

producing forms such as *voldrà*, *prendrà*, *valdrà*, *caldrà*, or, in areas such as Seta where coda l subsequently vocalises, *voudrà*, *vaudrà*, *caudrà* (see e.g. Ronjat 1932:229). As a result, the cluster -dr- has become characteristic of the Fuèc stems of a number of high-frequency irregular verbs. It is, however, clear that neither 'have' nor 'see' would ever have presented a cluster nr or lr likely to trigger this development.

Analogy from elsewhere in the paradigm is unlikely, since d is only present in one of the two concurrent infinitives for 'have' (*avudre*, *agure*), and in no form of *veire* 'see'; the influence of French is likewise improbable, since neither *avoir* (SF *il aura*) nor *voir* (SF *il verra*) presents a consonant d anywhere in its paradigm.

In the absence of any other viable explanation, it thus seems reasonable to postulate an analogy of purely abstract morphological nature — convergence. Just as high vowels come to characterise PYTA roots in Spanish (Maiden 2001), and are subsequently extended to PYTA roots which did not originally present high vowels, the cluster dr is perceived as characteristic of Fuèc stems, and spread into the Fuèc stems of two separate lexical items.

5.4 Defectivity

The ALLOr data include a number of cases, chiefly affecting verbs of conjugational class IIIb, where no data are given for the SF and/or SC. In the absence of recordings against which the transcriptions may be checked, it is impossible to determine whether these represent genuine cases of defective paradigms, or simply a failure to elicit the relevant forms: the gaps in the transcription must thus be treated with extreme caution, and indeed I propose to exclude them from consideration. However, the case of *mólzer* 'milk' at point 34.17 is noticeably different, since here the atlas questionnaire did succeed in eliciting a form — a periphrastic future and conditional, formed with the verb *anar* 'go' and the infinitive *mólzer*:

<i>anarà</i>	<i>mólzer</i>	<i>anariá</i>	<i>mólzer</i>
go.SF.3SG	milk.INF	go.SC.3SG	milk.INF

The fact that the informant provided a form, but that this form was not the expected SF, suggests that the absence of SF and SC forms for *mólzer* in the atlas fieldwork data for ALLOr 34.17 is not an accident of incomplete fieldwork elicitation but a genuine case of defectivity, involving the SF, the SC and also the present subjunctive (all other synthetic forms are present in the elicited paradigm). The finding is also lent significance by corroboration from fieldwork in Venès, in which the SF and SC of *mólzer* were likewise absent, the informant having recourse to periphrastic constructions involving the infinitive, such as *cal mólzer* 'one has to do the milking'.

Defectivity is not uncommon within lexemes of class IIIb: indeed, in several cases the paradigm has been reduced to the infinitive alone. For example, informants from Avairon in my own fieldwork typically produced a periphrasis *far còser* (literally 'make cook') in place of *còser/coire* 'cook' for all paradigm cells, *far* being conjugated for TAM and PN values. Certain informants in and around Venès showed defectivity for *mólzer* affecting almost all forms except

the infinitive, past participle and present indicative. While defectivity of Fuèc appears to affect both the SF and SC when it occurs,⁸⁵ I am not aware of any cases in which defectivity of Fuèc occurs independently of defectivity in one or more other screeves. The prevalence of varieties in which IIIb verb paradigms have been reduced to the infinitive or are largely defective, and the variety of patterns of defectivity encountered, together suggest that defectivity of Fuèc is not a stable pattern, but rather represents an incidental, transitional stage of change in progress.

⁸⁵With the exception of *paréisser*, discussed in §1.3 and §6.

5.5 *Heteroclisis*

Stump (2006:279) defines heteroclisis as 'the property of a lexeme whose inflectional paradigm contains forms built upon stems belonging to two or more distinct inflection classes'. This phenomenon commonly affects the SF and SC in varieties of Occitan, most frequently — though not limited to — SF and SC forms of lexemes belonging to inflectional class IIIb.

As Steven Kaye (p.c.) has pointed out, the definition of heteroclisis is less intuitively simple than it initially appears: for example, if a pattern which originates as a mixture of two conjugational classes comes to supplant either class, it is doubtful whether it would remain synchronically useful to consider it a heteroclit paradigm, as opposed to a conjugational class in its own right. In the particular case of the data under consideration here, however, the patterns of heteroclisis encountered apply to so few lexemes and with such little systematicity that they remain a minority, and that in practice there is little if any difference between diachronic and synchronic views of these data.

The developments discussed below are restricted to the SF and SC: they do not extend to the rest of the paradigm — notably, they do not affect the infinitive — nor should they be interpreted as reflecting a collapse of conjugational class distinctions in general.

5.5.1 *Published attestations of IIIb > I*

Allanche (1941) for the Carcin, Benoît (1932) for the Peiregòrd, Chontoclar & Camproux (1931) for Lozèra, Alibèrt (2000) for the Carcin and Roègue, and Ronjat (1937) for the Lemosin all attest IIIb lexemes with SF and SC forms in /a/ rather than /e/. It is not clear that this development is systematic for *all* members of IIIb, but it is very strongly represented. IIIb is the only class affected, and the remodelling operates to align its SF and SC forms (but not infinitives,

with the single exception of *crénher*, Allanche 1941:64) on those of the largest and most productive class in the language.

	prs.ind	impf.ind	pret	SF	SC
1sg	lauri	lauravi	laurèri	laurarai	laurariái
2sg	laures	lauravas	laurèras	lauraràs	laurariás
3sg	laura	laurava	laurèt	laurarà	laurariá
1pl	lauram	lauràvem	laurèrem	laurarem	laurariam
2pl	lauratz	lauràvetz	laurèretz	lauraretz	laurariatz
3pl	lauran	lauravan	laurèran	lauraràn	laurarián

Table 16. *Laurar* 'work a field', I (Allanche 1941:51).

	prs.ind	impf.ind	pret	SF	SC
1sg	plangi	plangiái	plangèri	planjarai	planjariái
2sg	planges	plangiás	plangèras	planjaràs	planjariás
3sg	plang	plangiá	plangèt	planjarà	planjariá
1pl	plangèm	plangiam	plangèrem	planjarem	planjariam
2pl	plangètz	plangiatz	plangèretz	planjaretz	planjariatz
3pl	planjan	plangián	plangèran	planjaràn	planjarián

Table 17. *Plànger* 'pity', IIIb (Allanche 1941:67).

5.5.2 *Published attestations of IIIb > II*

A more widespread pattern of heteroclisis aligns the SF and SC forms of class IIIb verbs on those of class II. This pattern is attested by Alibèrt (2000) and Lignières (1951:54ff.) for unspecified areas of the Lengadòc, Ronjat (1937:314-15) for Droma, Ronjat (1937:317) for Auvèrnha, Savinian (1978:57) for central Provença, Quint (1998:65) for the isolated case of *córrer* 'run' in the país de Seina, and Grosclaude & Nariò (1999:100) for the isolated case of *húger* 'flee' in the Bazadés, all affecting only the future and conditional.

Here again the remodelling replaces the exceptional theme vowel /e/ with a commoner one, in this case /i/. The development may be facilitated by the minimal difference in inflection between the second and third conjugations in the area concerned: III is only differentiated from

IIb by the difference of theme vowel in the infinitive, past participle, SF and SC, and from IIa by this and the presence of the augment.

5.5.3 *Published attestations of IIIb > IIIa*

Mâzuc (1899) for Pesenàs attests a number of IIIb verbs with roots in *ɲ* which would be expected to present Fuèc stems in *-ɲer-*, but which instead present Fuèc stems in *-ndr-*: *atendrà* 'he will reach', *astrendrà* 'he will constrain', *crendrà* 'he will fear', *jondrà* 'he will yoke', *plandrà* 'he will pity'. The implication is that all IIIb verbs with root-final *ɲ* now follow this pattern. The form *jondrà* is also attested for Seta (Thérond 2002, SF & SC), and for Palavàs (Académie Palavasienne 2000; only the SF is given).

In Pesenàs IIIb verbs with stems in *s* or *z* are not affected, except for the reflexes of PARESCERE and their compounds, in which both infinitive and Fuèc are of IIIa type. Thérond does not give forms for this verb, but attests *conoidrà* 'he will know'; the variety of Palavàs presents *conoistrà* 'he will know', *neistrà* 'he will be born', *pareistrà* 'he will appear', and *tordrà* 'he will twist'.

Alibèrt (1976:108) dismisses such forms as 'de simples gallicismes', implicitly ascribing them to the influence of cognate French forms which present stems in *-dr-* or *-tr-* for reasons of regular sound change. However, while French influence is certainly a possibility, it is not the only plausible motivation for these forms. One alternative is to treat them as the products of phonological change: although in Pesenàs the presence of *conéisser*, *nàisser* and the absence of **coneitre*, **naitre* argue against *paretre* being the outcome of regular sound change, in Palavàs where no IIIb lexemes remain regular sound change may plausibly be argued for.

The tendency of the innovative Fuèc forms to present a cluster –dr- or –tr- suggests that these might conceivably be analysed as further cases of convergence, similar to that discussed for the geographically close variety of Seta in §5.3 above.

One might, however, ask whether apparent cases of IIIa/IIIb heteroclisis represent mixed conjugation at all. Originally IIIb lexemes presenting IIIa Fuèc stems might be considered to have been entirely assimilated to the majority IIIa pattern, since the chief distinctive feature of the IIIb pattern is its Fuèc stem with theme vowel e. Although in most cases the infinitive remains characteristically IIIb (rhizotonic, in -e, e.g. *plànher* /'plape/), this is not necessarily sufficient grounds for maintaining a separate class IIIb, since verbs assigned to the IIIa type already display some variation in infinitive form, between the characteristic IIIa type (rhizotonic, in -re, e.g. *batre* /'batre/) and a rarer type found in certain irregular verbs which is stressed on the desinence, e.g. *voler* /bu'le/.

It is of course possible that several of these motivations conspire to favour the observed forms.

5.5.4 *Heteroclite developments of IIIb lexemes in the ALLOc/ALLOr area*

Consideration of the ALLOc and ALLOr data shows that while heteroclisis is a common and widespread phenomenon, affecting verbs of conjugational class IIIb, the resulting paradigms are highly variable in shape. In particular, although inspection of grammars suggests that it may be theoretically attractive to distinguish a sub-class IIIb, the atlas data offer quite a different picture, in which IIIb rarely behaves as a coherent class. At many points in Tarn, verbs of IIIb systematically retain their etymological theme vowel e; at three points in Garona Nauta, these verbs present the pattern discussed in §5.5.1 above, forming their synthetic future and conditional on the model of the first conjugation; while in Aude, they tend to migrate entirely to the second conjugation. However, these points are in the minority, as may be seen from the

maps below: in most cases, the significant factor in determining which conjugational type *Fuèc* is remodelled on appears to be not geographical area, but lexical item.



Figure 19. *còrrer*.

Fig.19 illustrates the geographical extent of innovative paradigm distributions for *còrrer* in the ALLOr survey area. Over the vast majority of this area, the entire paradigm (or the entire paradigm with the exception of the infinitive and/or past participle) of *còrrer* migrates to IIa; entirely IIIb paradigms are confined to Lozèra, while majoritarily IIIb paradigms with first- or second- conjugation *Fuèc* forms are found in Ardèche and Gard.

By contrast, *mólzer* (Fig.21) remains of IIIb type over the majority of the ALLOr area, only shifting to IIa in Aude. Unlike *còrrer*, *mólzer* occasionally migrates entirely to I (*mozar*, *amozar*), and where it displays heteroclisia affecting *Fuèc*, this never involves second-conjugation forms; moreover, the geographical extent of heteroclitic paradigms involving first-conjugation *Fuèc* forms is much greater than in the case of *còrrer*. The black star indicates the defective paradigm at 34.17.

Pòner and *còser* display a marked preference for IIIa type paradigms, even in Aude where IIIb has a tendency to shift wholesale to II; *pòner* is often replaced by periphrastic forms such as *faire l'uòu*.

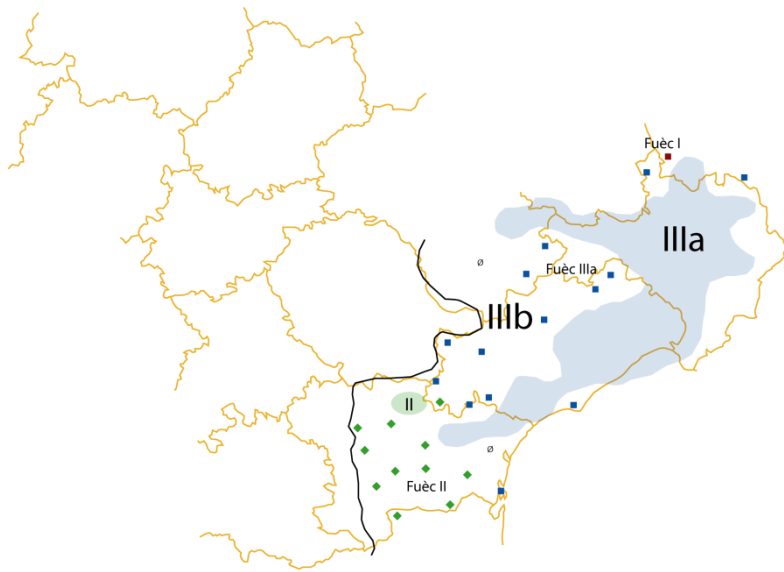


Figure 20. *conéisser*

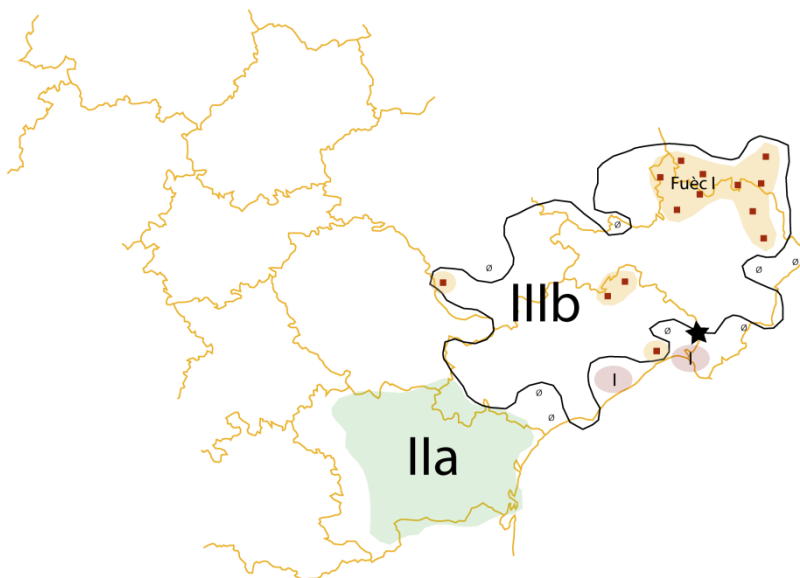


Figure 21. *mólzer*

Of particular interest, though, are the maps for *conéisser* and *nàisser*. In the preceding cases, it might be argued that the failure of IIIb to behave as a single class is to be attributed to the phonological diversity of the roots of the lexemes involved.⁸⁶ However, such an argument would predict that verbs such as *conéisser* and *nàisser* should behave in more similar fashion to each other.

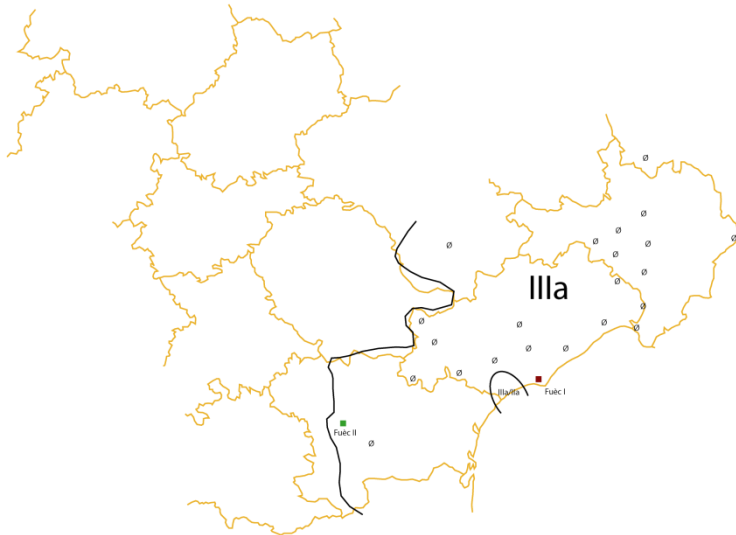


Figure 22. còser

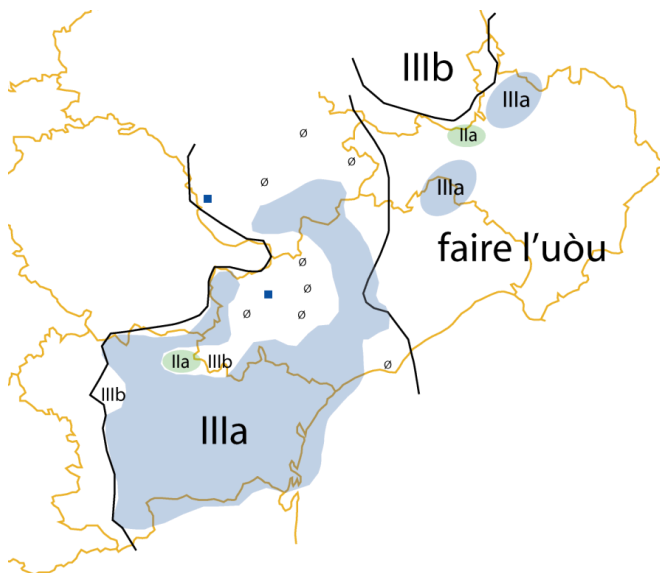


Figure 23. pòner

⁸⁶In the large volume of cases where *plànher* IIIb is replaced by *planir* IIa, there probably is an element of phonological process, eg. linearisation of the palatal nasal > planjeraj, followed by monophthongisation je > i. *Pòner* conceivably has an analogical model in *prene*, which might well explain the frequency of *pondrai*; by contrast, there is no similarly obvious model available for *mólzer* or *plànher*.

In the event, the correlation between the behaviour of *conéisser* and that of *nàisser* appears relatively poor.

Most commonly, *conéisser* shifts wholesale to IIIa, with one case of wholesale shift to II, one of first-conjugation Fuèc in an otherwise IIIb paradigm, and many of IIIa or second-conjugation Fuèc in an otherwise IIIb paradigm. The distribution of heteroclite IIIa points on the edges of the entirely IIIa zone suggests the possibility of a change in progress in which Fuèc forms, followed by the infinitive, progressively shift to IIIa.⁸⁷

By contrast, *nàisser* most frequently retains its characteristic IIIb forms. Occasionally it is replaced by a first-conjugation lexeme; first-conjugation heteroclite Fuèc forms are more common than for *conéisser*, and occur in several areas where *conéisser* presents heteroclite IIIa Fuèc forms. Shift to IIIa is much rarer, and while in Aude IIa-type Fuèc forms are common, some localities in this area also display total shift of *nàisser* to the second conjugation, a phenomenon which is not encountered for *conéisser*.

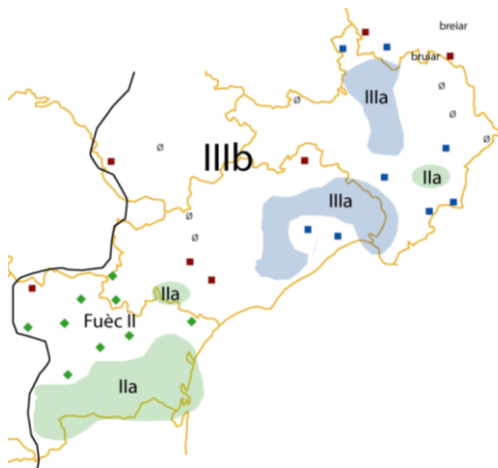


Figure 24. *nàisser*

⁸⁷Note the potential influence of Fuèc in remodelling the infinitive, as opposed to the often-argued reverse.

The diverse behaviour of these lexemes suggests strongly that the lexemes which I label IIIb do not in fact form a coherent single class in the mind of the speaker. Allanche (1941:51), whose approach recognises only two regular inflectional classes, mentions IIIb lexemes merely as 'quelques rares verbes terminés en *-je, -sse, -ze, etc.*, qu'on ne peut guère classer'. Initially, he appears to be missing an attractive morphological generalisation: that there is a class of verbs presenting root-stressed infinitives and Fuèc stems with theme vowel e. However, consideration of the atlas data in fact supports his view.

If speakers did in fact perceive these lexemes as constituting a class, it should follow that all lexemes in the class would undergo coherent developments in a given variety. In its strongest version, this hypothesis would predict that if for lexeme X in variety A the traditional IIIb Fuèc stem with theme vowel e were replaced by an innovative Fuèc stem with theme vowel i, all other lexemes of class IIIb would present the same innovation (leading to a uniform class IIIb with all Fuèc stems in i). A weaker version would predict that any other lexeme in which the Fuèc stem was remodelled would follow this same pattern (leading to variation between lexemes with Fuèc stems in e and lexemes with Fuèc stems in i). However, the atlas data reveal a very different state of affairs, in which almost each one of the originally IIIb lexemes of a given variety presents a distinct development. The differential behaviour of *conéisser* and *nàisser* suggests that the verbs which I label here as IIIb are not even grouped into small sub-classes according to their phonological shape (e.g. class in *-s-*, class in *-ɲ-*), but instead that each individual lexeme is perceived as an independent item.

5.6 *Heteroclisis and convergence*

A cluster of varieties at the south-eastern edge of the Occitan domain present SF and SC forms in which distinctions of conjugational class are entirely or partially neutralised. While it is possible that this development may form part of a general neutralisation of conjugational class, it should be noted that such a change has not yet reached completion, and thus that it currently remains possible to differentiate between conjugational classes.

The resulting distributions display a consistent stem form for SF and SC across conjugational classes: an apparent case of convergence, since diagramming membership of Fuèc is privileged over marking conjugational class membership.

5.6.1 *Nissa : levelling of theme vowel across all three conjugational classes*

The variety of Nissa (Ronjat 1937, Gourdon 1975, Compan 1981, Gasiglia 1984, Toscano 1996) presents a development such that all verbs (with the exception of those which present synchronically irregular, lexicalised Fuèc stems, such as *aur-* 'have', *ser-* 'be') form their Fuèc stem with a theme vowel *e*. This development is not limited to Nice, but is also found in the neighbouring varieties of Sospel, Tende and St-Agnès (Jean-Philippe Dalbera, unpublished fieldwork data; these data further show a common theme vowel *e* across conjugations I, IIb and III in the varieties of Menton and Castilhon, though regrettably no data are given for IIa).

conjugational class	infinitive	Fuèc stem
I	<i>cantar</i>	<i>canter-</i>
IIa	<i>finir</i>	<i>finisser-</i>
IIb	<i>partir</i>	<i>parter-</i>
III	<i>batre</i>	<i>bater-</i>

Table 18. Regular Fuèc stem types in Nissa (Toscano 1998:100-03)

The theme vowel *e* appears to originate in the first conjugation, most probably (as in Italian; see Maiden 1995:44) by a process of regular sound change, the raising of unstressed *a* before *r*. Variation between *e* and *a* in first-conjugation SF and SC forms is already in place by the end of the fifteenth century. In the 1492 arithmetic manual *Compendion de l'Abaco* (Lafont 1967b), for example, 306 out of 325 first-conjugation SF and SC forms present a theme vowel <*e*>, while only 19 present <*a*>; of the four first-conjugation SF forms in the documents edited by Canestrier (1950), three present <*a*> and one <*e*>. By the late eighteenth and early nineteenth century, textual evidence (Imbert 1937) suggests systematic *e* for the first conjugation.

The spread of *e* to the other conjugations is harder to chart in detail owing in part to gaps in the textual record and in part to the low frequency of tokens. For instance, while the *Compendion de l'Abaco* contains 325 first-conjugation SF and SC tokens (spanning approx. 25 lexical items), it only contains 3 second-conjugation SF and SC tokens (2 lexical items); the third conjugation is better represented (197 SF and SC tokens, 14 lexical items), but most of these are instances of 'have' and 'be', neither of which presents a form with theme vowel *e* in any modern variety for which I have data available. The documents edited by Isnard (1912) present 10 IIIa SF forms which could not reasonably be expected to present a theme vowel, one which might but does not, and one, *resolveran*, with non-etymological theme vowel <*e*>; Canestrier's documents include one class II SF form with <*i*>, three third-conjugation SF forms with no possible theme vowel and a fourth (*recebra*) which conceivably could but does not. However, comparative evidence offers support for the idea that /*e*/ spreads outwards from the first conjugation (cf. variety of Breil (Dalbera 1994) in which first-conjugation Fuèc forms systematically present a theme vowel /*ø*/, while second-conjugation forms display /*i*/ and /*ø*/ apparently in free variation), and that /*e*/ affects the third conjugation before the second conjugation (cf. §5.6.2 and §5.6.3 below for varieties of Entraunes and the Valadas in which a theme vowel common to the first and third conjugations fails to permeate the second).

It should be pointed out that this levelling of theme vowel across conjugations is almost certainly a morphological rather than a phonological development: lowering of i to e is not found elsewhere in Nissart, nor is any general process inserting epenthetic e into consonant clusters (consider the infinitives of IIIa verbs, which remain as *batre*, *rendre*, etc., and not **batere*, **rendere*). Furthermore, several of the grammars cited above suggest that the historically expected forms *finir-*, *partir-*, *batr-* can still be found in Nissart, albeit marginally.

The interest of the Nissart forms is not, however, limited to levelling of conjugational class: there are also apparent changes in stem distribution.

The spread of the augment *-iss-* into the SF and SC of verbs of class IIa is particularly striking: this is clearly a morphological development and sensitive to the abstract morphological category of conjugational class, since the SF and SC forms of IIb are unaffected, as are all class II infinitives and past participles (though consider the extraparadigmatic status of these forms, §3.1.5 above and Maiden 2011a:208).

	prs.ind	impf.ind	prs.sbjv	preterite	impf.sbjv	SF	SC
1sg	<i>finissi</i>	<i>finissii</i>	<i>finissi</i>	<i>finissèri</i>	<i>finissessi</i>	<i>finisserai</i>	<i>finisserii</i>
2sg	<i>finisses</i>	<i>finissies</i>	<i>finisses</i>	<i>finissères</i>	<i>finissesses</i>	<i>finisseràs</i>	<i>finisseries</i>
3sg	<i>finisse</i>	<i>finissia</i>	<i>finisse</i>	<i>finissèt</i>	<i>finissesse</i>	<i>finisserà</i>	<i>finisseria</i>
1pl	<i>finissèm</i>	<i>finissiavam</i>	<i>finissèm</i>	<i>finisseriam</i>	<i>finissessiam</i>	<i>finisserèm</i>	<i>finisseriam</i>
2pl	<i>finissètz</i>	<i>finissiavatz</i>	<i>finissètz</i>	<i>finisseriatz</i>	<i>finissessiatz</i>	<i>finisserètz</i>	<i>finisseriatz</i>
3pl	<i>finisson</i>	<i>finissíon</i>	<i>finisson</i>	<i>finissèron</i>	<i>finissésson</i>	<i>finisseràn</i>	<i>finisseríon</i>

Table 19. *finir* 'finish', IIa (Toscano 1998:102). prs.ptcp *finissent*, pst.ptcp *finit*

	prs.ind	impf.ind	prs.sbjv	preterite	impf.sbjv	SF	SC
1sg	<i>parti</i>	<i>partii</i>	<i>parti</i>	<i>partèri</i>	<i>partessi</i>	<i>parterai</i>	<i>parterii</i>
2sg	<i>partes</i>	<i>parties</i>	<i>partes</i>	<i>partères</i>	<i>partesses</i>	<i>parteràs</i>	<i>parteries</i>
3sg	<i>parte</i>	<i>partia</i>	<i>parte</i>	<i>partèt</i>	<i>partesse</i>	<i>parterà</i>	<i>parteria</i>
1pl	<i>partèm</i>	<i>partiavam</i>	<i>partèm</i>	<i>parteriam</i>	<i>partessiam</i>	<i>parterèm</i>	<i>parteriam</i>
2pl	<i>partètz</i>	<i>partiavatz</i>	<i>partètz</i>	<i>parteriatz</i>	<i>partessiatz</i>	<i>parterètz</i>	<i>parteriatz</i>
3pl	<i>parton</i>	<i>partíon</i>	<i>parton</i>	<i>partèron</i>	<i>partésson</i>	<i>parteràn</i>	<i>parteríon</i>

Table 20. *partir* 'leave', IIb (Toscano 1998:101). prs.ptcp *partent*, pst.ptcp *partit*

The fact that the augment does not propagate into the entirety of the paradigm suggests that this is not general paradigm levelling, but remodelling of Ila Fuèc forms to align their structure with that of (reanalysed) Fuèc forms in all other conjugations. The levelling of conjugational class, and the resulting role of the theme vowel in marking membership of Fuèc rather than the lexical information of inflectional class, both render more salient the identity of the root in the Fuèc stem with the root present in the impf.ind and much of the prs.ind. The SF and SC of class I, IIb and III lexemes may accordingly be reanalysed as sharing a stem with the prs.ind/impf.ind, motivating analogical remodelling of Ila Fuèc forms to conform to the same pattern.

This hypothesis is also consistent with the emergence of Fuèc stems such as *creser-* 'believe', *plaser-* 'please', *escriver-* 'write', *faser-* 'do' (Blaquièra 1997; Dalbera, unpublished fieldwork data for Nissa, Bendejun, Castilhon) replacing historically expected *creir-*, *plair-*, *escriur-*, *far-*;⁸⁸ here, the innovative stems are clearly modelled on the prs.ind/impf.ind.

The Nissart data suggest that the distribution Fuèc has psychological reality for speakers: the formal relationship of SF and SC is reinforced at the expense of conjugational class distinctions (an instance of 'convergence' in the sense of Maiden 2005a), and Fuèc is clearly demonstrated to be distinct from the infinitive. The data largely concur with Maiden's (2011d) observations of Fuèc stems being analogically remodelled on a stem found in the present indicative, replicating an existing morphomic pattern of identity between the root found in Fuèc and in the prs.ind.

⁸⁸There is variation in the first two cases as to whether or not an infinitive in *-ser* exists alongside the historically expected form in *-ire*; in the third, there is no attestation of **escriver*. I would take these facts as suggesting that the infinitive may subsequently be remodelled on an innovative Fuèc stem (or the source of that stem), but that this development is by no means obligatory, and, in particular, that it is not the case that Fuèc follows the infinitive.

5.6.2 *Entraunes*

Blinkenberg (1939:96) observes that in the variety of Entraunes the SF and SC forms of class II verbs 'ne se terminent que dans des rares cas en [-irai, -iriu]'. Instead, it is much more common to find the theme vowel a characteristic of the first conjugation. As in Nissart, class II is divided into IIa, where the augment is systematically present in all cells except the infinitive and past participle, and IIb, which lacks the augment and in terms of inflectional endings closely resembles IIIa. This variety accordingly presents IIa Fuèc stems in -isar-, and IIb Fuèc stems in -ar-: for example, the IIa verb *finir* 'finish' has 1sg SF *finisarai* and 1sg SC *finisariu*, while IIb *dormir* 'sleep' presents 1sg SF *dormarai* and 1sg SC *dormariu*.

The spread of a also affects class IIIb, while Blinkenberg's paradigms for verbs of class IIIa show the historically expected forms without theme vowel; a thus appears to be confined to the set of Fuèc forms which historically presented a theme vowel. However, Blinkenberg does observe that

Dans les verbes en [-dre], nous n'avons jamais entendu de formes en [arai, ariu] ; pour ces verbes, à côté de la forme régulière en [drai, driu], nous avons noté sporadiquement une forme en [derai, deriu] que nous n'avons pas fait entrer dans nos paradigmes. (1939:97)

This comment suggests that the convergence of Fuèc forms across conjugational class may be significantly more complete in the variety of Entraunes than the paradigms initially imply.

5.6.3 *Valadas Occitanas: variations on levelling of conjugational classes*

The paradigms given by Bianco et al. (2008) for the varieties of Ostana and Belins behave almost identically to those discussed for Nissa above, with the exception that the theme vowels are levelled not to e but to a, almost certainly on the model of the first conjugation.

The variety of Santa Anna de Vaudier initially seems to present a very similar set of data, with a in the SF and SC across all conjugations. However, this variety differs from those of Nissa, Ostana and Belins in the distribution of the augment, which is confined to the singular and 3pl forms of the prs.ind and all forms of the prs.sbjv, and which remains absent from the SF and SC.

A third variation is found in the Bassa Val Cluson, where the theme vowel a has permeated the future and conditional forms of conjugational classes IIb and III but not IIa.

Finally, Talmon (1914:92-93) for Prajalats claims asymmetry between the SF and SC of class II verbs; taken together with all the other data for this region, the pattern found in Prajalats would appear to represent an intermediate stage in the process of convergence of all regular Fuèc stems on -a-.

class	lexeme	SF.1sg	SC.1sg
I	'sing'	<i>chantarèi(k)</i>	<i>chantaríu(k)</i>
II	'sleep'	<i>gurmirei(k)</i>	<i>gurmariú(k)</i>
IIIa	'sell'	<i>vendarèi(k)</i>	<i>vendaríu(k)</i>

Table 21. Regular SF and SC forms in Prajalats.

The data suggest the following order of changes. Initially, the theme vowel a is present in the SF and SC of first-conjugation verbs, as expected from regular historical change. This vowel is subsequently spread by analogy, first to third-conjugation verbs, then to the SC of second-conjugation verbs, and finally to the SF of second-conjugation verbs, resulting in convergence of Fuèc stems across all conjugational classes. It is, however, difficult to suggest a principled motivation for the relative conservatism of second-conjugation verbs, which appear to present lower token frequency as a class than either I or IIIa, yet retain their distinctive forms longest.

5.7 *Conclusions*

The data presented in this chapter illustrate the wide variety of novel developments which affect both the SF and SC. Most merely preserve the identity between the stems of the SF and SC; in the cases of convergence, this identity is reinforced, but only the case of convergence in Seta increases the distinctiveness of this stem with respect to the rest of the paradigm. Indeed, while the developments observed in Nissart and the varieties of the Valadas may be classed as convergence, they are of a very different type to that originally identified by Maiden: the cases which Maiden discusses for PYTA involve the extension of a stem shape associated with high-frequency irregular verbs, to other irregular verbs, while the Nissart type concerns lexemes belonging to regular conjugational classes.

Most frequently, changes in Fuèc are analogical, and indeed this area of the paradigm appears particularly susceptible to such change: in those of the cases discussed above where change to Fuèc forms part of a more general change in progress, the SF and SC are typically the first groups of cells affected. For instance, in cases of heteroclisis, virtually all heteroclite distributions involve Fuèc stems of non-etymological conjugational type, whichever other screeves are affected; in the cases of levelling discussed for Gasconha, the etymological Fuèc stem is replaced by an innovative stem, while several distinctive PYTA stems are maintained. The SF and SC thus appear more vulnerable to analogical levelling than other parts of the paradigm; this finding may be attributed to the relatively low frequency of these forms, in accordance with Bybee's observations that low-frequency irregular forms are less strongly represented in the mental lexicon, and consequently more likely to undergo analogical remodelling.

The sources of the innovative stems, though, provide little clue to any stable relationship between Fuèc and other areas of the paradigm: while it seems that the etymological identity of

the Fuèc stem with the infinitive no longer has psychological reality for speakers, the innovations discussed in this section show Fuèc stems remodelled variously on the N-pattern root (an issue I return to in §6.6.11 below), the N-pattern complement root, the PYTA root, or a single element of one of these, such as the v- found in certain cells of *anar* 'go'.

Another striking feature of these data is the tendency for change producing defectivity or heteroclisis to affect verbs of class IIIb (which the atlas data suggest is not in fact a coherent class in the mind of the speaker). In the terms of Natural Morphology, these verbs are not system-congruent. They are a low-frequency minority, resembling IIIa verbs in the majority of paradigm cells, but forming their Fuèc stem differently (moreover, with a theme vowel different from those of classes I and II). It is perhaps not surprising, therefore, that this class should be particularly susceptible to change. However, the changes observed do not necessarily improve system-congruence overall. While in some cases entire IIIb lexemes are replaced by a lexeme of class I/II or a periphrasis (e.g. in my own fieldwork I encountered *botar*, *grelhar*, *grandir* and *venir bèl* for 'grow' in place of *créisser*), or shift class entirely (e.g. class II *creissir*, *naissir*, ALLOr 11.18; class I *mozar* ALLOr 30.24), other changes create new and unpredictable stem allomorphs (e.g. SF/SC *plandrà*, *plandriá* in a paradigm which otherwise presents only the root *plap*) or novel patterns of distribution, such as the diverse patterns of heteroclisis and defectivity. Not only do these paradigms have no precedent within the system, but different lexemes within a given variety may display very different distributions. While it seems plausible to argue that IIIb-type Fuèc forms are good candidates for analogical or other remodelling, given their low frequency, potential weak mental representation, and irregular form, it would be difficult to argue that the changes which apply to them genuinely improve system-congruence.

Overall, these data show that while the SF and SC continue to share a stem, and that Fuèc presents behaviour which may be considered morphomic (coherence and convergence), the

behaviour of Fuèc is nevertheless somewhat different to that of classic morphemes such as PYTA, the N-pattern, or Aronoff's 'clearest cases'. Although all the changes considered above preserve stem identity within Fuèc, only some of them pick out Fuèc uniquely: the cases of defectivity and spread of the v-stem, for example, also affect other areas of the paradigm. Cases of convergence are rarer, and often of a different type. Finally, while Fuèc is susceptible to influence from other morphemes (e.g. extension of the PYTA root), I am not aware of any case in which the distinctive Fuèc stem is spread into cells associated with a separate morpheme, in contrast to e.g. the spread of PYTA roots into the prs.sbjv or Fuèc itself.

6. Novel developments compromising identity between future and conditional stems

In addition to the developments described in the foregoing, many varieties of Occitan present novel developments which, instead of preserving the familiar identity between future stem and conditional stem, introduce a formal distinction between the two. I describe and analyse in this section the resulting distributions, in which the SF and SC present distinct stems, and which I label cases of ‘asymmetry’.

Fig.25 diagrams the range of asymmetrical stem distributions which are logically possible for a given lexeme.⁸⁹ Alongside the canonical case, in which SF and SC each present a unique stem, there exist cases in which SF and SC share one or more stems and SF additionally presents a distinct stem, in which SF and SC share one or more stems and SC additionally presents a distinct stem, and in which SF and SC share one or more stems but each also presents a distinct stem. While examples of all four types are attested in Occitan, a single variety may display one, several, all or none of these types, and within a given variety there is non-systematic variation between lexemes as to which type each presents.

SF		SC
stem A		stem B
stem A	stem B	
stem A		stem B
stem A	stem B	stem C

Figure 25. Schematic representation of asymmetrical stem distributions. Stems common to SF and SC are shaded in grey.

Occitan may be unique amongst Romance languages in presenting such distributions, in which the implicational relationship of SF and SC is somehow disrupted. While nothing in morphological theory prohibits this phenomenon, or even makes it unexpected, such a split

⁸⁹ This typology assumes that all SF forms share a stem and all SC forms share a stem. While variation by person and/or number may be possible, this must remain a topic for further research, since the vast majority of the data available to the present study provide only 1sg or 3sg SF and SC forms. I return to this question in §7.2 below.

between SF and SC stems appears odd in the wider context of cognate Romance varieties, where the familiar pattern is of systematic identity between future and conditional stems.

Within varieties of Occitan, asymmetry most often constitutes a minority pattern, affecting relatively few lexemes in any given variety. The asymmetrical distributions themselves are highly diverse: asymmetry may arise as a consequence of morphological analogy, phonological change, conflation of multiple lexemes into a single paradigm, shift of conjugational class, or occasionally pragmatic factors,⁹⁰ and may be linked to innovations in the SF or in the SC. The lexemes affected likewise vary: they are typically members of conjugational class III, but are not confined to this class, and even within it range from isolated irregulars showing extensive stem allomorphy to items with otherwise entirely level paradigms. The extent to which asymmetry can be predicted to apply to a given lexical item is thus very limited; for the types grounded in phonology, it is sometimes possible to state a necessary condition (e.g. a particular phonological context) for a verb to be affected, but no more.

Nevertheless, asymmetry is both real and widespread. Asymmetrical distributions are attested in a number of dialect descriptions, in the atlas data (for almost every one of the 200 survey points covered in the ALLOc/ALLOr surveys, there is evidence of asymmetry in at least one lexeme, often more), and in the fieldwork recordings conducted for the purposes of the present study. Moreover, although it is relatively rare for a given asymmetry to be attested over a coherent geographical zone, many asymmetries recur in multiple localities, attesting to their reality.

⁹⁰It proved impossible to elicit a future for *paréisser* 'appear' in the fieldwork questionnaire, since this verb has been restricted to the impersonal sense of 'it appears that', and while a conditional in this sense is entirely acceptable, the value of assertion present in the future made it incompatible with the value of non-assertion present in the lexical meaning of this verb. *Paréisser* accordingly displayed asymmetrical defectivity.

Not all attestations of asymmetry can be considered of equal significance for this study: in some cases, the reliability of the source material cannot be established, while in others the asymmetries described are incidental to morphology.

Some attestations are artefacts of incomplete description. In Quint's (1998) study of the variety of Seina, this is made very plain. For the verbs *plànher* 'pity' and *disparéisher* 'disappear', two stems are given for the SF, but only one of these is given for the SC; however, this is not a demonstrable case of asymmetry, since Quint explicitly notes that the SC form was not elicited in fieldwork, but reconstructed. The available data are thus insufficient to determine whether these two verbs do indeed present asymmetry between SF and SC.

Other instances of incomplete description can generally be demonstrated by comparison with alternative sources for the area concerned: although Roques (1940:97) gives SF *anarai* and SC *aniriái* for *anar* 'go' in varieties of the Lengadòc, this asymmetry is not attested in the ALLOc/ALLOr data, which show instead that the two stems are regional variants, some varieties presenting SF *anarai* and SC *anariái*, others SF *anirai* and SC *aniriái*.

Where no alternative source is available for the same variety, an independent attestation elsewhere may nevertheless argue for the reality of the asymmetry in question: identical stem distributions encountered in distinct varieties cannot be ascribed to accidents of description.

Occasionally, no independent confirmation is available, as is true for the case of alternation of /b/ and /v/ between the SF and SC of *viure* 'live' at ALLOc point 19.01 (for which the sound recording was not available). In such cases, it is impossible to determine whether the reported attestation is genuine, or whether it simply constitutes an error of production or transcription. While excluding from consideration isolated attestations of this type risks overlooking some

genuine cases of asymmetry, for the purposes of the present study this has been deemed preferable to the inclusion of erroneous data.

Finally, some attestations have been excluded on the grounds that they are incidental to morphology. For example, at ALLOc point 46.21, the verb *nàisser* 'be born' is attested with SF *naißerà* /nɔjʃe'rɔ/ but SC *naißeriá* /nɔjʃe'rjo/. The only difference between the two stems at issue is between [s] and [ʃ]; while this represents a genuine phonetic difference, it does not involve a phonemic contrast (the allophones [s] and [ʃ] are in free variation), and thus will not be of morphological significance.

I discuss below those cases of asymmetry which may be considered reliably attested and of potential significance for the morphological relationship between SF and SC stems.

6.1 *R-less conditionals*

Lanly (1971) identifies a number of localities in Auvèrnha and Lemosin where the etymological -r- typically assumed to be characteristic of the SF and SC stems has been lost from the SC, leading to such contrasts as *farai* do.SF.1SG vs. *fa(r)ia* do.SC.1SG.⁹¹ Although Lanly only describes these for a relatively small area, the true extent of their range is much wider: they are attested not only in the ALMC data, but across much of Gasconha and Lengadòc (ALLOc, ALLOr, Kelly 1973, Camps 1985, Laurent 2002a) along a corridor roughly corresponding to the valley of the river Garona.

The extent of r-less SC forms in the ALLOc data is represented in Fig.26 overleaf.

⁹¹I indicate within parentheses graphemes which figure in the standard orthographic representation but do not correspond to any segment in the word-form at issue: e.g. <fa(r)ia> for the realisation fa'ja, which would in standard orthography be written <faria> obscuring the loss of the segment -r-.

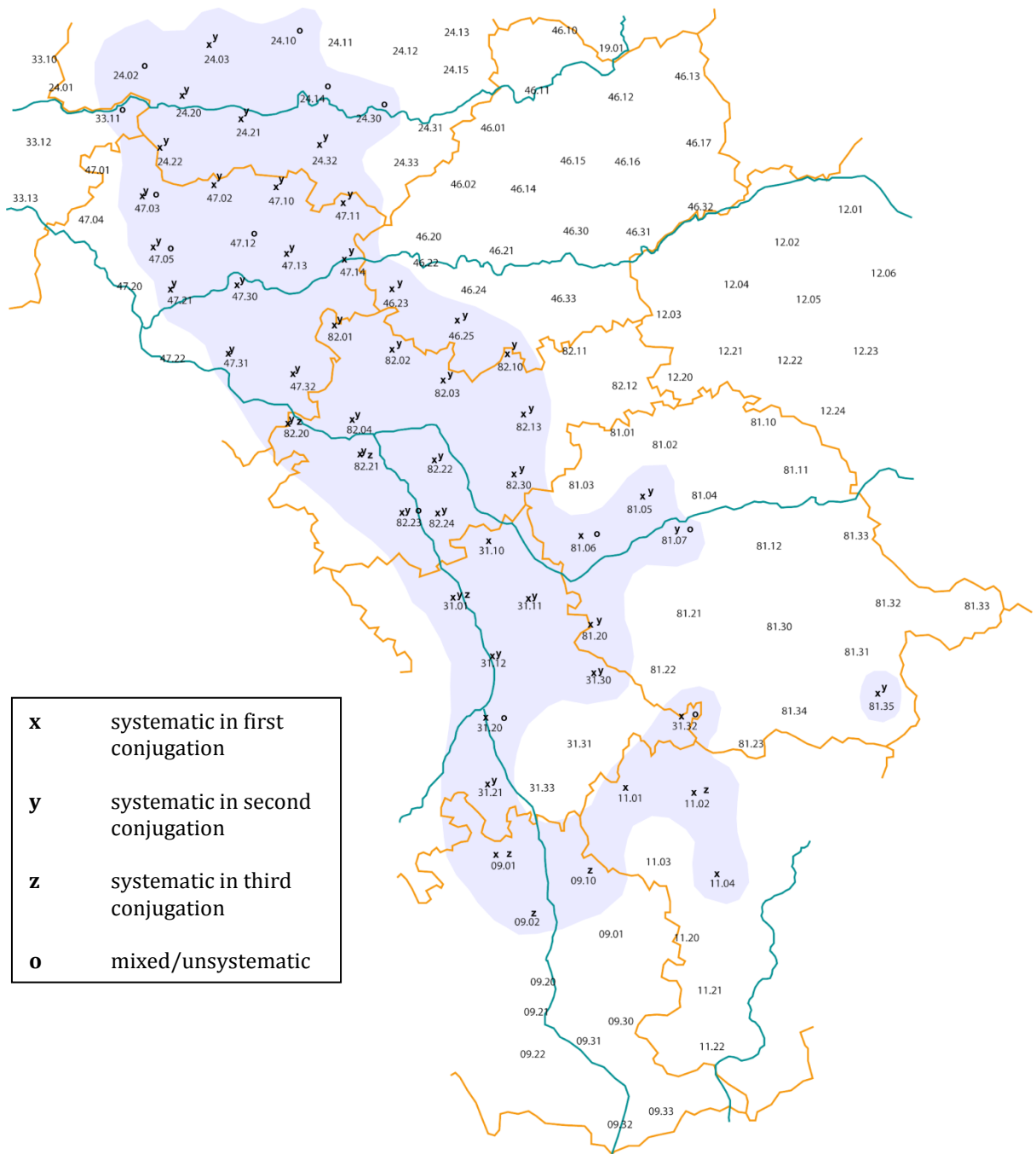


Figure 26. Extent of r-less SC forms in ALLOc area.

The shaded area on the map represents the range across which r-less SC forms are attested in the ALLOc data for the sample regular verbs *cantar* 'sing' (I), *bastir* 'build' (IIa) and *vendre* 'sell' (IIIa), which are assumed to be representative examples of their respective conjugational types. The labels <x>, <y> and <z> indicate systematic presence of r-less conditionals for all 6 persons in conjugations I, II and IIIa respectively. The label <o> denotes presence of a 'mixed'

distribution in one or more conjugations (e.g. at 81.06, in the second conjugation, 1sg 2sg 3sg and 3pl have r-less SC forms, but 1pl and 2pl still have forms with *-r-*), or concurrent r-less and r-ful forms in one or more conjugations (e.g. at 31.20, in the second conjugation, the forms initially produced are r-less, but careful pronunciation elicits forms with *-r-*).

The rarity of r-less SC forms in regular IIIa verbs is striking. Third-conjugation r-less SC forms occur over a coherent, but highly restricted zone, limited to a handful of points in Arièja, Aude and Garona Nauta. By contrast, r-less SC forms in the first and second conjugations are much more widespread. However, the fact that r-less SC forms are also commonly encountered for irregular third-conjugation verbs, such as *deure* ‘owe, have to’, *beure* ‘drink’ and *viure* ‘live’, which all have vowel-final stems, indicates that the appearance of r-less conditionals is not directly conditioned by conjugational class. Instead, the fall of the *-r-* is favoured by a specific phonological context — *VrjV* — which is systematically present in the first and second conjugations, but absent from regular IIIa verbs.⁹² It would therefore appear that r-less SC forms originate in a regular sound change⁹³ affecting the first conjugation; they are subsequently spread to other conjugations and irregular verbs in a case of morphological analogy. It should also be noted that the sound change producing r-less SC forms appears to be confined to the SC: compare e.g. *cerièra* se'rjɛrɔ ‘cherry’ (ALLOc 31.10), which presents the context *VrjV* with primary stress on the second V, as in SC forms prior to r-deletion, but which retains the intervocalic r, in contrast to the SC forms of all three major conjugational classes in this variety.

⁹²It may be pointed out that the fall of the *-r-* from IIIa verbs would cause syncretism of the imperfect indicative (e.g. *batiá*) and the SC (e.g. *bat(r)iá*). However, this is not a plausible argument for blocking of r-deletion in these verbs; r-less SC forms syncretic with imperfect indicative forms are reliably attested in a number of varieties.

⁹³I assume that this change is in most varieties no longer productive, and thus that the asymmetry is now integrated into the morphological system (rather than, for example, being treated as a superficial consequence of phonological processes acting to differentiate underlying symmetric SF and SC forms.

For the purposes of the present study, the r-less SC forms are of interest as an example of an asymmetry which is of transparent origin, and which is not subsequently ‘repaired’: I am not aware of any case in which the –r- of the SF is deleted to realign the SF forms on the SC forms.

It may be objected that the significance of the r-less SC forms is dependent on theoretical assumptions concerning segmentation. Lanly (1971:799), for instance, segments *far-ai* ‘I will do’ and *fa-ía* ‘I would do’ according to the historical composition of these forms, and ascribes the asymmetry to functional divergence of a chiefly temporal SF from a chiefly modal SC. In contrast, an alternative segmentation — following, for example, that proposed in Bosque & Demonte (1999) for Castilian Spanish, in which the -r- is considered not as part of the stem but as part of the inflectional ending — appears to restore symmetry: *fa-rai*, *fa-ía*. Altering the segmentation might therefore seem to alter the nature of the developments at issue: formal differentiation of SF and SC, or preservation of formal identity between the two. However, this line of argument fails to take account of the –r- present in SC forms of other conjugations or with different stem shapes. A segmentation which systematically considers –r- as a consistent marker of the SF will have difficulty in accounting for the presence of this segment in SC forms such as *vendría* ‘he would sell’ which exist alongside forms such as *cantaría* ‘he would sing’ within a single variety. If segmentation is to be adopted, a version such as Lanly’s which results in asymmetry would therefore account better for the observed data.

6.2 Vocalic asymmetry

The ALLOc and ALLOr data also attest a second type of recent and widespread stem asymmetry resulting from phonological processes, and affecting future and conditional stems which were not historically differentiated. Although only a relatively small number of lexemes are affected in any given variety, the relevant asymmetric stem distribution recurs across many varieties.

Vocalic asymmetry affects those verbs which for reasons of historical phonology would be expected to present a diphthong in the stems of the future and conditional. One such example is *veire* ‘see’: the SF form of this verb typically resembles *veirà* /βej’ra/, and can be unproblematically derived from UIDERE HABET via syncope of E, lowering of I to e, and vocalisation of D, all of which represent regular phonological changes. The reflex of UIDERE would thus be expected to present a stem of the form *veir-* in both the SF and the SC, a pattern which is indeed commonly found.

In cases of vocalic asymmetry, the expected -j- in the SC stem falls, leaving a monophthong in the SC stem but a diphthong in the SF stem, as exemplified in Table 22 below. A broad transcription is given for each form on its first occurrence.

lexeme	SF.3sg	SC.3sg	localities
‘cook’	<i>coirà</i> /kuj’ra/	<i>coriá</i> /ku’rjɔ/	81.12, 81.23, 81.32, 81.34, 81.35, 46.23, 82.13, 46.24
‘know’	<i>coneirà</i> /kunej’ra/	<i>coneriá</i> /kune’rjɔ/	09.30, 81.12, 81.30, 81.34
‘believe’	<i>creirà</i> /krej’ra/	<i>creriá</i> /kre’rjɔ/	46.11, 81.06, 81.07, 81.12, 81.21, 81.22, 81.32, 81.34, 81.35, 24.13
‘be able’	<i>poirà</i> /puj’ra/	<i>poriá</i> /pu’rjɔ/	11.21, 31.11, 46.02, 46.11, 81.03, 81.06, 81.07, 81.12, 81.21, 81.22, 81.23, 81.30, 81.34, 81.35, 82.10, 82.11, 47.11, 46.23, 46.25, 82.13, 24.12, 24.33, 24.13
‘see’	<i>veirà</i> /βej’ra/	<i>veriá</i> /βe’rjɔ/	46.11, 46.14, 81.04, 81.06, 81.07, 81.12, 81.21, 81.22, 81.23, 81.31, 81.32, 81.34, 81.35, 46.23, 47.11, 47.12, 46.25, 82.20, 82.13, 24.13,

			24.15, 24.30, 47.10
'sit down'	<i>seirà</i> /sej'ra/	<i>seriá</i> /se'rjɔ/	81.04, 81.07, 81.12, 81.31, 81.32
	<i>aseirà</i> /asej'ra/	<i>aseriá</i> /ase'rjɔ/	11.15
	<i>sèirà</i> /sej'ra/	<i>seriá, aseriá</i>	81.34
	<i>asèirà</i> /asej'ra/	<i>aseriá</i>	81.35, 11.11
	<i>sierà</i> /sje'ra/	<i>seriá</i>	81.22
	<i>sièirà</i> /sjej'ra/	<i>seriá</i>	81.23
	<i>sieirà</i> /sjej'ra/	<i>sieriá</i> /sje'rjɔ/	12.34
	<i>asèirà</i>	<i>seriá</i>	81.30

Table 22. Canonical cases of vocalic asymmetry attested in ALLOc/ALLOr cahiers d'enquête.

In a handful of cases (see Table 23 below), variation can be observed in the SC between a conservative Fuèc stem, with the diphthong, and an innovative stem showing vocalic asymmetry.

lexeme	SF.3sg	SC.3sg	localities
'cook'	<i>coirà</i>	<i>coriá, coirá</i>	47.14
'believe'	<i>creirà</i>	<i>creiriá, crieriá</i>	09.30
'be able'	<i>poirà</i>	<i>poiriá, poriá</i>	31.32

Table 23. Vocalic asymmetry as a variant.

In Galhac (ALLOc 81.06, see Table 24 below) an analogous type is attested for 'write', likewise involving the optional deletion of a glide from the SC stem, this time -w-. The variety of Galhac typically, though not systematically, presents r-less SC forms.

lexeme	SF.3sg	SC.3sg	localities
'write'	<i>escrurà</i> /eskriw'ra/	<i>escruiá</i> /eskriw'ja/ <i>escririá</i> /eskri'rja/	81.06

Table 24. Corresponding type with deletion of -w-. ALLOc 81.06.

Vocalic asymmetry co-occurs with r-less SC forms in a number of varieties, as shown in Table 25 below. In these cases, the presence of a sequence vowel+glide in the SC forms produces a superficial resemblance with the SF; however, the presence of SC forms in -iá other than those with stems in -i, and that of forms such as *veriá* given in careful speech, both argue for these being genuine instances of vocalic stem asymmetry.

lexeme	SF.3sg	SC.3sg	localities
'sit down'	<i>aseirà</i> /asej'ra/	<i>aseiá</i> /ase'jɔ/	11.10, 11.35, 34.22
	<i>asèirà</i> /asej'ra/	<i>aseiá</i>	34.24
	<i>asèirà</i> <i>asetarà</i> /asetar'a/	<i>aseiá</i> <i>asetaiá</i> /asetajɔ/	11.12
	<i>asietarà</i> <i>aseirà</i>	<i>asetaiá</i> <i>aseiá</i>	11.14
'cook'	<i>coirà</i> /kuj'ra/	<i>coiá</i> /ku'jɔ/	33.11, 24.02, 24.22, 24.03
	<i>coirà</i>	<i>coiá</i> <i>coriá</i> /ku'rjɔ/	47.02
	<i>queirà</i> /kej'ra/	<i>queiá</i> /ke'jɔ/	47.05, 47.03, 24.01
'know'	<i>coneirà</i> /kunej'ra/	<i>coneiá</i> /kune'jɔ/	24.21
'believe'	<i>creirà</i> /krej'ra/	<i>creiá</i> /kre'jɔ/	11.02, 31.01, 31.12, 47.12, 47.14, 33.11, 47.21, 82.21
	<i>creirà</i> /krej'rɔ/	<i>creiá</i> /kre'jɔ/	24.10, 24.12, 47.10, 47.05, 47.02, 24.02, 24.21, 24.03, 24.22, 24.20, 24.14, 47.03
'be able'	<i>poirà</i> /puj'ra/	<i>poiá</i> /pu'jɔ/	31.10, 47.31, 82.21, 24.31
	<i>poirà</i>	<i>poiá</i> <i>poriá</i> /pu'rjɔ/ <i>poiriá</i> /puj'rjɔ/	11.20
'see'	<i>veirà</i> /βej'ra/	<i>veiá</i> /βe'jɔ/	31.10, 31.11, 33.11, 24.01, 47.31, 82.21
	<i>veirà</i> /βej'rɔ/	<i>veiá</i>	24.10, 24.02, 24.20, 24.03, 47.05, 24.21, 24.22, 24.12, 47.02, 47.03
	<i>veirà</i>	<i>veiá</i> (<i>veriá</i> /βe'rjɔ/, 4 th time)	47.14
	<i>veirà</i>	<i>viá</i> /βi'jɔ/	11.04

Table 25. Vocalic asymmetry and r-less SC.

A further variant is occasionally encountered, in which the original diphthong in the SC stem is levelled to a high vowel i or u corresponding to the original glide.

lexeme	SF.3sg	SC.3sg	localities
'believe'	<i>creirà</i> /krej'rɔ/	<i>cririá</i> /kri'rjɔ/	46.20
'owe/have to'	<i>deurà</i> /dew'ra/	<i>durié</i> /du'rje/	30.34
'write'	<i>escrieurà</i> /eskrjew'ra/	<i>escririé</i> /eskrjew'rje/	30.34
'be born'	<i>nèitrà</i> /nej'tra/	<i>nitrié</i> /ni'trje/	30.33
'see'	<i>veirà</i> /βej'rɔ/	<i>viríá</i> /bi'rjɔ/	46.21
	<i>veirà</i> /vej'ra/	<i>viríé</i> /vi'rje/	30.30
	<i>veirà</i> /βej'ra/	<i>viríá</i> /βi'rjɔ/	Volvéstre(Deledar 2006:45)
	<i>veirà</i> /βej'ra/	<i>veiriá</i> /βej'rjɔ/ <i>viríá</i> /βi'rjɔ/	09.11

Table 26. Vocalic asymmetry with levelling.

Occasionally, the SC stem can be seen spreading to the SF, restoring the coherence of Fuèc (see Table 27 below). From a phonological point of view, there is no a priori obstacle to restoring symmetry by remodelling the future on the conditional; this solution has been adopted in some varieties, resulting in monophthongs in both stems, and 31.12 and 31.30 accordingly appear to represent this change in progress. However, in many varieties, no such realignment has taken place; asymmetry between future and conditional is tolerated, and persists.

lexeme	SF	SC	locality
'be able'	<i>poirà</i> /puj'ra/ <i>porrà</i> /pu'ra/	<i>porriá</i> /pu'rjɔ/	81.04
'see'	<i>veirà</i> /βej'ra/ <i>virà</i> /βi'ra/	<i>viá</i> /βi'ja/	31.12, 31.30

Table 27. Symmetry restored by analogy.

Finally, there are also a handful of disparate cases in which vocalic asymmetry appears to act in the opposite direction. In these cases, the diphthong is retained in the SC, but levelled in the SF. The pattern of distribution at ALLOc point 46.32 is an isolated one, in which alongside the reversed pattern of vocalic asymmetry, there is an asymmetry of stem vowel, the diphthong being levelled to e in the SF and to i in the SC.

lexeme	SF	SC	locality
'believe'	<i>crerà</i> /kre'ra/	<i>creiriá</i> /kre'rjɔ/	46.15
'write'	<i>escrirà</i> /ehkri'ra/ <i>escriurà</i> /ehkriw'ra/	<i>ehcriurá</i> /ehkriw'rɔ/	82.02
'sit down'	<i>serà</i> /se'rɔ/ <i>seirà</i> /sej'rɔ/	<i>siriá</i> /si'rjɔ/ <i>sieiriá</i> /sjej'rjɔ/	46.32
'follow'	<i>sigrà</i> /si'gra/	<i>siegrá</i> /sje'grɔ/	82.02
'see'	<i>virà</i> /vi'ra/	<i>veié</i> /ve'je/	30.34

Table 28. Inverse type.

The geographic distribution of vocalic asymmetry is shown in Fig. 27 overleaf. As may be seen, vocalic asymmetry is attested for approximately half the ALLOc sample localities, and appears to occur across a relatively coherent zone. However, if the distribution of vocalic asymmetry is

instead considered by lexeme (Fig. 28, following page), the picture changes dramatically. The localities in which an individual lexeme presents vocalic asymmetry rarely cluster in a single zone or in patterns easily explained in terms of the physical features of the area; neither is there significant overlap between the localities in which each individual lexeme presents asymmetry.

Were a systematic, exceptionless phonological process at work here, one would expect the reflexes of UIDERE and CREDERE to behave identically, yet points in which both are asymmetrical are extremely rare. Furthermore, there exist cases such as that of Ròcacorba (ALLOc 81.30), where the verb 'sit down' presents asymmetry (SF *asèirà*, SC *seriá*), but the verb 'follow' (SF *seirà*, SC *seiriá*), despite presenting a similar phonological context, does not. In the light of these data, it seems most appropriate to consider vocalic asymmetry as phonological in origin, but that this change is lexically diffuse.

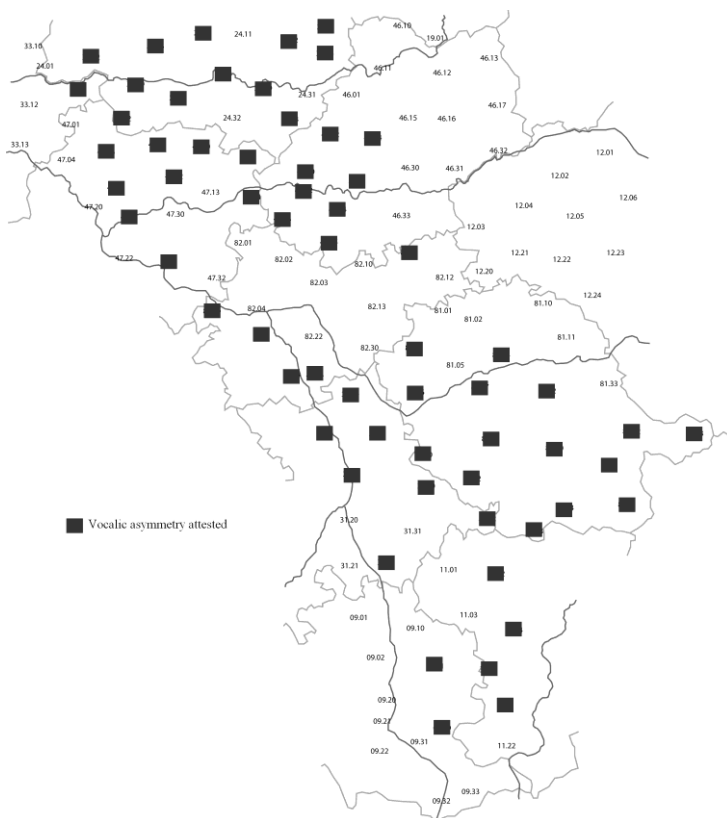


Figure 27. General extent of vocalic asymmetry in the ALLOc survey area.



Figure 28. Distribution of vocalic asymmetry in the ALLOc area.

Presence of vocalic asymmetry (square for r-ful SC, lozenge for r-less SC):

in red, 'cook' (*coirà* ~ *coriá/coirà* ~ *coiá*)

in yellow, 'know' (*coneirà* ~ *coneriá/coneirà* ~ *coneiá*)

in green, 'be able' (*poirà* ~ *poriá/poierà* ~ *poiá*)

in blue, 'see' (*veirà* ~ *veriá/veirà* ~ *veiá*)

in violet, 'believe' (*creirà* ~ *creriá/creirà* ~ *creiá*)

While vocalic asymmetry is rarely if at all attested in published sources, there is a case of partial asymmetry involving the verb *traire* 'milk' in Provença which may usefully be compared with the Lengadòc data. Both Ronjat (1937:306) and Durand (1941:82) cite the same distribution of forms: stems *traseir-* (see §5.2.2 above) and *treir-* (regular historical development of the Fuèc stem) common to SF and SC, but *trar-* found only in the SC. The fact that Ronjat attempts to offer an explanation for this distribution offers further evidence for its reality, although the explanation he proposes is unconvincing.

Ronjat suggests that if *trar-* ever occurred in the SF, it was eliminated as cacophonous, since entailing a sequence *-rara-* in four out of the six persons. The string is certainly rare: examination of the *ALP* yields no tokens of *-rara-*, but neither does it offer any pair of tokens (for instance, a derived lexeme and its base) in which a segment has evidently been altered or suppressed to avoid this string.⁹⁴ Furthermore, even in the unlikely event of the string being dispreferred for this reason, it is clear that phonology alone would not be sufficient to account for the observed stem distribution: the unacceptability of the string *-rara-* would eliminate SF forms **trarai*, **traràs*, **trarà* and **traràn*, but should not affect the 1pl and 2pl forms **trarem* and **traretz*.

Ronjat is perhaps aware of how tenuous the argument from cacophony is, since he suggests that it is more likely that *trar-* was never present in the SF. However, this approach raises the question of why this form, a total isolate within the paradigm, should have appeared in and only in the SC. Ronjat (1937:306) proposes analogy with *far-* (from *far/faire* 'make/do'); yet *far/faire* presents neither asymmetry between SF and SC, nor multiple stems for either of these.

⁹⁴The presence of a plural in *-as* in some localities implies that the string in question must exist for *raras* 'far edges', and indeed it may be assumed to occur in the future of such verbs as *laurar* 'work [a field]', but this remains speculative and, more importantly, none of these examples share a stress-pattern with **trarai*, etc.

It is also worth noting that no analogous form is found in verbs such as *plaire* 'please', *caire* 'fall', *jaire* 'lie [down]' which otherwise pattern with *traire*.

While it remains to be explained why *trarieu* etc. should be found rather than *trerieu* etc., it seems potentially more fruitful to link the alternation *treir-* ~ *trar-* to the general phenomenon of sporadic, lexically gradual vocalic asymmetry found elsewhere.

Finally, it is worth mentioning a similarly lexically diffuse change, recurrent in the verb *deure* 'owe/have to': raising of e to i in the SC (Table 29), occasionally spreading to the SF and/or to other areas of the paradigm. Where the desinence of the SC presents a high vowel or yod, this change may plausibly be attributed to a process of assimilation.

lexeme	SF	SC	locality
'owe, have to'	<i>deurà</i>	<i>diurá</i> <i>deurá</i>	11.02
	<i>deurà</i>	<i>diuriá</i>	12.20
	<i>deurà</i>	<i>diuriá</i>	47.21
	<i>deurà</i> <i>diurà</i>	<i>diurá</i>	11.20
	<i>diurà</i>	<i>diuré</i> <i>deuré</i>	47.01
	<i>diurà</i> (spontaneous) <i>deurà</i> (suggested)	<i>deurá</i> (spontaneous) <i>diurá</i> (suggested)	09.10
	<i>diurà</i> <i>deurà</i>	<i>diuriá</i>	12.21

Table 29. Vocalic asymmetry in *deure*, ALLOc.

6.3 Consonantal asymmetry (i)

Many varieties across the Lengadòc present a type of asymmetry involving difference of a consonant cluster between the stems of the SF and SC in a number of irregular verbs, most frequently *caler* or *faler* 'be necessary', *valer* 'be worth', *voler* 'want'. Such asymmetry typically involves alternation between e.g. ldr ~ dr, dr ~ r, or r ~ r (Table 30):

lexeme	SF	SC	locality
'want'	<i>voldrà</i> /βu'dra/	<i>vodriá</i> /βu'drjɔ/	81.06
'be necessary'	<i>cadrà</i> /ka'dra/	<i>cariá</i> /ka'rjɔ/	47.11

Table 30. Illustrative examples of consonantal asymmetry.

While the stem with more phonological substance tends to appear in the SF rather than SC form, this trend is far from absolute, and the reverse distribution is in fact common (Table 31).

lexeme	SF	SC	locality
'want'	<i>vodrà</i> /βu'dra/	<i>voldrá</i> /βul'drɔ/	82.01
'be necessary'	<i>cadrà</i> /ka'dra/	<i>caldrá</i> /kal'drɔ/	09.21

Table 31. Illustrative examples of 'reversed' consonantal asymmetry.

Moreover, these asymmetries often display variation in real time. In some cases, both forms of the cluster are present in the SF and/or SC (e.g. SF *caldrà*, *cadrà* vs. SC *cadrá*, ALLOc 31.32). The *cahier* transcriptions also frequently mention a third or fourth elicitation in which the informant produces a 'careful' form of SC (or SF), symmetrical with the SF (or SC), as in the following examples from Roairós (ALLOc 81.35, Table 32).

lexeme	SF	SC (first elicitation)	SC (careful speech)
'want'	<i>vodrà</i> /βu'dra/	<i>voriá</i> /βu'rjɔ/	<i>vodriá</i> /βu'drjɔ/
'be necessary'	<i>cadrà</i> /ka'dra/	<i>cariá</i> /ka'rjɔ/	<i>cadriá</i> /ka'drjɔ/

Table 32. Multiple SC forms in the variety of Roairós.

In a given locality it is usual for all of *caler*, *valer* and *voler*, i.e. those verbs in which SF and SC present the cluster -lr- in early mediaeval times,⁹⁵ to display asymmetry of this type; *poder* 'be able' occasionally presents similar distributions. The systematic phonological context of the lexemes involved, coupled with the extent and vitality of variation as described above, argues for such asymmetries being to this day an entirely phonological phenomenon, the result of assimilation and continuous speech processes. In contrast to the r-less SC forms and vocalic asymmetries, it is highly unlikely that the consonantal asymmetries have been morphologised.

I reproduce in Tables 33-35, for illustrative purposes, examples from the ALLOc *cahiers d'enquête*.

lexeme	SF	SC	localities
'be able'	<i>porrà</i> /pu'ra/	<i>poriá</i> /pu'rjɔ/	46.13, 81.32, 47.12, 47.02, 47.03, 24.14, 24.02, 24.32, 12.01, 24.03, 24.20, 24.21, 47.14, 12.05, 47.05
'be necessary'	<i>carrà</i> /ka'ra/	<i>cariá</i> /ka'rjɔ/	81.32, 47.12, 47.13, 24.32
	<i>carrà</i> /ka'ra, kɔ'ra/	<i>cariá</i> /ka'rjɔ/	46.13
	<i>farrà</i> /fa'ra/	<i>fariá</i> /fa'rjɔ/	47.02
	<i>carrà</i> /ka'ra/	<i>cariá</i> /ka'rjɔ/	
'be worth'	<i>farrà</i> /fa'ra/	<i>fariá</i> /fa'rjɔ/	47.05, 47.03
	<i>varrà</i> /βa'ra/	<i>variá</i> /βa'rjɔ/	81.32, 47.12, 47.02, 47.03, 24.32, 47.05, 24.02
'want'	<i>varrà</i> /βɔ'ra/	<i>variá</i> /βa'rjɔ/	33.11
	<i>vorrà</i> /βu'ra/	<i>voriá</i> /βu'rjɔ/	81.32, 47.12, 47.02, 47.03, 47.05, 24.32, 24.22, 24.21
	<i>vorrà</i> /βu'ra/	<i>voriá</i> /βu'rjɔ/ <i>vorriá</i> /βu'rjɔ/	46.13
	<i>vorrà</i> /bu'ra/	<i>borriá</i> /bu'rjɔ/ <i>boriá</i> /bu'rjɔ/	12.21

Table 33. Asymmetric alternation of trilled and tapped r.

lexeme	SF	SC	localities
'be necessary'	<i>cadrà</i>	<i>cariá</i> (<i>cadriá</i> , careful speech)	81.35
	<i>cadrà</i> /ka'dra/	<i>cariá</i> /ka'rjɔ/	47.11, 47.21, 47.30
'be able'	<i>podrà</i> /pu'dra/	<i>poriá</i> /pu'rjɔ/	82.20, 47.21
'want'	<i>vodrà</i>	<i>voriá</i> (<i>vodriá</i> , careful speech)	81.35
	<i>vodrà</i> /bu'dra/	<i>voriá</i> /bu'rjɔ/	82.20, 47.14

Table 34. Asymmetric alternation of -dr- vs. -r-.

⁹⁵See for example Anglade (1921:325, 351, 352).

lexeme	SF	SC	locality
'be necessary'	<i>cadrà</i>	<i>cadriá</i> <i>caldriá</i>	09.11
	<i>cadrà</i>	<i>caldrá</i>	09.21
	<i>caldrà</i> <i>cadrà</i>	<i>cadrá</i>	31.32
	<i>cadrà</i>	<i>caldriá</i> <i>cadriá</i>	46.25
	<i>carrà</i>	<i>caldriá</i>	81.31
	<i>fòrrà</i>	<i>fòdriá</i>	24.03
'be worth'	<i>valdrà, varrà</i>	<i>valdriá</i>	81.21
	<i>vadrà</i>	<i>vadrá</i> (<i>valdrá</i> 1 of 4 times)	82.02
	<i>vadrà</i>	<i>vadriá, valdriá</i>	46.25
	<i>valdrà</i>	<i>valdriá, valriá</i>	47.21
	<i>valdrà</i>	<i>varriá</i>	81.31
'want'	<i>vodrà</i>	<i>vorriá</i>	33.11
	<i>vodrà</i>	<i>vodriá, vorriá</i>	81.04
	<i>vorrà</i>	<i>vodriá</i>	81.31
	<i>voldrà</i>	<i>vodrà, voldrà</i>	11.04
	<i>voldrà</i>	<i>vodriá</i>	81.06
	<i>voldrà</i>	<i>vodriá, voldriá</i>	81.22
	<i>voldrà</i>	<i>vodrà</i>	81.23
	<i>voldrà</i>	<i>voldrà</i>	82.01

Table 35. Asymmetric alternation of -ldr- vs. -dr-/trilled r.

6.4 Consonantal asymmetry (ii)

A different type of asymmetry, involving alternation between /β/ (occasionally /b/) and /w/ in coda position, is encountered in a number of varieties. Most commonly affected of the lexemes in the ALLOc questionnaire is *receure* 'receive', for which the attested asymmetrical patterns are reproduced in Table 36.

lexeme	SF	SC	locality
'receive'	<i>recevrà</i> /rese'vra/	<i>receuriá</i> /resew'rjɔ/	47.11
	<i>recevrà</i> /rese'vra/	<i>receuiá</i> /resew'jɔ/	47.30
	<i>recevrà</i> /rese'βra/ <i>receurà</i> /resew'ra/	<i>receuriá</i> /resew'rjɔ/	82.13
	<i>recevrà</i> /rese'b'ra/ <i>receurà</i> /resew'ra/	<i>receurá</i> /resew'rɔ/	31.11
	<i>receurà</i> /resew'ra/	<i>recevriá</i> /rese'βrjɔ/	47.21
	<i>receurà</i> /resew'ra/		

Table 36. Asymmetries for *receure* 'receive'.

A number of further examples exist and may usefully be linked to these data.

Two attestations involving *viure* 'live' (Table 37) are somewhat problematic and must be treated with caution. At Ausits (ALLOc 12.02), the informant supplies a conditional with /β/ and accepts the fieldworker's suggestion of a conditional with /w/, but the transcription notes the possibility of confusion with *beure* 'drink'. At Castèlmairan (ALLOc 82.21), the form given for the SC is syncretic with that of the imperfect indicative. As Castèlmairan falls within the r-less conditional zone, a development *viuriá* > *viuiá* > *viviá* can be envisaged, in which, after the r has fallen, the /u/ is replaced by /β/, maintaining the regular phonological distribution of /β/ in initial position and /u/ elsewhere; however, the possibility of the informant simply having given the wrong form cannot be excluded.

lexeme	SF	SC	locality
'live'	<i>viurà</i> /biw'ra/	<i>vivriá</i> /bi'βrjɔ/ (spontaneous) <i>viuriá</i> /biw'rjɔ/ (accepted)	12.02
	<i>viurà</i> /biw'ra/	<i>viviá</i> /bi'βjɔ/	82.21

Table 37. Asymmetries for *viure* 'live'.

Further attestations, though, are less easily discounted. The variety of Agde (ALLOr 34.34) presents incursion of /β/ into the SC but not the SF of both *plòude* 'rain' and *deude* 'owe/have to':

lexeme	SF.3sg	SC.3sg	locality
'rain'	/plɔw'da/	/plɔw'βjɔ/	34.34
'owe/have to'	/dew'da/	/dew'jɔ/ /dew'βjɔ/	34.34

Table 38. Asymmetries for *plòure*, *deure* (Agde).

This last development is not exceptionless; it is not, for example, attested as affecting the future and conditional forms of *beude* 'drink', although they present, through regular historical development, the same phonological context. Nevertheless, attestation of the same development in two lexemes in the same variety suggests that this asymmetry is real, all the more so when compared with data provided by Arnaud & Morin (1920:312) and Koschwitz (1973:151) for *deure* 'owe/have to' in the area of Barciloneta (Ubaia valley).

lexeme	SF	SC	locality
'owe/have to'	<i>deurè</i> /dew'rɛ/	<i>deurié</i> /dew'rje/ <i>devrié</i> /dev'rje/	Barciloneta

Table 39. Asymmetry for *deure*, Barciloneta.

The case of Barciloneta, however, opens up another line of enquiry, since here it is difficult to argue for an asymmetry motivated by phonology. *Deure* is alone in this variety in presenting such an asymmetry: no such pattern, nor even a Fuèc stem with coda /v/, is attested for *beure* 'drink', *viure* 'live' or *plòude* 'rain', which otherwise display paradigms of similar shape, and the regular phonological alternation of -v- (onset) and -w- (elsewhere).

One possibility is that of influence from French *devoir*, given the long history of contact between most varieties of Occitan and French, and the now systematic bilingualism of Occitan speakers in France. *Il devrait* is a not implausible source for the coda -v- in *devriá*, and indeed this argument might be extended to posit influence of *il vivrait*, *il pleuvrait*, *il recevrait* on *viuriá*, *plòuriá*, *receuriá* in varieties where these lexemes present coda -v- in one or other stem. This line of reasoning presents the advantage of explaining why the cognates of *il boirait*, etc. do not present analogous forms in -v-: the segment at issue is simply not present in the French form.

If the -v- forms do in fact derive from French, this represents a very singular set of circumstances: the borrowing of a form from one language in which there is identity between SF and SC stems, into another language in which there is such identity, with the result of creating a disparity between SF and SC for which there is no apparent precedent in either language. However, while speakers would have been familiar with the identity of SF and SC stems in their own (Occitan) variety, it cannot be taken as a given that all speakers were equally well acquainted with French at the time *devrié*, etc. first appeared. Occitan speakers in this area may not have known French well enough, or have been sufficiently exposed to French, to be aware that French does not present asymmetry. Alternatively, the asymmetry may simply be a further example of the type of change Labov (2007) terms 'diffusion', in which adult learners in a contact situation borrow elements of a system, but do not replicate the precise constraints or distributions of the original system; while Labov's examples are concerned with e.g. the lexical distribution of vowel phonemes, it is plausible that a similar process may account for the novel stem distribution borrowed from French into the Occitan of the Ubaia valley.

One further consideration is potentially of interest here. Frequency studies on informal test corpora of both French and Occitan suggest that, for the single lexical item *devoir/deure*, tokens of the SC significantly outnumber tokens of the SF, a distribution in contrast to the general trend. The high frequency of the SC is conceivably conditioned by pragmatic factors of face-

saving, politeness and the attenuation of requests. Taking a uniformitarian approach (see e.g. Labov 1972:161, Newmeyer 2002:360), it may be assumed that the SC of *devoir* was of similarly high relative frequency at the time of borrowing, and thus that Occitan speakers would have encountered many more instances of the SC than of the SF, which, as a comparatively rare and hence less well known form, could have exerted very little influence. Alternatively, it may be the pragmatic factors themselves which are important here: it is possible that the innovative SC form is deliberately remodelled on that of the distinct and prestigious language French, as a further attenuation strategy.

Quite a different approach is proposed by von Fintel & Iatridou (2008), who claim that a semantically compositional relation exists between strong necessity modals ('must') and weak necessity modals ('ought'). In the case of the Occitan varieties here considered, such a compositional relation would be assumed to hold between the present indicative ('must') and the conditional ('ought') of *deure*; the existence of this relation might therefore supply a semantic motivation for remodelling of the conditional on the present indicative. However, the Occitan data do not offer robust support for this hypothesis. The *v*-stem is not found in all present indicative forms (notably, not 3sg), nor is it confined to the present indicative: stems with *-v-* are also found in the present subjunctive, and the imperfect indicative, which for sound historical reasons presents very similar inflectional endings to those of the conditional.

It should be noted that the pragmatic and semantic hypotheses outlined above are limited, by virtue of the particular semantic values involved, to the isolated case of *deure*: *viure*, *plòure* and *recèbre* remain to be accounted for, whether by analogy internal to each paradigm, or analogy with *deure*.

As a footnote, it is perhaps interesting to consider four further cases of stem asymmetry involving the verbs 'have to', 'live' and 'rain' in the varieties of Las Luèvias (ALLOc 33.11), Sant Joan de Gard (ALLOr 30.06) and Ròchasmolas (Mallet 1997).

lexeme	SF.3sg	SC.3sg	locality
'rain'	<i>pleurà</i> /plew'ra/	<i>plòuiá</i> /plɔw'jɔ/	33.11
'owe/have to'	<i>deurà</i> /dew'ra/	<i>dòuriè</i> /dɔw'rjɛ/	30.06
'live'	<i>viorà</i> /vjo'ra/	<i>viòurié</i> /vjɔw'rie/	Ròchasmolas
'rain'	<i>pleurà</i> /plew'ra/	<i>plòurié</i> /plɔw'rie/	Ròchasmolas

Table 40. Asymmetry for 'rain', 'live', 'owe/have to'.

While Mallet's grammar is somewhat lacunary (in particular, he rarely provides both SC and SF forms, making it difficult to determine how widespread asymmetry is in the variety of Ròchasmolas, the independent attestations of one equivalent and one almost identical asymmetry in the Lengadòc argue for the reality of Mallet's data.

The wider context of these asymmetries is admittedly somewhat different. In the case of Las Luèvias (and Sant Joan de Gard), the SC is unique in presenting a stem in /o/, the rest of the paradigm presenting a front mid vowel:

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>plèu</i> 'plew	<i>pleviá</i> plɛ'βjɔ	<i>plègue</i> 'plɛgə	<i>plegué</i> ple'ge	<i>plègue</i> 'plɛge	<i>pleurà</i> plew'ra	<i>plòuiá</i> plɔw'jɔ

Table 41. 3sg forms for *plèure* 'rain' (33.11).

By contrast, in Ròchasmolas it is the /ew/ form in the future which is anomalous with respect to the rest of the paradigm, the basic alternation being between /ɔw/ and /u/:

prs.ind	impf.ind	prs.sbjv	impf.sbjv	cond2	SF	SC
<i>plòu</i> plɔw	<i>plovíe</i> plu'vie	<i>plovès</i> plu'ves	--	<i>plovér</i> plu'ver	<i>pleurà</i> plew'ra	<i>plòuriá</i> plɔw'rjɔ

Table 42. 3sg forms for *plòur*, Ròchasmolas.

In both these cases it is difficult to make a convincing case for analogy internal to the paradigm: there is simply no precedent for these vowels. French influence (*il pleuvra*) constitutes a possible influence for *pleurà* in Ròchasmolas, in which case the restriction of such influence to this single form of a single lexeme might be attributable to diffusion.

With regard to *viorà*, similar questions of motivation obtain: the /o/ vowel of the SF stem is unprecedented, but perhaps represents levelling of an original diphthong /ɔw/ which is maintained in the SC, in which case this might be considered an instance of reversed vocalic asymmetry.

prs.ind	impf.ind	prs.sbjv	impf.sbjv	cond2	SF	SC
<i>viòu</i> vjɔw	<i>vivíe</i> vi'vie	<i>viv</i> viv	<i>vivès</i> vi'ves	--	<i>viorà</i> vjo'ra	<i>viòuriá</i> vjɔw'riɔ

Table 43. 3sg forms 'live', Ròchasmolas.

6.5 Asymmetry of conjugational class

Many cases of asymmetry involve variant stems which belong to distinct conjugational class types: although as seen in the previous chapter heteroclisys often targets all and only all the cells of the future and conditional, there are likewise cases in which the two are split.

Occasionally such an asymmetry is systematic for a given conjugational class, for example those encountered at ALLOc points 47.03 and 47.05, where the future of IIIa verbs retains a typical IIIa shape, while the conditional is assimilated to IIIb or I respectively.⁹⁶

lexeme	SF.1sg	SC.1sg	locality
'sell'	<i>vendrèi</i> /βen'drɛj/	<i>vende(r)iái</i> /βende'ɔj/	47.03
	<i>vendrèi</i>	<i>venda(r)iái</i> /βenda'ɔj/	47.05

Table 44. Systematic asymmetry of conjugational class.

More often, however, such asymmetries affect only isolated lexical items within a given variety, as in the attestations below, in which lexemes of conjugational class IIIb, and verbs such as 'receive' and 'cook' (IIIa or IIIb according to region) predominate.

By far the most common type involves the contrast of a IIIb-type SF stem with an SC stem which presents the theme vowel *i* characteristic of class II. However, the very systematicity of this type, and its frequent occurrence in areas of r-less SC forms, argue for it being in fact a phonological phenomenon: the raising of *e* to *i* under the influence of a following or adjacent high vowel. At 82.13 for 'milk', original *molze(r)iái* occurs alongside the phonological variant *molzi(r)iái*; while at 46.02 and 46.32 the *i*-form has spread into the SF by analogy alongside the etymological *e*-form (and at 46.02 the informant still accepts the fieldworker's suggestion of *correriái* for the SC).

⁹⁶Note also systematic asymmetry at 47.03 in class I, *cantarà, cante(r)iái*. Apparent asymmetry of *conéisser* 'know' in this locality (*coneissarà, coneisseiái*) hence represents assimilation of both SF and SC to I; likewise at 33.11.

lexeme	SF.3sg	SC.3sg	locality
'fall'	<i>caiguerà</i>	<i>caiguiria</i>	Volvèstre
'be necessary'	<i>calerà</i>	<i>caliria</i>	Volvèstre
'know'	<i>coneguerà</i>	<i>coneguirá</i>	09.21
	<i>coneisherà</i>	<i>coneishiriá</i>	09.32
	<i>conesherò</i>	<i>coneshiriá</i>	46.17
'walk/run'	<i>correrò</i>	<i>corririá</i>	46.17, Volvèstre
	<i>correrà</i> <i>corrirà</i>	<i>corririá</i>	46.32
	<i>corrirà</i> <i>correrà</i>	<i>corririá</i> <i>correria</i> (suggested)	46.02
'cook'	<i>coserà</i>	<i>cosi(r)ia</i>	46.25, 47.21
'grow'	<i>creisherà</i>	<i>creishiria</i>	Volvèstre
	<i>creisherà</i>	<i>creishi(r)ia</i>	24.30, 46.23
	<i>creisserà</i>	<i>creissi(r)ia</i>	47.14, 11.12
'milk [the cow]'	<i>molherà</i>	<i>molhiria</i>	Volvèstre
	<i>molzerà</i>	<i>molze(r)ia, molzi(r)ia</i>	82.13
'be born'	<i>naisherà</i>	<i>naishiriá</i>	46.13
	<i>naisserà</i>	<i>naissi(r)ia</i>	82.13, 46.25, 47.14, 81.34, 81.35
	<i>naisherà</i>	<i>naishi(r)ia</i>	46.17, 24.30, 46.23
	<i>neisherà</i>	<i>neishiria</i>	Volvèstre
	<i>nèisserà</i>	<i>nèissi(r)ia</i>	47.11
'be able'	<i>poderà</i>	<i>podiria</i>	Volvèstre
'feel'	<i>senterà</i>	<i>sentiria</i>	Volvèstre
'follow'	<i>sieguerà</i>	<i>siegui(r)ia</i>	82.20
	<i>sieguerà</i>	<i>seguir(r)ia</i>	82.21
'hold'	<i>tenguerà</i>	<i>tenguiria</i>	Volvèstre
'be worth'	<i>valerà</i>	<i>valiria</i>	Volvèstre
'come'	<i>venguerà</i>	<i>vengui(r)ia</i>	82.20
	<i>venguerà</i>	<i>venguiria</i>	Volvèstre
'want'	<i>volerà</i>	<i>voliria</i>	Volvèstre

Table 45. SF IIIb SC II.

Many of the asymmetries apparently involving II and IIIa Fuèc stems may likewise be assimilated to the class of asymmetries involving Fuèc stems of types IIIa and IIIb. However, where an asymmetry involves distinct stems of third-conjugation type, it is difficult to establish which is the conservative and which the innovative form, since plausible phonological accounts can be constructed for each. In the majority of these cases, the IIIb-type stem is found in the SC (sometimes spreading to or retained in the SF), while in a smaller group, the IIIb-type stem is found only in the SF.

lexeme	SF	SC	locality
'know'	<i>coneirà</i>	<i>coneisseriá</i>	81.35
'cook'	<i>còidrà</i>	<i>coizeriá</i>	12.20
	<i>coirà</i>	<i>coseriá</i>	81.03, 46.21
	<i>coirà</i>	<i>cose(r)iá</i>	47.31
'receive'	<i>resebrà</i>	<i>reseb(r)iá</i> <i>rese(r)iá</i>	82.21
'cook'	<i>coirà</i>	<i>cosi(r)iá</i>	47.11, 47.32
	<i>coirá</i>	<i>cose(r)iá</i> <i>co(r)iá</i>	24.21
'know'	<i>conetrá</i>	<i>conetriá,</i> <i>coneshi(r)iá</i>	24.30
	<i>conetrà, conesserà</i>	<i>conesseriá</i>	46.01
	<i>conetrà</i> <i>conesherà</i>	<i>conetriá,</i> <i>conesheriá,</i> <i>coneshiriá</i>	46.13
'cook'	<i>queirà</i>	<i>queirá</i> <i>quesiriá</i>	11.20
'close'	<i>clauserà</i>	<i>clauriá</i> <i>clauseriá</i>	82.13
'cook'	<i>cojerà</i>	<i>coriá</i> <i>cojeriá</i>	46.02
	<i>cosirà, coirà</i>	<i>cosi(r)iá</i>	82.04
'be born'	<i>naissirà, nastrà</i>	<i>naissi(r)iá</i>	11.17
'milk'	<i>molrà</i>	<i>moziriá</i>	12.02

Table 46. SC shifting to IIIb.

lexeme	SF	SC	locality
'know'	<i>coneishirà</i>	<i>coneirá</i>	66.01
'cook'	<i>quesirà, queirà</i>	<i>queiriá</i>	09.11
'be born'	<i>naissirà, nastrà</i>	<i>nastriá</i>	11.12
'pity'	<i>plandrà, planhirà</i>	<i>plandrà</i>	11.13

Table 47. SF IIIb SC IIIa

For the verb 'know' in the varieties of 11.03 and 82.10, meanwhile, SF and SC present distinct stems of IIIa type.

lexeme	SF	SC	locality
'know'	<i>coneshirà</i>	<i>coneirá</i>	11.03
	<i>conetrà</i> <i>coneishirà</i>	<i>coneshirá</i>	
	<i>conetrà</i>	<i>coneirá</i>	82.10

Table 48. Distinct IIIa stems (including SF II & IIIa-1, SC II & IIIa-2)

Mixed distributions involving the first and third conjugations are rarer, but nevertheless occur. Many are conceivably instances of a transitional stage in changes of the type discussed in §5.5.1 above, in which the Fuèc stems of IIIb verbs assume a shape characteristic of first-conjugation verbs. In Table 49 below, the first-conjugation theme vowel *a* occurs in the SF, while the SC retains the historically expected *e* (sometimes raised to *i*); in Table 50, the theme vowel *a* occurs only in the SC; interestingly, both these distributions are found in the varieties of 11.02 and 31.30, while 47.32 and 31.32 appear to show variation in the form of the SF or SC. The data from 34.22, meanwhile, show raising of *e* to *i* in the SC concurrently with the introduction of the theme vowel *a*, one or other variant spreading by analogy into the SF. Taken together, these varying distributions with no clear directionality suggest a change in progress towards a stable heteroclite paradigm.

lexeme	SF	SC	locality
'know'	<i>coneissarà</i>	<i>coneisse(r)íá</i>	24.22
'walk/run'	<i>corruerà</i>	<i>correré</i>	47.01
	<i>corrarà</i>	<i>corre(r)íá</i>	24.10
	<i>corrarà</i>	<i>corri(r)íá</i>	47.05
'grow'	<i>creissarà</i>	<i>creisse(r)íá</i>	82.03, 24.21
'be born'	<i>naissarà</i>	<i>naisse(r)íá</i>	11.02, 31.11, 82.03
	<i>naissarà</i>	<i>naisseríá</i>	34.25, 12.24
'milk'	<i>molzarà</i>	<i>molze(r)íá</i>	31.30
	<i>muzarà</i>	<i>muzi(r)íá</i>	11.02

Table 49. SF I SC IIIb

lexeme	SF	SC	locality
'know'	<i>coneisserà</i>	<i>coneissa(r)íá</i>	11.02, 31.30
	<i>coneisserà</i>	<i>coneissariá</i>	12.34
'grow'	<i>creisserà</i>	<i>creissa(r)íá</i>	31.32
'be born'	<i>naisserà</i>	<i>naissariá</i>	81.22

Table 50. SF IIIb SC I

lexeme	SF	SC	locality
'know'	<i>coneisserà, coneissarà</i>	<i>coneissa(r)íá</i>	31.32
	<i>conesserà</i>	<i>conesse(r)íá, conessa(r)íá</i>	47.32
'grow'	<i>creisserà, creissarà</i>	<i>creissa(r)íá</i>	47.32

Table 51. SF I & IIIb, SC I

lexeme	SF	SC	locality
'be born'	<i>naissirà</i>	<i>naissi(r)ιά, naissa(r)ιά</i>	34.22
'grow'	<i>creissarà</i>	<i>creissa(r)ιά, creissi(r)ιά</i>	34.22

Table 52. SF I, SC I & II

The rarest type of all involve a contrast between stems of I and IIIa type, which may be explained as the product of an initial IIIa/IIIb asymmetry in which the IIIb stem has undergone shift of conjugational class into I.

lexeme	SF	SC	locality
'be worth'	<i>vardrà, vardarà</i>	<i>vardrá</i>	81.20
'be born'	<i>naisarà, naitrà</i>	<i>naitriè</i>	30.01
'know'	<i>conoissarà, conostrà</i>	<i>conostriá</i>	30.04

Table 53. SF I & IIIa, SC IIIa

lexeme	SF	SC	locality
'milk'	<i>moirà</i>	<i>mozariá</i>	81.32
'receive'	<i>recebrà</i>	<i>receba(r)ιά</i>	47.05
'hold'	<i>tendrà</i>	<i>tenda(r)ιά</i>	47.05
'know'	<i>conetrà</i>	<i>conoriè</i>	34.12

Table 54. SF IIIa, SC I

lexeme	SF	SC	locality
'know'	<i>conetrà, conesharà</i>	<i>conesha(r)ιά</i>	47.10
	<i>conoissarà, coneitrà</i>	<i>conoissará</i>	Lozèra (Chontoclar & Camproux 1931)

Table 55. SF I & IIIa, SC I

The unique instance of asymmetry between SF I & IIIa and SC IIIb for 'cook' at 24.20 may represent an intermediate stage in this development.

lexeme	SF	SC	locality
'cook'	<i>coisarà, coirà</i>	<i>coie(r)ιά</i>	24.20

Table 56. SF I & IIIa, SC IIIb

Finally, one attestation of conjugational class asymmetry results simply from conflation of two conjugational types into a single lexeme: 'sit down', which mixes *s'assetar* (I) and *se sèire* (IIIa).

lexeme	SF	SC	locality
'sit down'	<i>asietarà</i>	<i>asieta(r)ιά, seiriá</i>	82.10

Table 57. Conflation.

6.6 Sporadic asymmetry resulting from analogy

Asymmetry may also result from the incursion of a stem already present elsewhere in the paradigm, particularly the PYTA root, into the future or conditional (for spread of prs.ind/impf.ind root see §6.8 below). This type is relatively rare, and inconsistent in terms of its geographical distribution, the lexemes affected, and the distribution of stem forms in the relevant paradigms. The present study identifies 14 attestations of such asymmetry, each the only case in its variety, and very few affecting the same lexeme; incursions of the PYTA root into the conditional represent just over two-thirds of attestations, but future stems remodelled on the PYTA root are not unknown.

SF.3sg	SC.3sg	gloss	locality
<i>angerà</i>	<i>ani(r)íá</i>	'go'	82.20
<i>poscrà, porrà</i>	<i>porríá</i>	'be able'	Barciloneta (A&M 1920:312)
<i>volguerà</i>	<i>voldria</i>	'want'	Massat (Laurent 2001)
<i>creirà</i>	<i>cretge(r)íá</i>	'believe'	47.31
<i>creirà, creisserà</i>	<i>crescriá</i>	'grow'	81.12
<i>creisherà</i>	<i>cresqueriá, creisheríá</i>	'grow'	12.22
<i>deurà</i>	<i>dòu(r)íá</i>	'owe, have to'	24.03
<i>naisherà</i>	<i>naisheria, nesqueria</i>	'be born'	Aulus (Laurent 2002b)
<i>siegrà</i>	<i>siegrá, setgi(r)íá</i>	'follow'	82.01
<i>setgirà</i>	<i>segriá</i>	'follow'	47.12
<i>seguirà</i>	<i>seiriá</i>	'follow'	81.03
<i>sieguerà</i>	<i>seirá</i>	'follow'	09.10
<i>sirà</i>	<i>siguá</i>	'be'	47.13
<i>coneirà, coneissirà, conoissirà</i>	<i>coneiriá, coneissiriá</i>	'know'	Provença (Koschwitz 1973:164, Durand 1941:67, Portal 1914:103).

Table 58. Asymmetries resulting from morphological analogy.

6.6.1 *anar* < *andare x IRE, Donzac

inf	prs.ptcp	pst.ptcp
<i>anar</i>	<i>anant</i>	<i>anat</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	fut	cond
1sg	<i>vau</i>	<i>anavi</i>	<i>angui</i>	<i>angóri</i>	<i>angóssi</i>	<i>anguerèi</i>	<i>aniái</i>
2sg	<i>vas</i>	<i>anaves</i>	<i>anges</i>	<i>angóres</i>	<i>angósses</i>	<i>angueràs</i>	<i>aniás</i>
3sg	<i>vai</i>	<i>anava</i>	<i>angue</i>	<i>angót</i>	<i>angósse</i>	<i>anguerà</i>	<i>aniá</i>
1pl	<i>vam</i>	<i>anavem</i>	<i>ànguem</i>	<i>angórem</i>	<i>angóssem</i>	<i>anguerem</i>	<i>aniám</i>
2pl	<i>vatz</i>	<i>anavetz</i>	<i>ànguetz</i>	<i>angóretz</i>	<i>angóssetz</i>	<i>angueretz</i>	<i>aniátz</i>
3pl	<i>van</i>	<i>anavan</i>	<i>anguen</i>	<i>angóran</i>	<i>angóssen</i>	<i>angueràn</i>	<i>anián</i>

Table 59. *anar*, ALLOc 82.20.

In Donzac (ALLOc 82.20), the SC continues *andare x IRE, which would have given first *aniriái*, etc. and subsequently the attested forms *aniái*, etc. following loss of the -r- from the SC. The SF has been remodelled on the PYTA root, which has also spread to the present subjunctive (but not, in this case, to the infinitive).

6.6.2 *poire/poguer* < *potere, Barciloneta

Arnaud & Morin (1920:312) attest asymmetry in the verb *poire/poguer* 'be able', which presents one shared stem and one additional stem allomorph confined to the SF: *porr-* and *poscr-* respectively. *Porr-* is unique to (all of) Fuèc, while a stem *posc-* is found across the two participles, the preterite and the imperfect subjunctive. In contrast to the case of *deure* discussed above, the influence of French cannot be invoked, since French *pourr-* should if anything support its homophone *porr-*. It is further interesting that the velar root extended to the infinitive is distinct from that found in the SF.

6.6.3 *voler* < *volere, Massat

A particularly intriguing case is found for *voler* 'want' < *volere in the variety of Massat (Laurent 2001) and La Rusa (see Appendix 4), where a stem built on the PYTA root replaces the inherited Fuèc stem in the SF, while the SC retains a stem due to regular historical change.

	prs.ind	impf.ind	pres.sbjv	preterite	impf.sbjv	SF	SC
1sg	<i>vòli</i>	<i>volia</i>	<i>volga</i>	<i>volguè</i>	<i>volguès</i>	<i>volguerè</i>	<i>voldria</i>
2sg	<i>vòs</i>	<i>volias</i>	<i>volgas</i>	<i>volguères</i>	<i>volguèsses</i>	<i>volgueràs</i>	<i>voldrias</i>
3sg	<i>vòl</i>	<i>volia</i>	<i>volga</i>	<i>volguèc</i>	<i>volguès</i>	<i>volguerà</i>	<i>voldria</i>
1pl	<i>volem</i>	<i>volíam</i>	<i>volgam</i>	<i>volguèrem</i>	<i>volguèsssem</i>	<i>volgueram</i>	<i>voldríam</i>
2pl	<i>voletz</i>	<i>volíatz</i>	<i>volgatz</i>	<i>volguèretz</i>	<i>volguèssetz</i>	<i>volgueratz</i>	<i>voldríatz</i>
3pl	<i>vòlen</i>	<i>volian</i>	<i>volgan</i>	<i>volguèren</i>	<i>volguèssen</i>	<i>volgueràn</i>	<i>voldrian</i>

Table 60. *voler*, Massat (Laurent 2001)

This asymmetry represents an exception both to the majority pattern of symmetry, and to the relatively systematic type of asymmetry current in this and other neighbouring varieties (see §6.8 below). Contrary to expectations, *voler* here fails to pattern with *caler* 'be necessary' (symmetrical: *caldrà*, *caldriá*) and notably *valer* 'be worth' (asymmetrical: *valdrà*, *valeria*). In the case of *valer*, the form in *-/ldr/-* (resulting from regular historical development) persists in the SF, but is replaced in the SC by an innovating form *valer-*. *Voler* presents a near-opposite situation: here, the form in *-/ldr/-* is preserved in the conditional, while the future has adopted the velar root otherwise found in the preterite, imperfect subjunctive, present subjunctive and past participle.

As discussed in §5.2.1 above, the extension of the velar root into the infinitive and/or future and conditional is not uncommon in varieties of Occitan, including varieties of Bigòrra not too distant from Massat. However, it is striking that Laurent attests no instances of infinitives with velar roots for Massat itself — so while the innovating conditional of *valer* may be partially mediated by the infinitive, this is clearly not the case for the innovating future of *voler*, which must be modelled directly on the PYTA forms. It is notable also that for the two verbs in which the velar root has been most widely extended (*tier* 'to hold' and *vier* 'to come', in which the velar root occurs throughout the imperfect indicative and in the first singular present indicative, a most unusual state of affairs in Occitan), almost the only area of the paradigm which it does *not* affect is the future and conditional. This observation, together with the differential behaviour of *valer* (which presents a velar root with very similar form and near identical distribution to that

of *voler*), makes it difficult to advance a sensible argument for the extension of the velar root on either formal or semantic grounds.

6.6.4 *sègre/seguir* 'follow' < *SEQUI*, *Lengadòc*

In a number of cases involving the verb 'follow', the PYTA root has been extended into other areas of the paradigm, and asymmetrically into one or other side of *Fuèc*.

At 47.12, the infinitive *siègre* and the conditional, and at 81.03 the gerund, subjunctives and conditional. 81.03 falls within an area where /*ɣ*/ tends to zero, so it might initially be thought that the conditional [se'irjɔ] was only an incidental product of fast speech; however, since repeated elicitation produces no other form, it may be assumed that this is a genuine case of asymmetry. In both cases, the velar stem appears correlated with second- (as opposed to third-) conjugation forms; it is striking that here, in contrast to the examples from the *Coserans* where the spread of a levelling stem affects the SC in the first instance, it is the SF which is regularised on a more common conjugational type, and the SC which retains its original stem (synchronically irregular, but the expected result of regular historical change).

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>sièt</i>	<i>setgiá</i>	<i>siètge</i>	<i>setgièt</i>	<i>setgièsse</i>	<i>setgirà</i>	<i>segriá</i>
<i>sjèt</i>	<i>set'sjɔ</i>	<i>'sjetse</i>	<i>setsi'èt</i>	<i>setsi'ese</i>	<i>setsi'ra</i>	<i>se'grjɔ</i>

Table 61. 3sg forms 'follow', 47.12

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>seguís, sièc</i>	<i>seguissíá</i>	<i>se(gu)iga</i>	<i>segu(gu)èt</i>	<i>se(gu)ièssa</i>	<i>seguirà</i>	<i>seiriá</i>
<i>se'yis, sjæk</i>	<i>segi'sjɔ</i>	<i>se'igɔ</i>	<i>seyi'èt</i>	<i>sei'essɔ</i>	<i>seyi'ra</i>	<i>sej'rjɔ</i>

Table 62. 3sg forms 'follow', 81.03

At 82.01, the root *setg-* is clearly restricted to PYTA forms and correlated with the regular second-conjugation type, but propagates into the conditional rather than the future.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>sièc</i> sjɛk	<i>sieguiá</i> sje'gjo	<i>siègue</i> 'sjege	<i>setgiguèt</i> setsi'get	<i>setgiguèsse</i> setsi'gese	<i>siegrà</i> sje'gra	<i>siegrá, setgi(r)íá</i> sje'grɔ, setsi'rjo

Table 63. 3sg forms 'follow', 82.01

At 09.10 the context is slightly different, since although the velar stem is current throughout the paradigm with the sole exception of the SC, it is not correlated with a shift in conjugational class or increasing inflectional regularity. Nevertheless, the distribution is similar, with a velar stem in the SF presents a velar stem, and the unique root *seir-* in the SC.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>sièc</i> sjɛk	<i>sieguiá, siegá, siguíá</i> sje'gjo, sje'gɔ, si'gjo	<i>siègua</i> ⁹⁷ 'sjege	<i>sieguisquèc</i> sje'gis'kɛk	<i>seguisquèssa</i> se'gis'kɛsɔ	<i>sieguerà</i> sjege'ra	<i>seirá</i> sei'rɔ

Table 64. 3sg forms 'follow', 09.10

Finally, at 81.35 this same verb presents a contrast between a root *sov-* [suβ-], generalised across the paradigm with the single exception of the SF root *seg-*; all forms are regular second conjugation. The informant accepts the fieldworker's suggestion of *seguir*, *seguit* for the infinitive and past participle, but prefers *sovir*, *sovit*; he also accepts *siègre* for the infinitive, but considers it archaic. By contrast, the SF *seguirà* is produced spontaneously, and there is no mention of **sovirà*. It seems likely that in this variety an original verb *siègre* (IIIa) has been regularised on II to *seguir*, and then remodelled as *sovir*, conceivably under the influence of French *suivre*. The SF thus appears to preserve an older, native form.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>sovis</i> su'βis	<i>sovissíá</i> suβi'sjo	<i>sovia</i> su'βio	<i>sovi(gu)èt</i> suβi'et	<i>sovi(gu)èssa</i> suβi'ɛsɔ	<i>seguirà</i> segi'ra	<i>sovi(r)íá</i> suβi'jo

Table 65. 3sg forms 'follow', 81.35

⁹⁷*Seguisca* is suggested by the fieldworker, and accepted.

6.6.5 *créisser* 'grow' < CRESCERE 81.12, 12.22

In the variety of Fauch (ALLOc 81.12), the reflex of CRESCERE 'grow' presents the stem distribution shown above: in the SF, a canonical IIIb-type stem with theme vowel /e/ alongside a form *creitrà* which may result from shift towards IIIa and/or from convergence effects; in the SC, by contrast, only *crescriá*, patently modelled on the PYTA root.

inf	prs.ptcp	pst.ptcp
<i>créisser</i>	<i>creisse(gu)ent</i>	<i>crescut</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>creissi</i>			<i>cresquèri</i>			
2sg	<i>creisses</i>						
3sg	<i>creis</i>	<i>creissíá</i>	<i>cresque</i>	<i>cresquèt</i>	<i>cresquèssa</i>	<i>creitrà,</i> <i>creisserà</i>	<i>crescriá</i>
1pl	<i>creissèm</i>			<i>cresquèrem</i>			
2pl	<i>creissètz</i>						
3pl	<i>creisson</i>			<i>cresquèron</i>			

Table 66. *créisser*, ALLOc 81.12.

In the variety of Jouels (12.22), the SC has again been remodelled on the PYTA root *cresc-*/kreh/, while the SF retains its expected historical form (IIIb type sharing root with prs.ind).

inf	prs.ptcp	pst.ptcp
<i>créisher</i>	<i>crescut</i>	<i>creishent</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>creishi</i>			<i>cresquèri</i>			
2sg	<i>creishes</i>						
3sg	<i>creish</i>	<i>creishiá</i>	<i>crésca</i>	<i>cresquèt</i>	<i>cresquèssa</i>	<i>creisherá</i>	<i>cresqueriá</i>
1pl	<i>creishèm</i>		<i>cresquem</i>	<i>cresquèrem</i>			
2pl	<i>creishètz</i>						
3pl	<i>créishon</i>			<i>cresquèron</i>			

Table 67. *créisher*, ALLOc 12.22.

6.6.6 *néisher* < *NASCI*, *Aulus*

inf	prs.ptcp	pst.ptcp
<i>néisher</i>	<i>nèishent</i>	<i>naishuth, nescuth</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>nèishi</i>	<i>neishiá</i> <i>nesquiá</i>	<i>nèisha</i> <i>nesca</i>	<i>naishè</i> <i>nesquè</i>	<i>naishèssa</i> <i>nesquèssa</i>	<i>naisherè</i>	<i>naisheríá</i> , <i>nesqueríá</i>

Table 68. *néisher* (Laurent 2002b)

Laurent (2002b:29) attests a root *nesc-* throughout the paradigm of this verb alongside /nVif/- (*naish-*, *nèish-*, *neish-* variously), except in the infinitive, gerund, present indicative and future, where the /nVif/- root alone is present. The velar root *nesc-* is of a type usually associated with the PYTA morpheme in Occitan, and its extension to the present subjunctive represents a common tendency (though to find it in the imperfect indicative is unusual); extension to the SC might be explained by appeal to the semantic proximity of imperfect subjunctive and conditional.

6.6.7 *creire* 'believe' < *CREDERE*, 47.31

inf	prs.ptcp	pst.ptcp
<i>creire</i>	<i>cretjut</i>	<i>creirent</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>crei</i>			<i>cretgèri</i> , <i>cretgeguèri</i>			
2sg	<i>crese</i>						
3sg	<i>crei</i>	<i>cregiá</i>	<i>cretge</i>	<i>cretgeguèt</i>	<i>cretgeguèssa</i>	<i>creirà</i>	<i>cretseiá</i>
1pl	<i>cresem</i>		<i>crétgem</i>	<i>cretgeguèrem</i>			
2pl	<i>cresetz</i>						
3pl	<i>crezan</i>			<i>cretgeguèran</i>			

Table 69. *creire*, ALLOc 47.31.

In the variety of Folaironas, for the verb *creire* 'believe', the SC is remodelled on the PYTA root *cretg-* /krets/, while the SF retains its expected historical form; the result is not only a root asymmetry, but an apparent asymmetry of conjugational class, since the innovative SC form is of

IIIb type. This development is somewhat unusual, as IIIb-type Fuèc stems, while still present in this variety, constitute a distinct minority.

6.6.8 *deure* 'owe/have to' < *DEBERE*, 24.03

In the case of *deure* in the variety of Sant Julian de Cremsa, the SC has been only partially remodelled on the PYTA root, with spread of the vowel ɔ found in the PYTA root, but not of the characteristic velar consonant. The SF retains its historically expected form.

inf	prs.ptcp	pst.ptcp
<i>deure</i>	<i>dòugu(t)</i>	<i>deure</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>devi</i>			<i>dòuguèi</i>			
2sg	<i>devei</i>						
3sg	<i>deu</i>	<i>deviá</i>	<i>degue</i>	<i>dòugé</i>	<i>dòugue</i>	<i>deurá</i>	<i>dòuiá</i>
1pl	<i>devém</i>		<i>dòuguem</i>	<i>dòuguèrem</i>			
2pl	<i>devé</i>						
3pl	<i>deven</i>			<i>dòuguèren</i>			

Table 70. *deure*, ALLOc 24.03.

6.6.9 *estar* 'be' < **essere* x *STARE*, 47.13

inf	prs.ptcp	pst.ptcp
<i>estar</i>	<i>estat</i>	<i>estant</i>

	prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
1sg	<i>sèi</i>	<i>èri</i>	<i>siágui</i>	<i>siguèri</i>	<i>siguèsse, -i</i>	<i>sirèi</i>	<i>sigái</i>
2sg	<i>sès</i>	<i>ères</i>	<i>siágues</i>	<i>siguères</i>	<i>siguèsses</i>	<i>siràs</i>	<i>sigás</i>
3sg	<i>es</i>	<i>èra</i>	<i>siágue</i>	<i>siguèt</i>	<i>siguèsse</i>	<i>sirà</i>	<i>sigá</i>
1pl	<i>sèm</i>	<i>siam</i>	<i>siam,</i> <i>siguem</i>	<i>sigueiam</i>	<i>siguessiam</i>	<i>sirà,</i> <i>sirem</i>	<i>siam</i>
2pl	<i>sètz</i>	<i>siatz</i>	<i>siguetz</i>	<i>sigueiatz</i>	<i>siguessiatz</i>	<i>siretz</i>	<i>siatz</i>
3pl	<i>son</i>	<i>èron</i>	<i>siáon</i>	<i>siguèron</i>	<i>siguèsson</i>	<i>sirà</i>	<i>sián</i>

Table 71. *estar*, ALLOc 47.13.

The verb *estar* 'be' in the variety of Savinhac presents an apparently unique distribution, in which the PYTA root has spread into the singular forms of the (r-less) SC, but has not affected the SF or the plural forms of the SC. The alternation of the velar with zero is clearly

morphological, since this is not a variety in which intervocalic $g > \gamma > \text{zero}$. It is possible that further instances of this shape of distribution exist; however as for many lexemes the ALLOc/ALLOr questionnaire elicits only 3sg forms for the SF and SC, the data are insufficient to determine whether the distribution found in Savinhac is indeed unique.

6.6.10 *receure* 'receive' < *RECIPERE*, Lengadòc

The verb 'receive' < *RECIPERE* is also susceptible to asymmetry, typically involving a difference in vowel quality. Two processes are at work here: analogy with the verb 'know' < *SAPERE*, resulting in alternation between etymological *e* and analogical *a*, and, in the north Lengadòc, the general phonological process of raising of *a* to ɔ , particularly in atonic position. At ALLOc points 46.13 and 12.22, analogy with 'know' introduces a vowel *a* into both SF and SC, but raising only affects the SF stem. At 24.30 and 46.30, only the SC is affected, but it is subject to both analogy and raising, producing an asymmetric alternation between *e* and ɔ . At 81.22 and 81.04, analogy has introduced the vowel *a* into the SF, but not the SC, and raising does not apply; it is plausible that this same process of analogy is beginning at 31.31; while the opposite pattern is produced at 11.31, where analogy only modifies the vowel of the SC stem. At none of these points does the verb 'know' present asymmetry.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>recèb</i> re'se	<i>reçabiá</i> , <i>recebiá</i> resa'βjɔ, rese'βjɔ	<i>recèbe</i> , <i>reçabe</i> re'seβe, re'ʃɔβe	<i>reçatgèt</i> resa'tsɛ	<i>reçatgèssa</i> , <i>recebèssa</i> resa'tsɛsɔ, rese'βɛsɔ	<i>reçaurà</i> resɔw'r ɔ	<i>reçauriá</i> resaw'rj o

Table 72. 3sg forms 'receive', 46.13

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçau</i> re'saw	<i>recebiá</i> refe'βjo	<i>reçatga</i> re'fatso	<i>recebèt</i> , <i>reçatgèt</i> refe'βɛt, re'ʃɔ'tsɛt	<i>reçatgèssa</i> resɔ'tsɛsɔ	<i>reçaurà</i> re'ʃɔw'ro	<i>reçauriá</i> refaw'rjo

Table 73. 3sg forms 'receive', 12.22

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçau</i> re'saw	<i>reçabiá</i> RESɔ'βjo	<i>reçatge</i> re'sae	<i>reçatgèt</i> RESɔ'ɛ	<i>reçatgès</i> RESɔ'ɛ	<i>reçeurà</i> re sew'ro	<i>reçauriá</i> RESɔw'rjo

Table 74. 3sg forms 'receive', 24.30

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçau</i> re'faw	<i>reçabiá</i> Reʃɔ'βjo	<i>reçatge</i> re'fatse	<i>reçatgèt</i> Reʃɔ'tset	<i>reçatgès</i> Reʃɔ'tsɛs	<i>reçeurà</i> Reʃew'ro	<i>reçauriá</i> Reʃɔw'rjo

Table 75. 3sg forms 'receive', 46.30

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>receu</i> re'sew	<i>recebiá</i> rese'βjo	<i>recebe</i> re'seβe	<i>recebèc</i> rese'βɛk	<i>recebèssa</i> rese'βɛsɔ	(<i>reçaurà</i>), <i>reçeurà</i> resaw'ra, re sew'ra	<i>receuriá</i> re sew'rɔ

Table 76. 3sg forms 'receive', 31.31. The informant first produced the SF form in parentheses, before 'correcting' it to the second form given.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçau</i> re'saw	<i>recebiá</i> rese'βjo	<i>reçapie</i> re'sapje	<i>reçapièt</i> resa'pjɛt	<i>reçapièssa</i> resa'pjesɔ	<i>reçaurà</i> resaw'ra	<i>reçauriá</i> re sew'rɔ

Table 77. 3sg forms 'receive', 81.22

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçau</i> re'saw	<i>reçabiá</i> resa'βjo	<i>reçapia</i> re'sapjo	<i>reçapièt</i> resa'pjɛt	<i>reçapièssa</i> resa'pjesɔ	<i>reçeurà, reçaurà</i> re sew'ra, resaw'ra	<i>reçeurá</i> re sew'rjo

Table 78. 3sg forms 'receive', 81.04

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>receu</i> re'saw	<i>recebiá</i> rese'βjo	<i>reçepia</i> re'sepjo	<i>reçepièc</i> rese'pjɛk	<i>reçepièssa</i> rese'pjesɔ	<i>reçeurà</i> re sew'ra	<i>reçauriá</i> resaw'rjo

Table 79. 3sg forms 'receive', 11.31

Finally, at ALLOr point 34.10, both SF and SC have been remodelled by analogy, though only the SC of 'receive' presents vowel raising. While at 34.10 both the SF and SC of 'know' present a stem sɔwp-, at 34.12 'know' is asymmetric, with SF /sawprɔ/ but SC /sɔwpje/, just as in 'receive' at 34.10.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>reçab</i> re'sap	<i>reçabiá</i> resa'βjo	<i>reçapie, reçatge</i> re'sapje, re'satfe	<i>reçatgèt,</i> <i>reçapièt</i> resa'tʃɛt, resa'pjɛt	<i>reçatgèssa,</i> <i>reçapièssa</i>	<i>reçauprà</i> resaw'pr a	<i>reçaupriá</i> RESɔw'prj ɔ

Table 80. 3sg forms 'receive', 34.10.

6.6.11 *dobrir* < *operire, Lengadòc

The verb *dobrir* 'open' presents alternation between e/œ/jɛ and y. Although this superficially resembles a phonological alternation, it appears in fact to be due to morphological analogy, remodelling the SF or SC stem on the stem of the N-pattern. While in some varieties, both variants have spread throughout the paradigm (11.20), or at least into both the SF and SC (31.31), in others the innovating stem only affects one of these last, with a very slight tendency in favour of the SF.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>derbís</i> der'βis	<i>durbissíá</i> dyrβi'sjɔ	<i>durbisque</i> dyr'βiske <i>derbisque</i> der'βiske	<i>derbisquèc</i> derβi'skɛk <i>durbisquèc</i> dyrβi'skɛk	<i>derbisquèssa</i> derβi'skɛso <i>durbisquèssa</i> dyrβi'skɛso	<i>derbirà</i> derβi'ra <i>derbirà</i> dyrβi'ra	<i>durbirá</i> dyrβi'rɔ <i>derbirá</i> derβi'rɔ

Table 81. 3sg forms 'open', 31.31

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>derbís</i> der'βis	<i>derbissíá</i> dyrβi'sjɔ	<i>derbisque</i> der'βiske	<i>derbisquèc</i> derβi'skɛk	<i>derbisquèsse</i> derβi'skɛse	<i>derbirà</i> derβi'ra	<i>debirá</i> deβi'rjɔ
<i>durbís</i> dyr'βis	<i>durbissíá</i> dyrβi'sjɔ	<i>durbisca</i> dyr'βiskɔ	<i>durbisquèc</i> dyrβi'skɛk	<i>durbisquèssa</i> dyrβi'skɛso	<i>durbirà</i> dyrβi'ra	<i>durbirá</i> dyrβi'ro

Table 82. 3sg forms 'open', 11.20.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>dèrb</i> dɛr	<i>dèrbiá</i> dɛr'βjɔ	<i>dèrbe</i> 'dɛrβɛ	<i>derbi(gu)èt</i> derβi'ɛt	<i>durbi(gu)èsse</i> dyrβi'ɛse	<i>derbirà</i> derβi'ra	<i>derbi(r)iá</i> , <i>durbi(r)iá</i> derβi'jɔ, dyrβi'jɔ

Table 83. 3sg forms 'open', 47.12

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>dièrb</i> djɛrp	<i>dièrbiá</i> djɛr'βjɔ	<i>dièrba</i> 'dɛrβɛ	<i>durbisquèc</i> dyrβi'skɛk	<i>durbisquèssa</i> dyrβi'skɛso	<i>dièrbirà</i> djɛrβi'ra	<i>durbi(r)iá</i> dyrβi'jɔ
<i>durbís</i> dyr'βis	<i>durbissíá</i> dyrβi'sjɔ	<i>durbisca</i> dyr'βisko			<i>durbirà</i> dyrβi'ra	

Table 84. 3sg forms 'open', 31.10

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>duerbís</i> dœr'βis	<i>duerbissíá</i> dœrβi'sjo <i>duerbissíá</i> dyrβi'sjo	<i>duerbisque</i> dœr'βisko	<i>duerbisquèc</i> dœrβi'skøk	<i>duerbisquèssa</i> dœrβi'skɛso	<i>duerbirà</i> dœrβi'ra <i>durbirà</i> dyrβi'ra	<i>duerbi(r)íá</i> dœrβi'jo

Table 85. 3sg forms 'open', 11.03

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>dèrb</i> djɛrp	<i>dèrbiá</i> dɛr'βjo	<i>dièrba</i> 'dɛrβɛ <i>durbisca</i> dyr'βisko	<i>durbic</i> dyr'βik	<i>durbisquèssa</i> dyrβi'skɛso	<i>durbirà</i> dyrβi'ra <i>derbirà</i> derβi'ra	<i>durbirá</i> ⁹⁸ dyrβi'rɔ

Table 86. 3sg forms 'open', 09.22

A similar pattern is found for *durmír* 'sleep' at 11.03.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>duermís</i> dœr'mis	<i>duermisíá</i> dœrmi'sjo <i>durmissíá</i> dyrmi'sjo	<i>duermisque</i> dœr'miske	<i>duermisquèc</i> dœrmi'skøk	<i>duermisquèssa</i> dœrmi'skɛso	<i>duermirà</i> dœrmi'ra	<i>duermirá</i> dœrmi'rɔ <i>durmirà</i> dyrmi'ra

Table 87. 3sg forms 'sleep', 11.03

To these may be compared the following examples, in which the SF presents a stem vowel limited to the present indicative (and, in the case of 09.32, present subjunctive), while the SC presents a vowel which is the expected result of regular sound change.

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>còtg</i> 'kɔts	<i>cosiá</i> ku'zjo	<i>còse</i> 'kɔzɛ	<i>cosèc</i> ku'zɛk	<i>cosès</i> ku'zɛs	<i>còirà</i> kɔj'ra	<i>coiria</i> kuj'ria

Table 88. 3sg forms 'cook', 09.32

prs.ind	impf.ind	prs.sbjv	pret	impf.sbjv	SF	SC
<i>còi</i> 'kɔj	<i>cosiá</i> ku'zjo	<i>cosega</i> ku'zɛɣo	<i>coseguèt</i> kuze'ɣɛt	<i>coseguèssa</i> kuze'ɣɛso	<i>còserà</i> kɔzɛ'ra	<i>cose(r)ia</i> kuze'jo

Table 89. 3sg forms 'cook', 81.06

⁹⁸The informant accepted the fieldworker's suggestion of *derbirá* as possible, but did not produce it, repeating *durbirá*.

Extension of a stem or stem vowel usually correlated with primary stress and thus with the N-pattern forms into Fuèc is not without precedent in Romance: Maiden (2011d) notes a number of cases in the history of French and Italian, though none of Maiden's examples are overtly asymmetrical (in many cases, however, there is no attestation of an SC form). Maiden argues that such extensions are due to analogy with existing patterns, in which the stem found in the N-pattern presents a 'fortuitous' but systematic identity with the Fuèc stem. For Italian, he cites as a possible model cases such as *vende* sell.3SG.PRS.IND ~ *venderà* sell.3SG.SF: here, not only does the Fuèc stem include exactly the same sequence of segments as the 3SG.PRS.IND form, but the two even resemble each other on a prosodic level, since the first syllable of the SF (and SC) form(s) carries stress. Maiden suggests that verbs such as this are likely to have constituted a precedent for the extension of a stem associated with the N-pattern into Fuèc.

While a similar explanation can be given for the spread of the N-pattern stem in the Occitan lexemes cited above, it fails to account for the non-extension of the stem into the SC at several points. Evidence of variation in the SC (and sometimes SF) may suggest that this is a change in progress, and that symmetry will later be restored. However, this conjecture is by nature uncertain, particularly so in the cases of 'cook' where variation is apparently unattested.

6.7 An etymological asymmetry

The varieties of Barèja and Gavarnia (ALG 697, 697E) are unusual in presenting systematic asymmetry between future and conditional stems across all conjugational classes, for both regular and irregular verbs, as shown in Tables 90-93 below (examples from Massourre 2006; and see also Rohlf's 1935). In regular verbs of the first and third conjugations, the difference between future and conditional forms is one of theme vowel: /a/ and /ɛ/ respectively for first-conjugation verbs, /e/ and /u/ for third-conjugation verbs. In the second conjugation, the conditional is distinguished from the future both by a difference of theme vowel (/u/ as opposed to /i/), and by the presence of the augment /ig/, which has been generalized to certain screeves of all regular second-conjugation verbs. In the case of irregular verbs such as *hèr* 'do, make' and *ver* 'come', meanwhile, the future and conditional present entirely distinct stems.

I	future	conditional
1sg	<i>cantàre</i> /kan'tare/	<i>cantèria</i> /kan'terjə/
2sg	<i>cantàras</i> /kan'tarəs/	<i>cantèris</i>
3sg	<i>cantàra</i> /kan'tarə/	<i>cantèri</i>
1pl	<i>cantàram</i> /kan'tarəm/	<i>cantèrim</i>
2pl	<i>cantàratz</i> /kan'tarət/	<i>cantèritz</i>
3pl	<i>cantàran</i> /kan'tarən/	<i>cantèrin</i>

Table 90. *cantar* 'sing' (I).

	future	conditional
1sg	<i>moríre</i> /mu'rire/	<i>morigória</i> /muri'ɣurjə/
2sg	<i>moríras</i>	<i>morigóris</i>
3sg	<i>moríra</i>	<i>morigóri</i>
1pl	<i>moríram</i>	<i>morigórim</i>
2pl	<i>moríratz</i>	<i>morigóritz</i>
3pl	<i>moríran</i>	<i>morigorin</i>

Table 91. *morir* 'die' (II)

	future	conditional
1sg	<i>batére</i> /ba'tere/	<i>batória</i> /ba'turjɔ/
2sg	<i>batéras</i>	<i>batóris</i>
3sg	<i>batéra</i>	<i>batóri</i>
1pl	<i>batéram</i>	<i>batórim</i>
2pl	<i>batératz</i>	<i>batóritz</i>
3pl	<i>batéran</i>	<i>batórin</i>

Table 92. *batre* 'beat' (IIIb)

	future	conditional
1sg	<i>hère</i> /'hère/	<i>hasória</i> /ha'zurjɔ/
2sg	<i>hèras</i>	<i>hasóris</i>
3sg	<i>hèra</i>	<i>hasóri</i>
1pl	<i>hèram</i>	<i>hasórim</i>
2pl	<i>hèratz</i>	<i>hasóritz</i>
3pl	<i>hèran</i>	<i>hasórin</i>

Table 93. *hèr* 'do, make' (irregular III)

However, although the conditional stem clearly resembles neither the future nor the infinitive, it is not an isolate within the paradigm, since, as shown in Table 94 below, it shares a stem with the preterite⁹⁹ and imperfect subjunctive.

INF	FUT.3SG	COND.3SG	PRET	IMP.SBJV.3SG
<i>cantar</i> 'sing' < CANTARE	<i>cantàra</i>	<i>cantèri</i>	<i>cantè</i>	<i>cantèssie</i>
<i>vèner</i> 'sell' < UENDERE	<i>venéra</i>	<i>venóri</i>	<i>venó</i>	<i>venóssie</i>
<i>dromir</i> 'sleep' < DORMIRE	<i>dromíra</i>	<i>dromiqóri</i>	<i>dromigó</i>	<i>dromiqóssie</i>
<i>estar</i> 'be' < STARE x *essere	<i>séra</i>	<i>sóri</i>	<i>estè</i>	<i>sóssie/estèssie</i>
<i>èr</i> 'have' < HABERE	<i>èra</i>	<i>òri</i>	<i>ò</i>	<i>òssie</i>
<i>hèr</i> 'do' < FACERE	<i>hèra</i>	<i>hesóri</i>	<i>hesó/hasó</i>	<i>hesóssie</i>
<i>ver</i> 'come' < UENIRE	<i>véra</i>	<i>vencóri</i>	<i>vencó</i>	<i>vencóssie</i>

Table 94. Sample forms for regular and irregular conjugations (Massourre 2006).

This striking similarity invites the conclusion that the Barèja conditional is not of the familiar western Romance infinitive+HABEBAM type but is in fact the reflex of a Latin perfective form, as are the preterite, derived from the Latin perfect, and the imperfect subjunctive, derived from the Latin pluperfect subjunctive.

The precise origin of the Barèja conditional is unclear. Two candidates have been proposed — the pluperfect indicative, and the future perfect/perfect subjunctive — of which the former is

⁹⁹The sole exception being in the preterite of *estar*, a lexeme which has undergone incursive suppletion and extensive analogical remodelling.

semantically more plausible. It is well established (see §3.2.7 above) that old Occitan presents conditionals deriving from the Latin pluperfect indicative alongside the SC, and thus the Barèja conditional may plausibly be viewed as a direct continuant of the mediaeval cond2.

As Rohlfs (1954:132) points out, deriving the Barèja conditional from the pluperfect indicative encounters a minor problem of historical phonology in that the desinences in /i/ are not the expected reflex of the pluperfect indicative. Since under regular sound change Latin A gives /a/, and post-tonic /a/ subsequently raises to /ɔ/ in most varieties of Occitan, one would expect a surviving reflex of the pluperfect indicative to present desinences in /ɔ/; as Rohlfs observes, reconstruction according to exceptionless sound change would predict forms such as **audíran* /aw'dirɔn/ < AUDIUERANT, **venóras* /βe'nurɔs/ < *UENUERAS, which are not attested.

Rohlfs' objection, though valid, is by no means insuperable — one might, for example, posit analogical remodelling based on the desinences of the present and imperfect subjunctives — but it leads him to suggest an alternative source for the conditional, namely the future perfect and perfect subjunctive. Regrettably, the data currently available are insufficient to confirm either hypothesis; but certainly there is no cogent explanation of these forms which does not involve a perfective origin.

The source of the future — atypical for Occitan in that it is stressed on the stem rather than the desinence — is a subject of more controversy. Rohlfs proposes that it is in fact this screeve which derives from the Latin pluperfect indicative, by means of a somewhat unusual semantic cross-over: a swap of TAM values attributing the function of future perfect to CANTAUERAT and that of pluperfect indicative (later conditional) to CANTAUERIT:

On est tenté d'admettre une confusion entre CANTAVERAT et le futur antérieur CANTA(VE)RIT conservé dans nos vallées dans la fonction d'un conditionnel. On se trouverait donc en face d'une inversion des deux temps latins, phénomène bien singulier dont les causes restent encore à éclairer. (1954:134)

While Rohlfs' hypothesis accounts for the placement of stress and is supported to some extent by the desinences in /ɔ/, it rests, as he himself acknowledges, on the supposition of a highly singular phenomenon: outright switches of this kind, in which both forms and both functions are conserved but the pairing between them reversed, are extremely rare,¹⁰⁰ and it is difficult to construct a convincing argument as to what could have motivated such a development, or indeed how it could have taken place.

Moreover, Rohlfs' explanation conveniently ignores a further point. In the variety of Barèja to this day, the forms uncontroversially derived from the Latin perfectum, namely the preterite, imperfect subjunctive and conditional, continue to share a stem; this is consistent with the assumption of regular processes of sound change affecting all instances of a given stem, in this case the perfectum. Were Rohlfs' hypothesis of a perfective etymon for the future to be correct, one would expect the future stem to present identity with the other forms derived from Latin perfectives; yet, far from doing so, the future systematically presents a stem associated with the infinitive, present indicative and imperfect indicative, that is to say with the reflexes of Latin imperfective forms, a phenomenon which can hardly be attributed to regular sound change.

A possible solution is offered by the analyses of Lausberg (1966:204-05) and Massourre (2006:206), who propose an alternative account, namely that the Barèja future is in fact a reflex of the familiar infinitive+HABEO type, which has subsequently undergone a retraction of stress onto the stem. From a formal point of view, this explanation is intuitively appealing: it accounts for the resemblance of future stem and infinitive, and it is easy to see how applying first a stress retraction and then the regular sound change raising post-tonic /a/ to /ɔ/ to the expected reflex *cantarà* < CANTARE HABET will straightforwardly produce the Barèja type *cantàra*. Moreover, if the contrast is between a future deriving from infinitive+HABEO and a conditional deriving from

¹⁰⁰Occasionally such switches do occur, witness the case reversal exhibited by the pronoun systems of some Western English dialects, eg. *him seen I* 'he saw me' (J.C. Smith, p.c.).

a perfective form, the distinct etymons offer a simple and elegant account for the systematic asymmetry.

The motivation for such a stress retraction remains to be established. However, one may plausibly suggest (see Maiden 2009:13-16) that the variety of Barèja originally presented futures derived from a Latin perfective form — perhaps the pluperfect indicative, as Rohlf's suggests — but that these were supplanted by an introduced future of the infinitive+HABEO type; the similarities in phonological shape between the two forms in a majority of verbs may have been enough to trigger a stress retraction in the introduced future, bringing its stress pattern into line with that of the original future.

It therefore seems likely that the asymmetries attested for Barèja and Gavarnia do not represent a violation of the claims that SF and SC constitute a morpheme and that in general they share an identical stem.¹⁰¹ Rather, these varieties constitute a special case, in which the item labelled 'conditional' is in fact cond2 (or, at the very least, of perfective origin), and thus does not share a source with the SF as the SC does in other varieties.

¹⁰¹Note that the properties of being a morpheme and sharing a stem are independent: morphomic phenomena are not limited to sets of cells which all present an identical stem.

6.8 Systematic asymmetry from analogy

A number of varieties in the area of the Coserans (roughly corresponding to the south-western part of the modern *département* Ariège) present occasional cases of asymmetry, affecting the SF and SC of high-frequency irregular verbs. A selection of illustrative examples is given in Table 95 below (Deledar 2006; Laurent 2001, 2002a, 2002b).

lexeme	locality	SF.3sg	SC.3sg
<i>valer</i> 'be worth' < UALERE	Massat La Rusa	<i>valdrà</i>	<i>valeria</i>
<i>voler</i> 'want' < *volere	Lescura	<i>voldrà</i>	<i>voleriá</i>
<i>saber</i> 'know' < SAPERE	Lescura	<i>saurà</i>	<i>saberiá</i>
<i>saber</i> 'know' < SAPERE	Volvèstre	<i>saurà</i>	<i>sabiriá</i>
<i>poder</i> 'be able' < *potere	Aulus Bas-Coserans Castilhonés	<i>poirà</i>	<i>poderiá</i>
<i>víver</i> 'live' < UIUERE	Aulus	<i>viurà</i>	<i>viveriá</i>
<i>véder</i> 'see' < UIDERE	Castilhonés	<i>virà</i>	<i>vederiá</i>
<i>escriver</i> 'write' < SCRIBERE	Lescura	<i>escruiurà</i>	<i>escriveriá</i>
<i>béver/beure</i> 'drink' < BIBERE	Seronés	<i>beurà, beverà</i>	<i>beveria</i>
<i>béver</i> 'drink' < BIBERE	Volvèstre	<i>beurà, beverà</i>	<i>beveria</i>

Table 95. Asymmetries in varieties of the Coserans

In all these cases, the asymmetrical stem distributions conform to a consistent pattern: the SF retains the stem which is the expected result of regular historical change, while the SC presents an innovative stem apparently formed on that of the present indicative and imperfect indicative. I am not aware of any instance in which the reverse stem distribution is found. In this area, both SF and SC are unproblematically of the infinitive+HABEO/HABEBAM type: the SF stem and the inflectional desinences are of exactly the form which would be expected given regular sound change. The modern stem asymmetries cannot therefore be traced to a structural difference in Latin; instead, they constitute a relatively recent development due to irregular morphological analogy.

The innovative SC stem is of the type discussed in §5.2.3 above, which is both widespread in varieties of Occitan spoken in the Pirinèus, and well-represented in the varieties for which asymmetry is listed above. This stem superficially resembles the infinitive, but is more plausibly analysed as resulting from a general process of analogical stem levelling acting across the paradigm.

The tendency for such analogical levelling in the relevant area, and the presence of *beverà* alongside *beurà* in some localities, suggest that the asymmetries of the Coserans may be an artefact of change in progress. If this is so, then it would mean that the general process of paradigm levelling which is at work is likely to affect the SC before the SF, and that this was the direction taken in those cases where SF and SC both now present IIIb-type stems. However, this is merely a conjecture; it cannot be assumed with any certainty that these asymmetries represent a transitional state and that they will in the course of time be eliminated by extension of the innovative stem to the SF. They may most usefully be characterised as instances in which a relatively recent, morphological (analogical) change has created an asymmetry which speakers subsequently appear to tolerate, despite it being at variance with the overwhelming norm (i.e. symmetry of SF/SC stems) within the system. From the systematic directionality of these asymmetries it may be inferred that the SC is in general more sensitive to pressure from the remainder of the paradigm than is the SF.

The asymmetries found in the variety of Mervila (31.01) although occurring in a separate area, may potentially be linked to this type, since a new stem of IIIb type is introduced into Fuèc, the original stem being preserved only in the SF.

lexeme	SF	SC	locality
'receive'	<i>recebrà, receberà</i>	<i>recebe(r)íá</i>	31.01
'be able'	<i>podrà, poderà</i>	<i>pode(r)íá</i>	31.01
'follow'	<i>seguirà</i>	<i>segue(r)íá</i>	31.01

Table 96. Asymmetry in Mervila (ALLOc 31.01)

Finally, the verbs *tenguer/tenir* < TENERE, and *venguer/venir* < UENIRE, in the Seronés (Laurent 2002a:35) are attested as presenting the asymmetry below: a stem with the velar root, resulting from analogical levelling across the paradigm and common to both SF and SC; the historically regular form in -ndr- confined to the SF; and an innovative, apparently second-conjugation form unique within the paradigm confined to the SC.

lexeme	SF	SC	locality
'hold'	<i>tendrà, tenguerà</i>	<i>tengueria, tendiria</i>	Seronés (Laurent 2002a)
'come'	<i>vendrà, venguerà</i>	<i>vengueria, vendiria</i>	

Table 97. Parallel asymmetries in the Seronés.

Regrettably, no SC form is given from *prenguer* 'take' which otherwise patterns with *tenguer* and *venguer*, and it is hence not possible to establish whether the development is entirely systematic, or confined to *tenguer* and *venguer*. While e is clearly licit in the SC stem, it might tentatively be suggested that the asymmetry of *tendrà* ~ *tendiria* represents another instance of IIIa vs. IIIb asymmetry, in which the stem vowel e has subsequently undergone raising. The particular interest of these forms lies in the fact that the -d- characteristic of the Fuèc stem has not been eliminated, as it would normally be in cases of asymmetry from analogical levelling: are these perhaps two cases of asymmetry by analogy with existing asymmetrical forms ?

6.9 Asymmetry following convergence

In the varieties of Bosiga (*ALLOr* 34.33) and Agde (*ALLOr* 34.34), the forms of the SF and SC attest a particularly striking series of developments: formal convergence, of the type attested for Seta and Clarmont d'Erau, followed by dissociation producing asymmetry.

Examples from Bosiga are shown in Table 98 below. As in Seta and Clarmont d'Erau, the SF stem of these verbs presents a non-etymological cluster *-dr-*. However, in this variety, the SC presents instead a single consonant *-d-*; the infinitive likewise is in *-d-*, due to sound changes under which intervocalic *r > d* or *> zero*.

inf	SF.3sg	SC.3sg
<i>beude</i> 'drink' < BIBERE	<i>beudrà</i>	<i>beudiè</i>
<i>deude</i> 'have to' < DEBERE	<i>deudrà</i>	[unattested] ¹⁰²
<i>veide</i> 'see' < UIDERE	<i>veidrà</i>	<i>veidiè</i>
<i>viude</i> 'live' < UIUERE	<i>viudrà</i>	<i>viudiè</i>
<i>plòure</i> 'rain' < PLUERE	<i>plòudrà</i>	<i>plòudiè</i>

Table 98. SF/SC asymmetry in Bosiga (*ALLOr* 34.33).

As a result, there is a superficial identity between the infinitive and the SC, inviting the suggestion that the *-d-* in the SC is simply due to regular sound change; the data appear to illustrate asymmetry much more convincingly than convergence. However, an account in terms of regular sound change proves to be unsatisfactory, as it cannot explain the appearance of the cluster *-dr-* in the SF.

On the basis of comparative evidence from other Occitan varieties, it may plausibly be assumed that this variety originally presented SF forms such as **viurà*. Since the atlas data do not permit a specific phonological context to be determined for either sound change, *r > d* or *r > zero*, any of three phonological developments might apply: *r > d / V_V* giving **viudà*, *r > zero / V_V*

¹⁰²No entry for this item appears in the *cahier* transcription; no reason is given, and the original recordings were not available for comparison.

giving **viuà*, or the preservation of the original etymological *-r-*, maintaining **viurà*. None of these derivations yields the attested modern form *viudrà*.

A number of other verbs in the variety of Bosiga present a similar cluster: for *vòudrà* ‘want’ < **volere HABET*, the cluster *-dr-* results from an ancient sound change of the type discussed in §5.3 above, in which a homorganic stop is inserted to facilitate articulation of an etymological cluster *-lr-*, while in the case of *prendrà* ‘take’ < **prendere HABET*, the *-dr-* cluster itself is etymological. However, neither of these explanations can be invoked for *viudrà*, nor indeed can French influence, as the cognate form is *vivra*. The only plausible source for this cluster in *viudrà* etc. is accordingly morphological analogy.

One possibility is that the original form **viurà* was maintained, and *-d-* extended from the infinitive and SC (the only forms in which this consonant could have been present). However, this analysis is problematic, as it is unclear why *-r-* should have been preserved in the SF but not in the SC, and why analogical levelling should have extended *-d-* into the SF in addition to (instead of replacing) the existing *-r-*.¹⁰³ It is more likely that this is a case of interparadigmatic analogy, whether of analogy between SF forms, or convergence of Fuèc on *-dr-*.

Positing analogy between future forms is a false economy. This approach is superficially attractive, since if the cluster *-dr-* only ever occurred in the SF, there is no need to motivate a subsequent change deleting the *-r-* from the SC. However, the assumption of interparadigmatic analogy operating across SF forms and only SF forms is problematic. While such a phenomenon is not impossible, asymmetry itself is statistically a minority distribution, and while there is good comparative evidence for SF and SC undergoing symmetrical historical development, there

¹⁰³Restoring symmetry between SF and SC would most effectively be achieved by replacing *-r-* by *-d-* in the SF, unless the *-r-* were analysed as part of the desinence and symmetry required between stems. Leaving aside theoretical questions of the plausibility of segmentation, it seems unlikely that the presence of *-r-* in SF forms is systematic enough to warrant it being considered a consistent future marker.

is little if any comparative evidence for analogy between SF stems.¹⁰⁴ Furthermore, adopting this explanation does not obviate the need to account for the few cases of verbs such as 'want', which from comparative evidence must have acquired a cluster –dr- in Fuèc through regular historical change but which now present only –d- in the conditional (*vòudiè* < *volere HABEBAT). In these conditions, assuming convergence followed by loss of –r- from –dr- clusters in the SC appeals to a type of analogy for which there is good comparative evidence in the place of one for which there is little or none, without introducing significant additional complication.

The historical development of these verbs may thus be assumed to proceed as follows. Initially, through natural phonological processes, the Fuèc stem of certain verbs acquires a cluster –dr-:

SF	*volere HABET	> <i>volrà</i>	> <i>voldrà</i>	> <i>vòudrà</i>
SC	*volere HABEBAM	> <i>volriè</i>	> <i>voldriè</i>	> <i>vòudriè</i>

This cluster is reanalysed as a characteristic marker of the set Fuèc, and extended to verbs in which it was not historically present, giving e.g. SF *viudrà*, SC **viudriè* for original **viurà*, **viuriè*. By regular sound change, intervocalic –r- is lost from the SC of regular verbs of conjugational classes I and II (hence modern forms *cantaiè* 'he would sing', *dormiè* 'he would sleep' for older **cantariè*, **dormiriè*), though not from conditionals of class IIIa verbs, cf. modern *batriè* 'he would beat'.¹⁰⁵ In many infinitive forms, r > d as a separate development: **beure*, **viure* > *beude*, *viude*. Finally, by irregular sound change, or by morphological analogy with the first and second conjugational classes, –r- is lost from some SC forms: **prendriè*, **beudriè*, **viudriè* > *prendiè*, *beudiè*, *viudiè*, though not all (cf. e.g. *vendriè* 'he would come', *tendriè* 'he would take').

¹⁰⁴Pastre (1913:55) gives SF *audrà* but SC *auriá* for *avure* 'have' in Clarmont-l'Erau; there is insufficient detail of other lexemes to establish whether this is a genuine case of analogy between SF forms, analogy with consonantal asymmetries of the *voudrà* ~ *vouriá* type, convergence followed by asymmetry as discussed here, or a trivial matter of phonology.

¹⁰⁵Compare general discussion of r-less SC forms in §6.1 above.

This differentiation creates multiple patterns of relationship between SF and SC. While each of these individual patterns may be considered implicational, their joint existence disrupts the general implicational relationship between SF and SC forms, which no longer holds across all lexemes.

The data from Bosiga and Agde, which display both coherence and asymmetry in the same lexemes, serve to illustrate the tenuous and arbitrary nature of the formal stem identity between SF and SC.

6.10 *Conclusions*

The asymmetries discussed above are highly diverse, both in their nature and in their significance for the present study. Among the few constants is the diffuse and relatively unsystematic nature of asymmetrical patterns, showing that these are a recent and often sporadic development; the striking case of Barèja, in which asymmetry is systematic, turns out to result from an etymological difference, and as such reveals little about the relationship of the SF and SC.

Of the recent asymmetrical innovations, some result from purely phonological processes, and others from morphological analogy. In cases of morphological analogy, it may be observed that the SC tends to be remodelled on the stem found in PYTA, while the SF, overall more resistant to analogical influence, is most frequently influenced by the present indicative and/or subjunctive. While only a tendency, this finding is interesting since it suggests a more complex internal structure to the set of cells constituting Fuèc: not only are the SF and SC subject to formal pressure holding them together, but each one is subject to a different set of external pressures. Of the phonological asymmetries, the consonantal type are conceivably the manifestation of a phonological process which is productive to this day, and therefore can reveal little about morphological structure; the vocalic type and r-less SC, by contrast, have plausibly been morphologised, making asymmetry between SF and SC a recognised and accepted pattern within the varieties concerned.

The maps on the following pages show the distribution of various types of asymmetry attested in the ALLOc area. Interestingly, while the correlation between the presence of r-less SC forms (Fig.29) and that of vocalic asymmetry (Fig.30) is very poor (Fig.31), indicating independent phonological changes, the majority of morphological asymmetries fall within the area in which

one or other form of phonological asymmetry is present (Figs.32-34). This is particularly true of asymmetry of conjugational class, of which almost attestations occur at survey points which already show an asymmetry of phonological origin, or another asymmetry of conjugational class, of the (possibly phonological) type involving assimilation of the SC to the second conjugation. and particularly within the areas presenting both types. Such a strong correlation suggests that the morphologisation of phonological asymmetries favours other types of asymmetry. It is plausibly the case that when sound change creates an asymmetrical pattern which speakers do not 'correct' to restore symmetry, this pattern becomes established in the system, and can subsequently act as a template for the redistribution of forms: that is to say, if sound change produces an asymmetrical pattern, this pattern of stem distribution can form a precedent such that speakers subsequently create new asymmetries. While the correlation of phonological and analogical asymmetry is not as strong as for phonological and conjugational-class asymmetry, it is notable that several of the apparent outliers (instances of analogical asymmetry falling outside the shaded zones) occur in varieties which present asymmetry of conjugational class; while point 31.31 is surrounded by varieties presenting phonological asymmetry, and also presents an r-less SC form in the single lexical item *mólzer* 'milk'. It is therefore likely that the correlation between the presence of asymmetry resulting from sound change and subsequently morphologised, and the presence of other types of asymmetry, is stronger than the maps presented here suggest. In particular, even if the correlation is not perfect at the micro-level of each individual survey point, it is striking that Occitan is unique among western Romance languages in presenting any type of asymmetry; it is extremely unlikely that the presence of so many different kinds of asymmetry confined to this one same area is a coincidence.



Figure 29. Zone presenting r-less SC forms.



Figure 30. Zone presenting vocalic asymmetry.



Figure 31. Zone presenting r-less SC forms (blue), vocalic asymmetry (green) or both (purple).

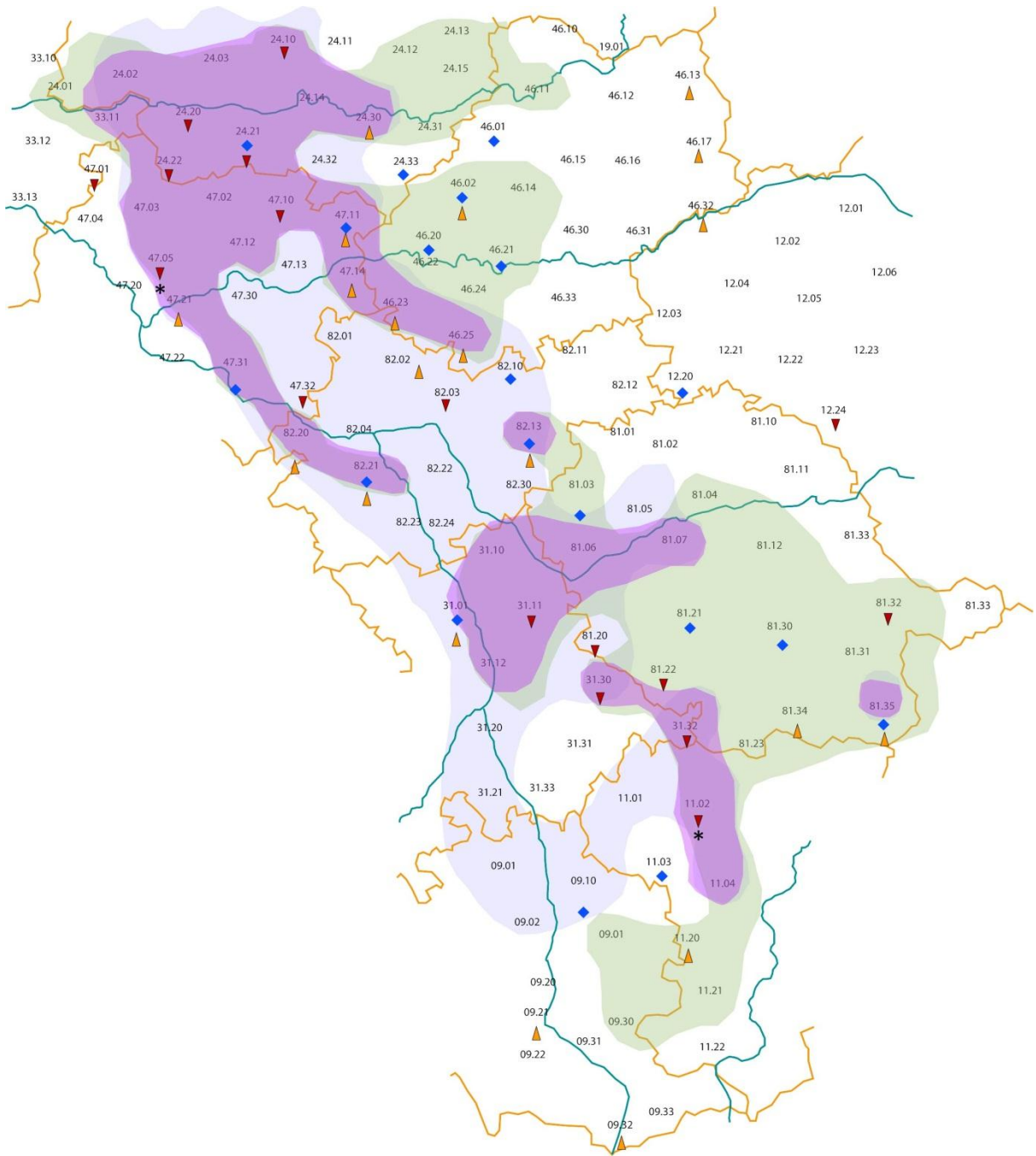


Figure 33. Geographic spread of asymmetry of conjugational class compared to (morphologised) asymmetry by sound change.

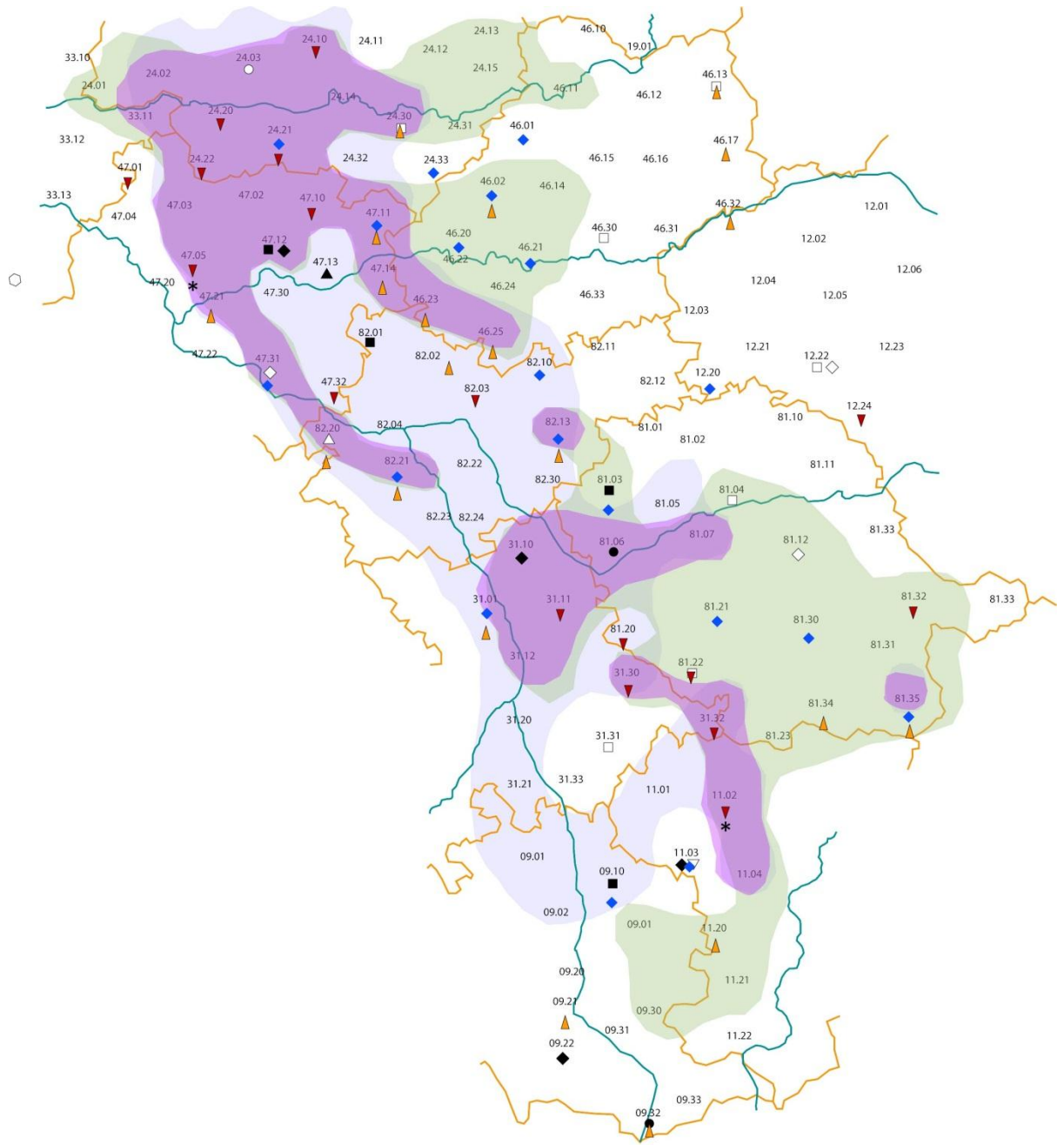


Figure 34. Synthesis of Figs. 29-33.

7. Conclusions and perspectives for further work

7.1 *Contributions of the present study to Romance linguistics*

Occitan has hitherto received relatively little scholarly interest, even in the regions where it is spoken: linguistic studies have tended to focus on the language of mediaeval texts, on the sociolinguistic situation of modern Occitan as an example of language death, or on dialect description without theoretical analysis. Yet the rich data available for the modern varieties of this language and the linguistic changes which they attest can be the source of significant insights for comparative Romance linguistics and general linguistic theory. The present study illustrates precisely this point: my detailed examination of ‘future’ and ‘conditional’ forms and the functions associated with them reveals quite unexpected relationships with significant consequences for morphological theory, showing the potential value to linguistics of conducting serious study on this unjustly neglected material.

Discussion of so-called ‘future’ and ‘conditional’ tense-forms in Romance linguistics has tended to focus on their Latin etyma, the grammaticalisation of the periphrases from which they emerge, and their development through regular sound change. By contrast, issues such as the functional relationship between the SF and SC in the modern varieties, and the formal and functional relationship of the infinitive with the SF and SC, have often been treated superficially. The absence of known cases in which SF and SC present different stems, and the use of the SC as FIP (with the exception of Italian) have long led traditional descriptions to consider the stem identity between these forms as unremarkable, and directly mapped to a common semantic value, that of ‘futurity’ or ‘temporal posteriority’. However, as the present study shows, examining the minute detail of dialectal variation leads to the conclusion that the relationship of SF and SC is much more complex and interesting than has hitherto been assumed.

Indeed, a major innovation of this study is in placing dialectal data to the fore. Existing studies of the SF and SC have tended to focus on the standard varieties of languages such as French, Spanish and Italian, on the more or less implicit assumption that this constitutes a sufficient basis for description; and for the purposes of the present study I have often had to rely on such studies, in the absence of more finely detailed studies of regional variation. It is perhaps surprising that such a significant innovation in western Romance languages and Italian — the rise of new synthetic forms — should only have been investigated with reference to the standard languages, all the more so in areas where rich dialect data are available: Alcover & Moll's (1929/1930/1932) survey of Catalan verb forms, for instance, includes extensive data on SF and SC forms, some of which appear to present analogous developments to those discussed in §5.2.1 and §5.5 above, and merits more detailed consideration.

Even within the Occitan domain, the issues and data encountered over the course of the present study suggest a number of further areas of investigation which could usefully be explored.

For the study of the SF and SC, there remains a large volume of data still to be exploited, in the *cahiers d'enquête* of the ALG and ALP, which were not available to the present survey. Yet the unpublished morphological data of the *cahiers d'enquête* both available and inaccessible extend well beyond these two screeves, providing extensive and thus far unexploited information on verbal, nominal and pronominal morphology. Just as in the case of the SF and SC, there are insights to be gained into the relationships between paradigm cells, screeves or morphomic distributions, which can be deduced from these data: what changes have occurred, and what influences may have motivated them. For instance, the discussion of heteroclisis in verbs of class IIIb above touches on the heteroclite distributions present outside Fuèc, but it is beyond the scope of the present study to explore these fully, and hence to investigate in detail the mechanisms of what appears to be a shift of conjugational class in progress.

The discussion of the relationship between form and function offered here highlights the disparity in the information currently available about the morphology and morphosyntax of Occitan. Data on form (though frequently problematic or incomplete) are available for much of the area where Occitan is spoken, and the present study constitutes an example of the type of survey which can be achieved on this basis. By contrast, the discussion of function highlights the scarcity of information and existing studies on the semantic values associated with particular screeves. While in French the meanings of the SC, and the distinction between the SF and *aller*+infinitive, currently receive extensive and theoretically sophisticated attention, there is a lack of equivalent (even descriptive) studies on Occitan. Although the behaviour of the SF and SC in French and in Occitan is similar, as the present study shows, it is not identical across the two languages: this is particularly apparent for the varieties of the Valadas, which present two categories absent from French, namely *cond2* and the then-future. The lack of descriptions which explicitly address the relationship between the then-future and the go-future — to what extent do both exist in a single variety? what semantic differences, if any, exist between them? — poses problems for understanding not only the function of these forms themselves, but also the extent of the semantic field associated with the SF in varieties with the then-future. Likewise, while information in Gasconha is typically available on whether *cond2*, the SC or both serve as FIP, information in the Valadas on the role of the SC is very limited, and it is rare to find information in either area on the distribution of functions such as evidentiality or attenuation between *cond2* and the SC — another obstacle to fully understanding the relationship of form and function in these cases.

Indeed, the investigation of functional relationships should not be limited to the forms discussed in the present study. Although this study focuses on the relationship between forms labelled ‘future’ and ‘conditional’, the relationship between these forms and others which are perceived to have similar functions is equally important in understanding the values which identify the SF and SC. One obvious candidate in this respect is the form labelled ‘imperfect

subjunctive', which, like the SC, has the value irrealis, and participates in the expression of hypothetical or conditional sentences. The semantic values of the 'imperfect subjunctive' thus appear to resemble or partially overlap with those of the SC, while the two present distinct stem forms as a result of regular historical change. The relationship of the 'imperfect subjunctive' and the SC would therefore constitute a further interesting case study of the relation between form and function.

Investigation of syntactic and semantic function in Occitan is complicated by the low availability of tagged or easily searchable digital corpora. While it is relatively simple to collate attestations of the SF or SC in French, in order to analyse the contexts in which these forms appear and the semantic values which are attributed to them, the available corpora for Occitan are much more restricted. For the mediaeval period, this difficulty will soon be alleviated with the publication of the prose tranche of the COM and the Digital Corpus of Medieval Gascon; it is likely to take significantly longer before a modern equivalent is available, and the coverage which this affords will depend crucially on the extent of primary material, which in some areas may be very limited. Investigation of such points as the relationship between the go-future and the then-future, cond2 and the SC, or the SC and 'imperfect subjunctive' must therefore be pursued via fieldwork eliciting particular constructions and spontaneous speech.

7.2 *Consequences of the present study for theoretical morphology*

Recent work on other Romance languages, particularly French, has shown that the basic value associated with the SF and SC is not uncontroversially temporal futurity. The SF is used for values of temporal posteriority, but also of possibility, epistemic modality, and attenuation. It may be characterised as temporal, as modal, or as a more general value such as 'projective' which can be given a temporal or modal interpretation according to context; and scholars disagree over which values should be considered most fundamental or intrinsic. In French, as

discussed in §2.2.4, the SC shares all four of these values, a state of affairs which might be represented as in Fig.35 (where epistemicity and evidentiality are grouped together as conjectural modalities).

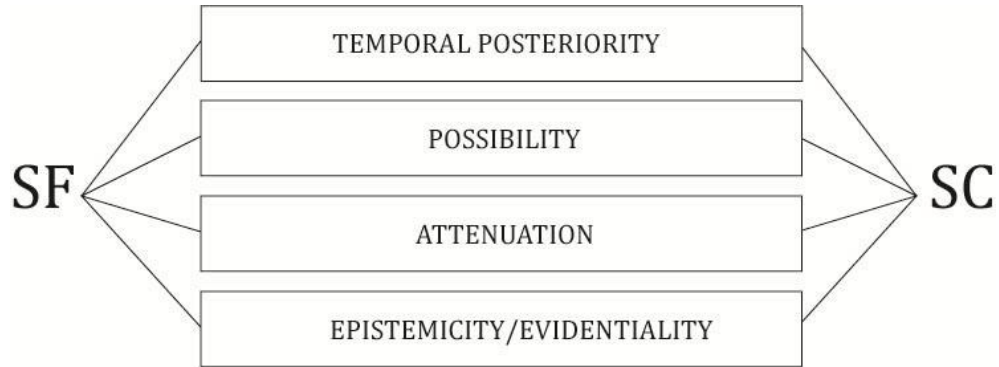


Figure 35. Functional parallelism of SF and SC in French.

However, in Italian the SC has long been replaced as exponent of FIP by the periphrasis SC+pst.ptcp (a semantic development which, although not straightforward, has received relatively little attention and is sometimes dismissed as a trivial feature of reported speech). In varieties of Occitan, the functional asymmetry is equally pronounced: in some varieties, as in Italian, the SC is no longer the exponent of FIP,¹⁰⁶ while in others it is doubtful that the SC can have an evidential reading. Fig.36 illustrates the functional relationship of SF and SC in a variety where the SC can serve neither as FIP nor as evidential.

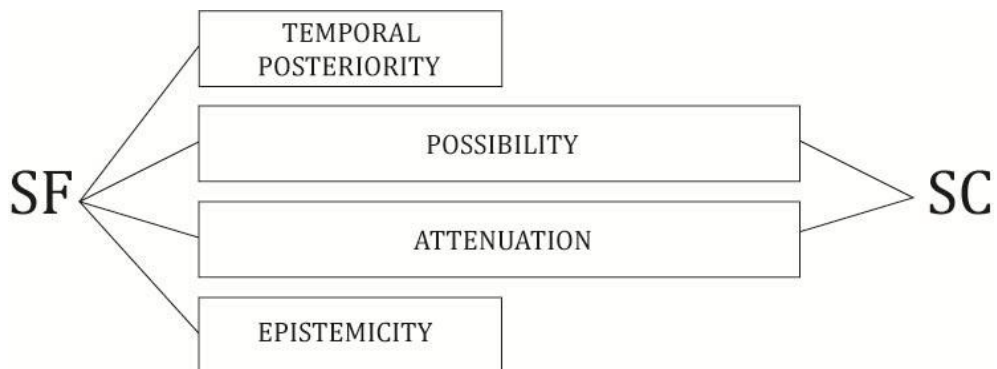


Figure 36. Functional asymmetry in Occitan.

¹⁰⁶The independent development in two geographically separate areas of this same construction associated with the function of FIP demonstrates how data from one cognate variety may inform analysis of another; similarities such as this innovation shared by standard Italian and the Occitan variety of Campan should not be ignored or dismissed from consideration.

It seems clear that there is some common semantic content in both SF and SC; however, some elements of this content may be shared with other forms, and not all the semantic content of the SF is shared by the SC. The presentation in Fig.36 might appear to suggest that the values associated with the SC are a subset of those associated with the SF; however, it remains to be determined whether this is indeed the case, or whether the SC in fact has other uses which are not shared by the SF.

The functional relationship of the SF and SC in Occitan is accordingly more complex than suggested by analyses which view the meaning of the SC as the sum of 'future' + 'past'. This finding is a significant potential problem for morphemic analyses which seek to explain the formal parallel of the SF and SC as diagramming their functional parallel: the 'same' stem is not systematically associated with exactly the 'same' content, as may be seen from Fig.37, which adapts Fig.36 to indicate the forms associated with each value for a variety such as that of Bordèras.

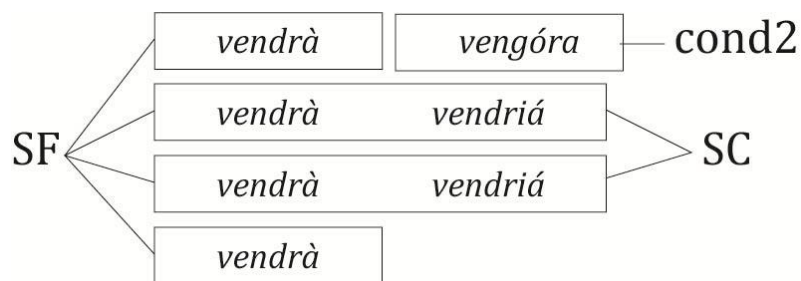


Figure 37. Distribution of forms across semantic values, *venir* 'come', Gasconha.

The distribution of the Fuèc stem, present in the SF *vendra* and SC *vendriá*, is conspicuously not aligned with a natural class, as is illustrated by Fig.38, in which the distribution of the Fuèc stem shown in Fig.37 is superimposed onto the set of four values involved.

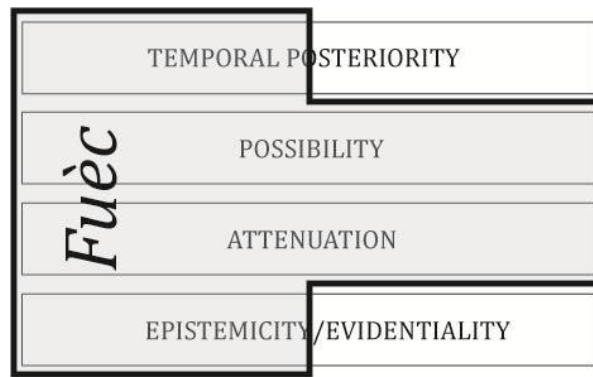


Figure 38. Distribution *Fuèc*.

The formal coherence of the *Fuèc* stem is likewise a more complex affair in Occitan than has been observed for standard Romance varieties. In the majority of cases, the identity of stem between SF and SC resulting from regular historical change is preserved; where analogical change reshapes the *Fuèc* stem, it tends to affect the SF and SC equally, or (though more rarely) to reinforce the identity between them. Particularly striking are the many cases of asymmetry between SF and SC. Some are due to regular phonological change, yet speakers do not invariably ‘repair’ the resulting difference of stem, to the extent that the new pattern becomes morphologised and spread by analogy to other lexemes, sometimes creating very stark disparities between the stem of the SF and that of the SC. Interestingly, the novel, asymmetrical distributions do not appear to align with distinctions of function: they are not significantly more common in the varieties in which the functional commonality of SF and SC is weakest, nor do they seem to involve formal splits between the individual semantic values of each screeve. The patterns produced are arbitrary, as is the mapping between distributions of forms and distributions of functions.

From a theoretical point of view, the arbitrary nature of this mapping is not in itself surprising. As discussed in §2.1 above, the Romance verb presents many deviations from the ideals of the classical morpheme, and each screeve is commonly associated with multiple, sometimes disparate, semantic values (consider, for example, the use of the *prs.ind* with past or future

time-reference). However, as the analyses discussed in §§3.2.2, 3.2.4, 3.2.5 and 3.2.6 illustrate, there is nevertheless a strong tendency in the literature to assume that sames of form should correspond to sames of function.¹⁰⁷ Iatridou and Touratier argue for French that the stem which I label *Fuèc* is consistently associated with a single basic meaning ('future' for Iatridou, and 'projection' for Touratier) and contributes this meaning to both the SF and SC; while Vet & Kampers-Manhe propose that the four identified usages of the SF and SC represent instantiations of temporal posteriority at different pragmatic levels. Although the observed data rarely if ever show true isomorphism between form and function, approaches which assume that the distribution of morphological stems reflects natural classes still remain widespread.

Even allowing for multiple functions to be unified as a single basic value, the data discussed here remain problematic for morphemic analyses, since the relation between forms and their functions is not consistent: the distribution of stems across paradigm cells can vary extensively between lexemes. Indeed, these data are to some extent problematic for all the frameworks presented in §2 as a representative sample of current theoretical approaches in morphology.

Distributed Morphology seeks to articulate the relationship between morphological form and morphosyntactic values — an aim which might be considered relevant for the case of the SF and SC at the interface between morphology and syntax. Yet it does so in such a way that the only means of accounting for stem allomorphy which is not determined by functional content is by brute stipulation. As O'Neill (2011:87) points out, this equates to treating the distribution of such allomorphy as a mere coincidence, an approach which seems highly questionable given the systematic nature of such allomorphy, its diachronic persistence and its demonstrable psychological reality for speakers.

¹⁰⁷ Note also the principle of Uniformity and Transparency proposed by Wurzel, who claims that biunique relationships between form and function are favoured within inflectional systems.

Some aspects of the changes described in this study are amenable to explanation by approaches based on markedness. For instance, Bybee's work on the correlation of frequency with strong lexical representation offers a plausible explanation for the high incidence of analogical remodelling of SF and SC forms (since the SF and SC are of relatively low frequency compared to other paradigm categories), and of low-frequency irregular items such as the lexemes of conjugational type IIIb. However, several of the developments observed in Occitan appear contrary to what markedness theory might predict. The Natural Morphologists' highest-ranked principles, System Congruity and Class Stability, both favour the generalisation and reinforcement of high-frequency existing patterns within the inflectional system; and, as discussed in §5.7, the fact that conjugational type IIIb tends to be eliminated is consistent with these principles. However, the loss of the classic IIIb type tends to involve the introduction of new conjugational types, novel distributions of stem allomorphy and increased variation between lexemes — a rise in precisely the type of minority irregular inflectional patterns which System Congruity and Class Stability should act to reduce. Asymmetry within Fuèc represents a further development which is at odds with System Congruity, since it introduces a distribution which has no precedent.

Approaches within the field of morpheme theory have provided compelling explanations for a variety of phenomena within Romance inflectional morphology, and many of the data discussed in the previous chapters suggest that such an approach may profitably be applied to Fuèc. In practice, autonomous morphology does indeed prove of greater explanatory adequacy for these data than the other frameworks considered here. Nevertheless, as I discuss below, the case of Fuèc differs from many previously identified morphemes, and its analysis entails certain modifications of existing morpheme theory, notably the recognition of a new type of object within autonomous morphology — 'weakly morphomic phenomena'.

7.3 *Fuèc and the notion of morphome*

I have argued above that the distribution *Fuèc* is resistant to functionalist or item-and-arrangement accounts, and is best understood in terms of autonomous morphology. However, *Fuèc* represents a rather different kind of autonomously morphological phenomenon to the majority of those discussed in the literature. More detailed analysis of this case study accordingly leads to the identification of a new type of morphomic phenomenon, and stresses the importance of Aronoff's original, very broad conception of autonomous morphology.

In Aronoff's initial model (1994:25), all relations between morphosyntactic values and phonological forms are mediated by an independent component of the grammar, a 'morphomic level' at which morphological 'functions'¹⁰⁸ are defined. The role of the morphological function or 'morphome' is typically to define a group of paradigm cells which present similar formal behaviour. All morphosyntactic values are mapped onto a morphome, which in turn maps to phonological forms. Two points are particularly significant here: the abstract nature of the morphome, which is a function or distribution rather than a concrete phonological form, and the universal nature of the morphomic level, which is involved in all mappings between morphosyntactic features and phonological forms.

For illustrative purposes, both Aronoff and Maiden (e.g. 2005) deliberately adduce distributions which might be described as 'the clearest examples of the purely morphological' (Aronoff 1994:167); not merely those which cannot be reduced to extramorphological motivation, but those which seem devoid of extramorphological motivation, such as the Romance 'L-pattern' identified by Maiden, in which the 1sg prs.ind and all forms of the prs.sbjv share a distinctive stem, although this group of cells has no unique functional correlate or phonological context. An important element of Maiden's work on morphomes in Romance, as highlighted by O'Neill

¹⁰⁸ In the mathematical sense of mapping, as opposed to the linguistic sense of meaning/role.

(2011), is to demonstrate that such distributions are not merely fossilised remnants of now defunct extramorphological motivation, but have psychological reality for the speaker, as abstract patterns which may serve as a template for analogy and suppletion. The diachronic persistence and productivity of morphomic patterns argues strongly for a view of the morphome as a purely abstract distribution.

One final point worth noting concerns the relationship between morphemes and stem identity. Among the characteristics of the morphomic patterns first identified by Maiden is the property of 'coherence', in which all members of a morphome share a single stem. However, as O'Neill (2011) shows, coherence is not always systematic. O'Neill addresses the case of Portuguese irregular verbs which present a distinctive PYTA root in the continuants of Latin perfective forms. While the majority of these verbs present the same root throughout the preterite, imperfect subjunctive, pluperfect indicative and future subjunctive, a small subclass present a distinctive root in the 3sg preterite (e.g. *fazer* 'do' has the root *fiz-* throughout the PYTA cells, except in the 3sg preterite *fez*). For all such verbs the only difference between the general PYTA root and the 3sg preterite form is the quality of the root vowel, while there is a much more significant difference between PYTA and non-PYTA roots. O'Neill argues that defining two morphemes here (PYTA including 3sg preterite, and PYTA excluding 3sg preterite) would fail to capture an important generalisation about paradigmatic stem distribution, since it overlooks the overall similarity of PYTA roots in comparison to non-PYTA roots; he proposes that these data are better handled by assuming that morphemes may display stem allomorphy. O'Neill further considers data from Asturian varieties, in which despite a lack of distinctive stems, morphomic patterns may be identified by their effects on analogical levelling of theme vowels. He concludes that, while morphemes most commonly present stem identity, imperfect coherence or lack of a distinctive stem is not sufficient evidence to consider a distributional pattern non-morphomic.

As discussed in the previous chapters, the distribution *Fuèc* behaves rather differently from ‘clear cases’ of morphemes. While it is far from clear that *Fuèc* has a *unique* functional correlate, there is certainly some measure of functional commonality between the SF and SC. Furthermore, *Fuèc* is less exactly referred to in cases of analogical change. Whereas Maiden has documented cases of convergence and defectivity as a change applying to many lexemes but affecting all and only all the cells of a given morpheme, comparably precise and unambiguous references to the distribution *Fuèc* are harder to find. Of the cases of convergence discussed here, one is limited in scope, while the other must be reconstructed; cases of defectivity, heterocclisis and analogical levelling most frequently respect the ensemble *Fuèc*, but rarely pick it out uniquely. The cases of asymmetry show a lack of the formal coherence usually associated with morphemes, and many resist explanation in terms of morphomic stem allomorphy: unlike O’Neill’s Portuguese data, in which both PYTA roots are unique to PYTA forms, cases of asymmetry within *Fuèc* often involve a root or stem shared with another morpheme elsewhere in the paradigm.

The behaviour of *Fuèc* thus differentiates it from that of many known morphemes in Romance; however, this does not mean that the notion of autonomous morphology should be excluded from consideration, since this notion still has descriptive value for handling the arbitrary mapping between SF/SC forms and their respective functions. Indeed, Aronoff’s initial characterisation of the morpheme predicts the existence of distributions partly resulting from autonomous morphology and partly determined by extramorphological criteria; and Maiden identifies just such a case at the interface between phonology and morphology. Given these initial conditions, one would expect to find phenomena in which syntactic/semantic criteria interact with morphological motivations; and it seems most reasonable to consider *Fuèc* as an example of precisely this, in which an essentially arbitrary stem distribution is partially reinforced by functional motivations. Investigation of the SF and SC in Occitan thus reveals the

existence of a type of autonomously morphological object which has not previously been discussed in the literature, and which I label ‘weakly morphomic phenomena’.

It should not be assumed that simply because Fuèc is among the first cases of weakly morphomic phenomena to be explicitly discussed, such phenomena are in themselves recent or uncommon. In the case of Fuèc, I have shown that a distribution hitherto attributed solely to the functional motivations is in fact only partially determined by those motivations, and is also crucially dependent on purely morphological factors. Given this precedent, it becomes plausible that many existing morphological distributions which have traditionally been ascribed purely to extramorphological factors may in fact result from the combination of these factors with autonomously morphological motivations, and that weakly morphomic phenomena of the type discussed here are common — a possibility which has an important consequence for morphological analysis. When the notion of autonomous morphology was first put forward, the existence of morphomic structure could only be convincingly demonstrated in cases where a total absence of functional motivation could be established. However, the data discussed in this study show that morphomic and extramorphological motivations are not in fact mutually exclusive. The implication is twofold: just as the presence of morphomic structure does not necessarily rule out an element of extramorphological conditioning, equally the presence of autonomously morphological motivation cannot be automatically dismissed where a given distribution appears *prima facie* to be motivated purely by extramorphological factors.

Returning to individual instances of weakly morphomic phenomena, in which extramorphological and autonomously morphological motivations interact, one might ask what form this interaction takes, and how it might be modelled. While in-depth consideration of this point is beyond the scope of the present study I suggest below some possible directions which further research might take.

In the case of Fuèc, a simple model of discrete presence or absence of each type of factor is clearly implausible. As I have shown above, the symmetry between SF and SC is motivated jointly by shared semantic content and membership of the distribution Fuèc: I will refer to these factors as ‘functional pressure for symmetry’ and ‘formal pressure for symmetry’ respectively. It is important to note that both pressures act in the same direction, while there is no morphological motivation of a general and principled nature which favours asymmetry.¹⁰⁹ If each of the two pressures may have one of two values, ‘present’ or ‘absent’, the following theoretical combinations may be obtained.

	1	2	3	4
functional pressure for symmetry	present	present	absent	absent
formal pressure for symmetry	present	absent	present	absent

Table 99. Possible value combinations within a discrete model.

In combination 1, both pressures favouring symmetry are present, while in 4 both are absent, and in combinations 2 and 3 only one of the two possible pressures is present. Intuitively, one might wish to link combination 1 with lexemes presenting symmetry in a given variety, and combination 4 with lexemes presenting asymmetry. However, this intuition is clearly not representative of the data, since in deeming ‘functional pressure for symmetry’ to be present in symmetrical pairs, but not in asymmetrical pairs, it contradicts the observations made throughout the present study to the effect that asymmetry can occur in areas where the semantic values associated with SF and SC are clearly linked. Indeed, the defining feature of Fuèc as a weak morpheme is that although both formal pressure and functional pressure are present, neither one is sufficient in isolation to motivate symmetry; yet this theoretical model suggests that either pressure could be absent. Combinations 2, 3 and 4 are thus in contradiction with the observed data.

¹⁰⁹The term ‘weak morpheme’ is paradoxical in as much as it designates a distribution which is ‘weakly’ morphemic (since not exclusively motivated by autonomous morphology) but which is potentially very strongly motivated, since both formal and functional motivations act in its favour.

The interpretation of combinations 2 and 3 is particularly problematic, since although these each represent a half-way point between presence of both pressures and absence of both pressures, there is no corresponding state of semi-symmetry: the SF and SC either share a stem, or they do not. Within the hypothetical model under consideration, one means of resolving the conflicting inputs would be to apply a logical operator, AND (which requires two positives in the input to produce a positive in the output, simulating 'both motivations are necessary to produce symmetry') or OR (which requires at least one positive in the input to produce a positive in the output, simulating 'either motivation is sufficient to produce symmetry').

The problems raised by the operator OR are immediately apparent. The data discussed in the preceding chapters clearly show that neither formal nor functional motivation is by itself sufficient to produce symmetry. However, a model using the operator OR predicts the presence of pressure for symmetry, leading to the occurrence of symmetry, in situations where only one of the two possible motivations is actually present; a prediction which is evidently at variance with the observed data.

Replacing OR with AND in fact produces no improvement. All three combinations predicted to produce asymmetry under the version of the model using AND (2, 3, 4) crucially rely on the absence of one or other pressure, or even both; yet the absence of either, in varieties where significant semantic commonality exists and symmetry is the majority pattern, is highly implausible. Resolving the technical difficulty of interpreting combinations 2 and 3 accordingly cannot resolve the fundamental problem of this discrete model, in which the only empirically plausible state of the system (presence of both pressures) is incapable of generating anything other than a symmetrical pattern: this model is simply inadequate to describe the observed data.

The problems associated with the model above stem chiefly from its discrete nature, since it has no mechanism for capturing how strong either pressure is. A more plausible approach may be offered by assuming that both functional pressure for symmetry and formal pressure for symmetry are present and combine in all cases, but that the strength of each is a continuous variable.

A possible model of this type is illustrated overleaf in Fig.39. The continuous random variable 'strength of functional pressure for symmetry' is given the label x , and the continuous random variable 'strength of formal pressure for symmetry' is given the label y . The overall strength of pressure for symmetry is calculated by adding x to y , modelling the way in which independent formal and functional motivations combine in favour of symmetry. A threshold is defined by the equation $x + y = t$, where t is an arbitrary constant representing the minimum value of 'strength of all combined pressures for symmetry' at which symmetry is obtained. Since neither type of pressure is sufficient in isolation to motivate symmetry, both x and y are defined as strictly less than t ; since neither type can in principle be absent, both x and y are defined as strictly greater than 0. The total shaded area on the graph represents the space defined by the possible values of x and y ($0 < x, y < t$), corresponding to all possible combinations of the two variables. The darker shaded area, in which $x + y \geq t$, represents all possible combinations producing symmetry, while the lighter shaded area, in which $x + y < t$, represents all possible combinations producing asymmetry.

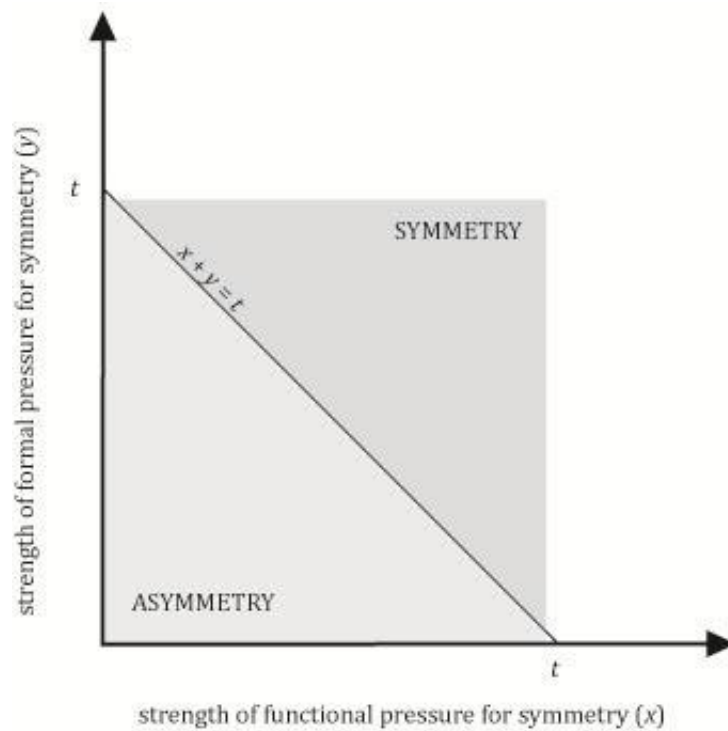


Figure 39. Model of interaction.

Fig. 40 illustrates a selection of possible outcomes within this model. Point A represents a case in which the strengths of formal and functional pressure are approximately equal, just over half the constant t each: the sum of the two, although only just exceeding t , is sufficient to produce symmetry. At points B and C, the strengths of the two types of pressure are also similar to each other: at B, both are very weak, producing asymmetry, while at C both are near the upper limit of their range, producing symmetry. Points D and E represent cases in which there is an imbalance between the strength of formal and functional pressures: at D, functional motivation is very weak, but symmetry is nevertheless produced since formal motivation is strong; at E, by contrast, although there is maximal functional motivation, the strength of formal motivation is close to zero and the combination of the two is insufficient to reach the threshold for symmetry.

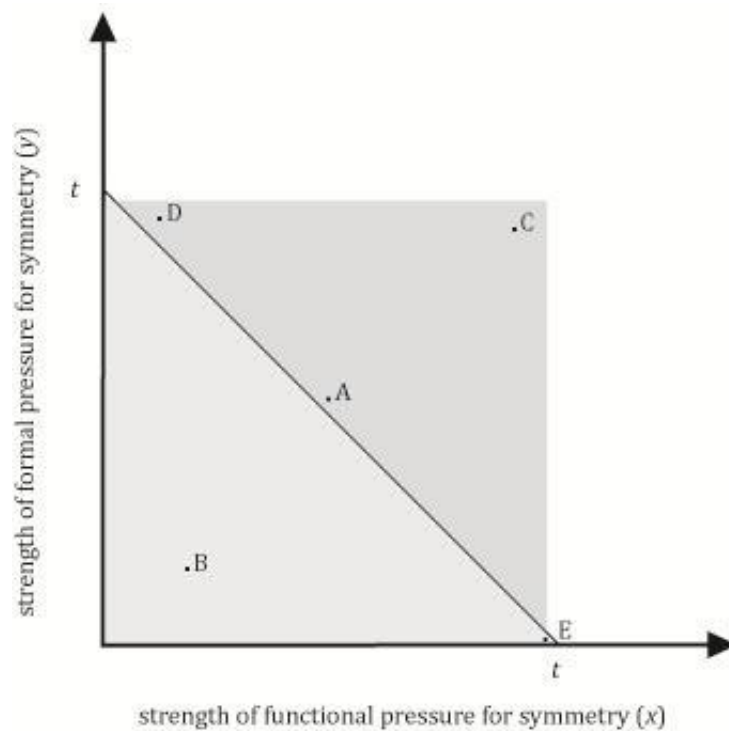


Figure 40. Hypothetical examples.

This model presents significant advantages. It is explicitly founded on the observations that both sources of motivation are always present, that both act in favour of symmetry rather than asymmetry, but that neither is sufficient on its own to guarantee symmetry. By allowing the strength x or y of each pressure to vary within a continuous range, the model can capture a wider range of potential values for each than simply 'presence' (1) or 'absence' (0), which allows this model to take into account the differences between varieties in which both SF and SC present the same set of four temporal and modal varieties (e.g. French), and varieties in which the value of temporal posteriority (e.g. Italian, Bordèras) or evidentiality (Lengadòc) is not shared. Not only can this difference be described, but such a description does not lead to an (incorrect) automatic prediction of asymmetry simply because x has a slightly lower value in the second type of variety than in the first. The model will easily allow for variation in the value of x and/or y , whether due to gradual change over time or differences between lexemes.

It should be noted that although the symmetrical space and the asymmetrical space occupy equal areas on the graph, this is not intended to suggest that the two outcomes are equally likely. Indeed, it is clear from the data discussed in this study that symmetry is a much more frequent outcome than asymmetry. It should therefore be assumed that the probability distribution of possible values for x and y is skewed, such that it is more likely for each to have a high value than a low value; that is to say, that instead of x (or y) having an equal probability of taking any value within the range $0 < x < t$ (uniform distribution), most values of x (or y) will be nearer t than 0. The probability distribution of x and y would most plausibly be modelled with a normal distribution in which the mean μ takes a value in the range $t/2 < \mu < t$. Such a distribution, modelled in Fig.41, produces a much higher concentration of points in the top right-hand quadrant of the shaded square than in the top left-hand or bottom right-hand quadrant, and produces a particularly low density in the bottom left-hand quadrant, namely the chief locus of combinations producing asymmetry.

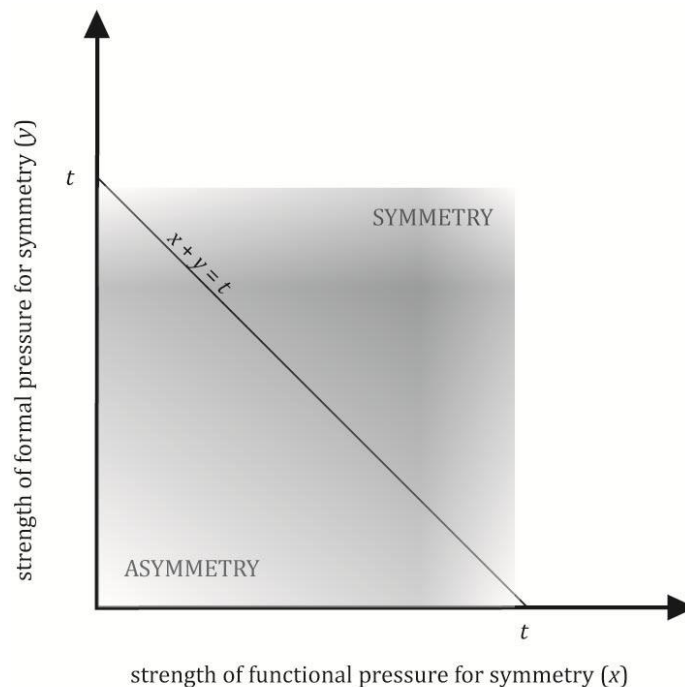


Figure 41. Intensity of shading indicates probability density.

I am assuming here that the values taken by the continuous random variables x and y may vary from lexeme to lexeme, as this is the level at which variation between symmetrical and asymmetrical patterns is observed. In the version of the model presented above, I deliberately do not quantify the values of x and y , as the most fundamental point to be made is one of relative strength: in French, for example, the mean value of x (since x plausibly varies between lexemes) is most probably higher than in Italian, while the value of x in Italian is likely to be higher than in many varieties of Occitan. Fig.42 illustrates this scenario: assuming a high mean value of x in French, only a few of the possible values for y would produce asymmetry, whereas a lower mean value of x in Occitan would mean that a much higher proportion of the possible values for y could produce asymmetry.

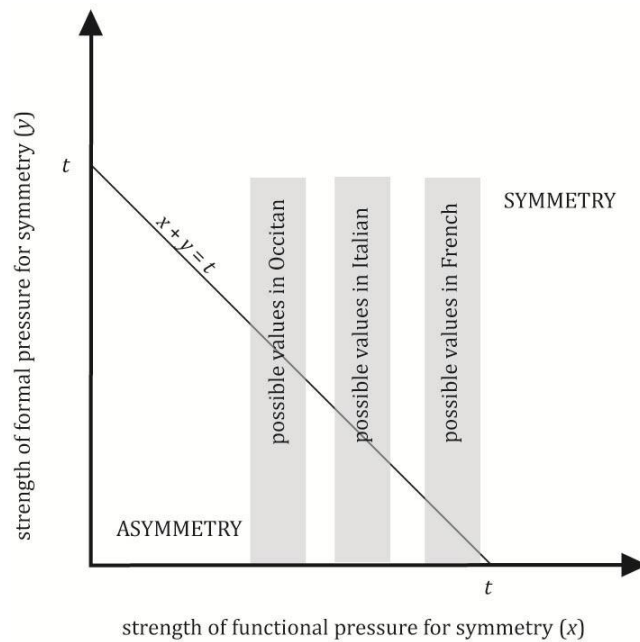


Figure 42. Comparison of probable value ranges in French, Italian and Occitan.

However, it is worth considering how the two variables might be quantified, both from the point of view of understanding what linguistic features the abstract variables of this model correspond to, and from the point of view of drawing a more detailed comparison between varieties, determining not only the relative strength of the two pressures between languages, but how much stronger or weaker either pressure is in one language than in another.

The precise detail of what determines the values taken by x and y for any particular lexeme (and hence the probability density function of each variable) must form the subject of future research. However, these values are plausibly to be calculated from a number of factors involving frequency, usage and the relationship of the SF and SC to other paradigm cells (since in the Word and Paradigm model envisaged here it would be implausible to consider $Fu\grave{e}c$ as isolated from the rest of the paradigm, and indeed the data discussed in §§5 and 6 above clearly show that $Fu\grave{e}c$ is subject to influence from other morphemes).

Factors affecting x might include the extent to which SF and SC share semantic values in the individual variety (the higher the proportion of shared values, the higher the value of x), the extent to which the relative token frequencies of these values match across the SF and SC (the closer the match between the frequency distributions, the higher the value of x), and, using similar measures, the extent to which each screeve shares semantic values with other screeves (strong links with screeves outside $Fu\grave{e}c$ would lower the value of x).

The calculation of y is more complex, since the only available evidence for the strength of formal pressure for symmetry is the incidence of symmetry itself. The variable y should in theory depend on the relationships of the stems of SF and SC to other stems in the paradigm, as well as on the relationship of the SF and SC to each other; it is clear that care must be taken here to avoid circularity. The solution may lie in considering the value of y to be subject to constant re-evaluation over time: for instance, according to a cycle such that the general frequency f_n of symmetry across all lexemes at time t_n is used to calculate y_n (the value of y at time t_n for a given lexeme), the value y_n combines with the value of x for that lexeme, producing a symmetrical or asymmetrical pattern, and on the basis of the patterns produced, a new value of general frequency f_{n+1} is calculated for time t_{n+1} . It should be noted that this diachronic characterisation of the variable y in fact adds a third dimension to the model, requiring the addition of a z -axis along which change over time could be plotted.

Further research should also address the issue of the relative weighting of x and y . In its current state, the model suggests that these two factors are equally important: a high value of x coupled with a low value of y will produce the same result as an equally high value of y coupled with an equally low value of x (a fact independent of the relative probability of these value pairings). However, this is merely an assumption made by the initial, simple state of the model. In practice, the relative importance of x and y may be different, and indeed this is likely to be the case for the Occitan data discussed here. For instance, if it is assumed that the functional pressures for SF/SC symmetry are likely to be very similar across most lexemes in a given variety (since the value of x is chiefly based on the semantic values of particular screeves, which are likely to be constant across lexemes in any one variety), this suggests that the strength of formal pressures for SF/SC symmetry is a more influential factor in determining whether the outcome is of symmetry or asymmetry.

It might be the case that x and y are not in a one-to-one relationship, but that $ax + by \geq t$ where a and b are constants greater than 0 (i.e. a change in the value of y will have an effect of different magnitude to the effect of an equivalent change in the value of x). Alternatively, the threshold might be better modelled as a curve rather than a straight line. There might also be individual thresholds on the values required to produce symmetry: for example, it might be the case that if the strength of formal pressure for symmetry were below a certain level, not even maximal functional pressure would be sufficient to produce symmetry ($x + y \geq t$ and $y \geq k$ where k is a constant in the range $0 < k < t$). As suggested above, it is likely that the range of values for x in any given variety is likely to be relatively restricted (as assumed in Fig.42 above, where values for x occur in a much smaller range than values for y).

The model described here is explicitly constructed on the basis of the case study Fuèc, and the remarks above refer to the detail to this particular case. However, the principle of the model, in which morphological and extramorphological motivations combine, to produce overall

strengths of motivation varying along a gradient but separated into distinct regions by the imposition of one or more thresholds, is of general applicability to weakly morphomic phenomena. Indeed, not only does this model allow for a range of ‘intermediate’ cases, from those with very strong extramorphological motivation (which is, however, not strong enough in isolation to guarantee coherence), to those with very strong morphological motivation (which is, however, not strong enough in isolation to guarantee coherence), but the extremes of the range for each variable may be considered to represent ‘classic’ morphemes such as the L-pattern which are wholly determined by purely morphological motivation ($x = 0$ but $y \geq t$), and cases of distributions entirely dependent on functional motivation ($y = 0$ but $x \geq t$). In this respect, the model embodies Aronoff’s original concept of a continuum between the two extremes of morphemes lacking any extramorphological motivation, and exact correspondences between morphosyntactic sets and morphophonological sets.

It also reflects an important theoretical point about the relative strength of motivation for ‘weakly’ morphomic phenomena and ‘classic’ morphomic phenomena. Since ‘weakly’ morphomic phenomena are motivated by both morphological and extramorphological factors, it might be assumed that these distributions would be more robust or more likely to persist than ‘classic’ morphomic phenomena which lack extramorphological motivation. However, this assumption is not justified by the data examined in the present study, since *Fuèc* is not found to be any more robust or stable than known cases of ‘classic’ morphemes such as *PYTA* (indeed, the present study appears to suggest the reverse). It therefore seems that the overall strength of motivation for a distribution is not merely a function of the number of factors motivating the distribution. Weakly morphomic phenomena are not overall any more strongly or weakly motivated than ‘classic’ morphomic phenomena, and therefore, a priori, no more or less likely to persist.

Quantitative testing of the proposed model, to determine values for x and y for different lexemes in varieties of Occitan, and to establish exactly how the model works in each particular case of asymmetry, is, regrettably, beyond the scope of the present study, and must therefore remain as a subject for further research. Such a study would involve the following steps. For each variety under consideration, it would be necessary to establish all semantic values associated with each paradigm screeve, in order to calculate how many values the SF and SC share with each other, and how many each shares with each other paradigm screeve. It would likewise be necessary to obtain data on the frequency of the different usages. If the SF and SC share 3 values but the SF shares 4 values with the *prs.ind* and the SC shares 5 values with the *impf.sbjv*, this might suggest that the functional links between the SF and *prs.ind*, and between the SC and *impf.sbjv* are stronger than those between the SF and SC; however, if the SF is very frequently used with the values it shares with the SC, and only very rarely occurs with the values it shares with the *prs.ind*, this would suggest instead a much stronger link between SF and SC than between either one and a screeve external to Fuèc. With regard to formal similarities, it would be necessary to compute the degree of similarity between the SF stem and the stems of all other screeves, and that between the SC stem and the stems of all other screeves. It would also be desirable to have access to frequency data showing the token frequency of symmetrical and asymmetrical lexemes. While the data currently available permit some of these calculations, notably the formal similarity between SF/SC stems and other stems, robust data on frequency and usage are much more elusive. As a result, it is not currently possible to determine the precise location which each individual case study of asymmetry discussed in §6 would occupy on a diagram such as Fig.41, within the area labelled 'asymmetry'.

Finally, further research should also address the overly simplistic division into symmetric and asymmetric outcomes which this model assumes. In the case of asymmetries within Fuèc, it is intuitively appealing to think of all SF cells sharing a stem and all SC cells sharing a stem, whether or not the SF and SC stems are identical with each other. The available data certainly

provide empirical support for this view in respect of some asymmetries, such as the r-less SC forms (present in conjugations I, II and III, for which the atlas data provide full paradigms), and many of the sources consulted for the present study imply that all cells within each screeve share the same stem. However, for many of the irregular verbs listed in the atlas data, only 3sg forms are provided in the SF and SC, and the theoretical possibility of distributions which are not symmetric but do not correspond to screeve divisions cannot be excluded, all the more so given the case of *estar* in Savinhac discussed in §6.6.9 above, which appears to present such a distribution. Fig.43 overleaf illustrates a selection of the stem distributions which are mathematically possible: a straightforward distinction between SF and SC, a functionally motivated distinction between singular and plural, a more arbitrary distribution in which the 1pl and 2pl forms of both screeves contrast with the 8 other cells, a distribution in which the 3sg SF form contrasts with all other Fuèc cells, a distribution in which singular SF forms contrast with SC and plural SF forms, and a distribution which appears almost entirely random. It is interesting to note that not all ‘incoherent’ distributions (those in which not all Fuèc cells share a stem) would appear ‘asymmetric’ from the ALLOc/ALLOr data.

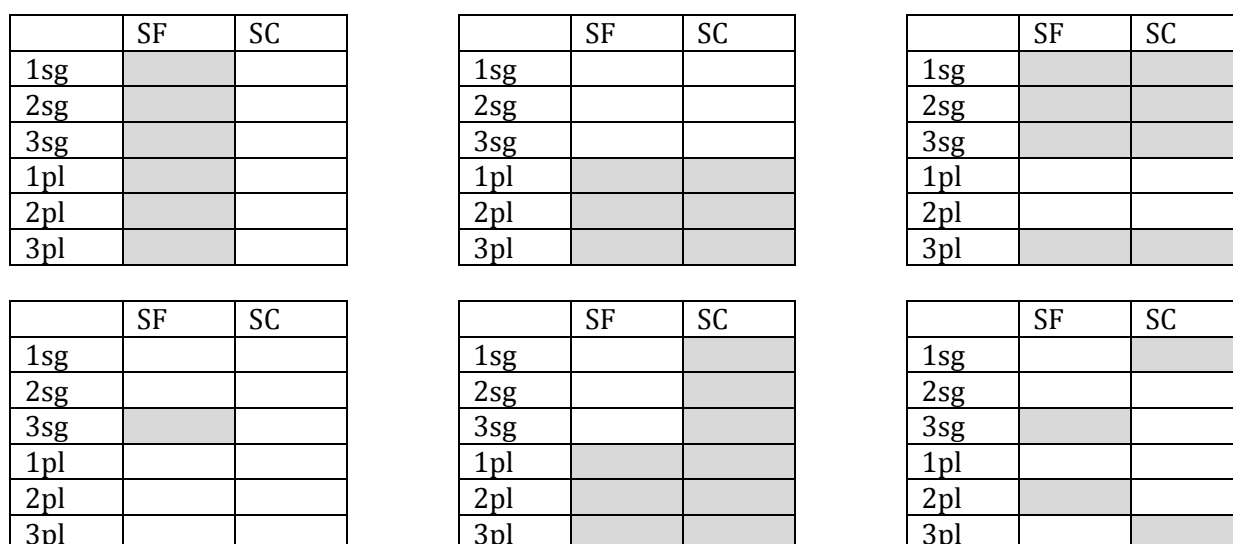


Figure 43. Possible asymmetrical/incoherent stem distributions

The existence of ‘incoherent’ distributions more complex and varied than that shown in the top left diagram of Fig.43 could be straightforwardly established by fieldwork eliciting the complete

SF/SC paradigm. Such data are likely to provide insight into which cells within each screeve are most susceptible to asymmetry resulting from morphological analogy, and the implicational relationships which exist between cells (as in Bybee & Brewer's (1980) study of preterite forms, or Maiden's (2011c) study of the L- and U-pattern in Daco-Romance). However, this level of detail makes apparent that, while there is only ever one 'coherent' state for a distribution (stem identity or strong similarity across all cells), multiple 'incoherent' states (in which the identity is compromised) may be possible. While the model of weakly morphomic phenomena proposed here accounts for the difference between 'coherent' (symmetrical) and 'incoherent' (asymmetrical) states, it requires further development in order to address the issue of which of the many logically possible distributions is found, in a case where formal and functional pressures do not produce a symmetrical or coherent distribution. The refinement of the model in order to accommodate such detail will be crucial in generalising the model to further instances of weakly morphomic phenomena, such as that described by Maiden (2011c).

In conclusion, while the chief focus of the present study is on description of the behaviour of future and conditional forms in varieties of Occitan, the details of this description prove to be of much wider significance. A degree of caution must, of course, be exercised, due to the limitations of the data available to the present study, particularly with regard to the functions associated with the SF and SC in individual varieties of Occitan. Even taking account of these limitations, though, the data discussed here have important theoretical consequences. With respect to morphological theory in general, the absence of a systematic, direct and consistent mapping between form and function — in cases of symmetry where the SC is not used as FIP or as an evidential, and in cases of asymmetry — provides further evidence in support of the notion that there is an irreducibly arbitrary element in the mapping between form and function. These data thus support models of the grammar which admit of morphology functioning autonomously, such as that put forward by Aronoff, in which all mappings between morphosyntactic values and phonological forms pass via a level of purely morphological

structure, the morphomic level. Within the particular field of morpheme theory, the case of Fuèc attests the existence of a type of autonomously morphological phenomenon the status and significance of which have hitherto gone unidentified: weakly morphomic distributions jointly motivated by morphological and syntactic/semantic factors.

Appendix i. Glossary of localities cited

Few of the regions and localities referred to in this study have a distinctive English toponym: *Gascony*, the *Pyrenees*, and the *Alps* are rare examples of this. In some cases, such as the *Auvergne*, the *Garonne*, *Bordeaux*, the French name has become accepted use in English. However, for many of the localities with which this study is concerned, there is no established convention as to the form of the name which should be used in English: there is thus no a priori reason to choose the French toponym over its Occitan equivalent in these cases.

It should further be noted that the 'official' French names are often merely adaptations of Occitan toponyms to French phonology: *Ayguesvives* for *Aigasvivas*, or *Rouergue* for *Roèrgue*. This is to a large extent true even of the artificially created *départements*, which, although departing from historical or cultural divisions of land, were typically named after rivers and mountains which had well-established local names. Occasionally, as in the case of *Aude* and *Graulhet*, the orthography is constant across the two languages, although the pronunciation changes. It may therefore be seen that the Occitan placenames are not significantly more 'foreign' or 'unfamiliar' than their French counterparts.

In the light of the foregoing, and in the interests of consistency, the present study uses Occitan toponyms throughout, following Poujade (2009), Jourdan (2010:8) and Lafont (2003). A list of all localities cited is provided below, with French or Italian equivalents.

Aigasvivas	Ayguesvives
Arièja	Ariège
Ardècha	Ardèche
Aude	Aude
Avairon	Aveyron
Aubenàs	Aubenas
Aups Maritims	Alpes-Maritimes
Aups Nauts	Hautes-Alpes
Aups de Provença Nauta	Alpes-de-Haute-Provence (formerly Basses-Alpes)

Bardonescha	Bardonnecchia
Barciloneta	Barcelonette
Barèja	Barèges
Bazièja	Baziège
Besièrs	Béziers
Bèthpug	Beaupuy
Biarn	Béarn
Bigòrra	Bigorre
Bocas de Ròse	Bouches-du-Rhône
Bordèras	Bordères-sur-l'Échez
Campan	Campan
Cantal	Cantal
Castras	Castres
Clarmont	Clermont-Ferrand
Corresa	Corrèze
Cruesa	Creuse
Donzac	Donzac
Dordonha	Dordogne
Droma	Drôme
Era Bòrda	Laborde
Fauch	Fauch
Foish	Foix
Garona	Garonne
Garona Nauta	Haute-Garonne
Gasconha	Gascogne
Gavarnia	Gavarnie
Gavaudan	Gévaudan
Gèrç	Gers
Gironda	Gironde
Graulhet	Graulhet
Harrèra-Arrens	Ferrière-Arrens
Hauts Pirinèus	Hautes-Pyrénées
Isèra	Isère
Lanas	Landes
La Rusa	La Ruse
La Torre	Torre Pellice
Lauserta	Lauzerte
Lemosin	Limousin
Lengadòc	Languedoc
Lespona	Lesponne
Losèra	Lozère
Los Sarrasins	Castelsarrazin
Marsilha	Marseille
Massat	Massat
Naut Lèire	Haute-Loire
Nauta Vinhana	Haute-Vienne
Navarra	Navarre
Nissa	Nice
Ols	Oulx
Òlt	Lot
Òlt e Garona	Lot-et-Garonne
Pirinèus Atlantics	Pyrénées-Atlantiques (formerly Basses-Pyrénées)

Pirinèus Orientals	Pyrénées-Orientales
Prajalats	Pragelato
Pral	Pral
Provença	Provence
Puèi Domat	Puy-de-Dôme
Realmont	Réalmont
Rodés	Rodez
Ròse	Rhône
Salabertrand	Salbertrand
Sant Julian de Cremsa	Saint Julien de Crempse
Savinhac	Savignac-sur-Leyze
Tarn	Tarn
Tarn e Garona	Tarn-et-Garonne
Tolosa	Toulouse
Ubaia	Ubaye
Val Cluson	Val Chisone
Val Germanasca	Val Germanasca
Val Pelís	Val Pellice
Val Vermenanha	Val Vermenagna
Var	Var
Vauclusa	Vaucluse

Appendix ii. Questionnaire items.

1. j'aime marcher
2. il connaît bien son métier
3. j'ai bien dormi
4. il paraissait fatigué / la chronique paraissait tous les jours
5. la soupe est cuite
6. je connais bien mon voisin...
7. ...il se plaint aujourd'hui...
8. ...et demain il se plaindra encore
9. j'aime chanter
10. ce marchand m'a vendu du bon vin
11. ce beau temps fait croître les plantes
12. autrefois les gens se plaignaient beaucoup moins
13. si on le lui demande, il chantera une belle chanson
14. je dors très peu
15. si j'étais à sa place, je me plaindrais pas
16. il faut pas qu'il marche dans la boue
17. la soupe cuisait sur le feu
18. nous cuisons la soupe
19. je veux pas paraître méchant...
20. ...mais celui-là se plaindrait pour un rien
21. il faut traire les vaches
22. s'il travaillait plus il dormirait mieux
23. tu te plaindras
24. tu dors bien ?
25. je pense pas qu'il craigne le soleil

26. j'ai laissé la soupe sur le feu, comme ça elle cuira toute seule
27. quand il était petit il craignait le chien
28. quand il était jeune il chantait tout le temps
29. cette maison est à vendre
30. il faut pas qu'il chante trop fort
31. il paraît qu'il va faire beau
32. je veux que ma soupe cuise plus vite
33. nous marchons dans la rue
34. quoi qu'il arrive je me plaindrai pas
35. il vendra pas sa maison
36. vous vous plaignez trop !
37. elle m'a dit que son petit naîtrait à l'automne
38. si je l'arrosais plus, cette plante croîtrait mieux
39. je veux pas que cet article paraisse sur le journal
40. cette plante a bien crû
41. il y a des gens qui marchent dans la rue
42. il faut qu'il traie ses vaches
43. s'il s'y mettait, il connaîtrait bientôt tous les dép. par coeur
44. il a trait ses vaches ce matin
45. le petit naîtra au printemps
46. je trais mes vaches
47. s'il faisait beau, il marcherait dans les champs
48. de quoi ils se plaignent ?
49. s'il voulait bien, il nous chanterait quelque chose
50. il connaîtra bientôt tous les gens du village
51. j'ai craint...
52. ...qu'il ne se plaigne

53. je vends ma voiture
54. tu les connais...
55. ...ils se plaindront de tout
56. il faut que cette plante croisse
57. nous chantons
58. ce garçon ne craindra jamais rien
59. le petit dort bien
60. vous craignez le soleil ?
61. quand il avait les vaches il les trayait tous les jours
62. s'il avait besoin d'argent il vendrait sa voiture
63. il m'a dit qu'il traitait ses vaches tout à l'heure
64. vous chantez bien
65. il faut qu'il dorme un peu
66. nous nous connaissons depuis longtemps
67. le petit craint le chien
68. nous sommes pas à plaindre
69. nous dormons bien
70. si vous aviez connu la guerre, vous vous plaindriez pas
71. vous marchez souvent dans cette rue ?
72. de quoi tu te plains ?
73. je marche dans la rue
74. (pour les champignons) il faut connaître les bons coins
75. nous nous plaignons pas
76. ils se connaissent depuis longtemps
77. je me plains pas
78. il travaille en chantant
79. vous dormez bien ?

80. vous vous plaindrez plus tard
81. en vendant sa maison il a fait une belle affaire
82. ce petit craindrait même une mouche
83. il marchera encore longtemps
84. ça m'étonnerait qu'il se plaigne
85. les Anglais craignent le soleil
86. si j'arrose cette plante, elle croîtra bien
87. on m'a dit que l'article paraîtrait demain
88. on a connu des étés plus chauds
89. le petit va naître bientôt
90. il traira ses vaches tout à l'heure
91. j'irai au marché demain
92. l'article a paru sur le journal
93. il marche dans la rue
94. tu vends rien
95. il faut y aller
96. je pensais pas que tu connaisses ce vin
97. nous craignons rien / pas le soleil
98. ces jeunes, s'ils avaient connu la guerre ils se plaindraient pas
99. tu chantes bien
100. ce marchand vend du bon vin
101. quand il était petit, il dormait beaucoup
102. l'article paraîtra sur le journal de demain
103. il faut que tu connaisses ce vin
104. il marchait dans la rue
105. il fallait qu'il vende sa maison
106. je me suis jamais plaint

107. vous vendez du fromage de chèvre ?
108. nous en vendons
109. il y a rien à craindre
110. ce qu'il a chanté, c'était bien...
111. ... mais j'aurais préféré qu'il chante autre chose
112. si nous étions à leur place, nous nous plaindrions pas
113. les petits dorment
114. les voisins vendent leur maison
115. la soupe cuit sur le feu
116. vous connaissez les fromages d'ici ?
117. autrefois je connaissais quelqu'un sur le marché...
118. ... qui vendait du bon fromage
119. quoi qu'il arrive, nous nous plaindrons pas
120. ça fait du bien de dormir
121. cette fille chante bien
122. ce petit, il fallait qu'il dorme
123. je crains le soleil
124. tu fais ça maintenant mais tu te plaindras plus tard
125. il faut cuire la soupe
126. il y a des gens qui chantent (au travail, dans la rue...?)
127. si je baissais le feu, la soupe cuirait moins vite
128. je voulais que mes plantes croissent
129. la soupe et les patates cuisent sur le feu
130. il dormira bien ce soir
131. je cuis la soupe
132. il faut qu'il vende sa maison
133. les plantes croissaient mieux l'an dernier

- 134. il trait ses vaches tous les jours
- 135. j'ai beaucoup marché aujourd'hui
- 136. nous trayons nos vaches
- 137. s'il faisait beau j'irais au marché
- 138. cette plante croît bien

+optional items

- 64b. cette terre ne vaudra jamais rien
- 68b. cet outil, tu pourras t'en servir quand tu voudras
- 69b. il vaudrait mieux qu'il ne se plaigne pas
- 70b. sa femme voudrait une maison en ville

References

- Adams, J. N. 1991. 'Some neglected evidence for Latin *habeo* with infinitive: the order of the constituents'. *Transactions of the Philological Society* 89. 131-196.
- Adams, J. N. 2007. *The Regional Diversification of Latin 200BC-AD600*. Cambridge: CUP.
- Alcover, Antoni & Francesc Moll. 1929/1930/1932. 'La flexió verbal en els dialectes catalans'. *Anuari de l'Oficina romànica de lingüística i literatura* 2:79-184; 3:73-168; 4:9-104; 5:9-72.
- Alibèrt, Loís. 1965. *Dictionnaire occitan-français d'après les parlers languedociens*. Toulouse: Institut d'Etudes Occitanes.
- Alibèrt, Loís. 1976. *Gramatica occitana segon los parlars lengadocians*. Montpelhièr: CEO [2nd edition].
- Allanche, Louis. 1941. *Eléments de grammaire du dialecte quercynol des environs de Moissac et de Montauban suivis de proverbes et de dictons*. Montauban: Forestié.
- Allières, Jacques. 1997. 'Note sur le "futur du passé" en gascon moderne'. *Estudis Occitans* 21. 19-20.
- Anderson, Stephen. 1982. 'Where's morphology?'. *Linguistic Inquiry* 13. 571-612.
- Anderson, Stephen. 1992. *A-Morphous Morphology*. Cambridge: CUP.
- Anglade, Joseph. 1921. *Grammaire de l'ancien provençal*. Paris: Klincksieck.
- Arnaud, François & Gabriel Morin. 1920. *Le Langage de la vallée de Barcelonette*. Paris: Champion.
- Aronoff, Mark. 1994. *Morphology by Itself: Stems and Inflectional Classes*. Cambridge, Mass.: MIT Press.
- Azevedo, Milton M. 2005. *Portuguese: A Linguistic Introduction*. Cambridge: CUP.
- Baccon-Bouvet, Clelia. 2003. *Prontuario morfologico della parlata occitano alpina di Salbertrand*. Oulx: Comunità montana alta valle Susa.

- Badia i Margarit, Antoni M. 1994. *Gramàtica de la llengua catalana*. Barcelona: Enciclopèdia Catalana.
- Barceló, Gerard. 2004. 'Lo(s) futur(s) occitan(s) e la modalitat : elements d'estudi semantic comparatiu'. *Lingüística Occitana* 2.
<<http://www.revistadoc.org/file/Linguistica%20Occitana%202%20Barcelo.pdf>>.
- Barceló, Gérard Joan & Jacques Bres. 2006. *Les Temps de l'indicatif en français*. Paris: Ophrys.
- Bec, Pierre. 1967. *La Langue occitane*. Paris: PUF.
- Belmon, Jérôme & Françoise Vielliard. 1997. 'Latin farci et occitan dans les actes du XI^e siècle'. *Bibliothèque de l'Ecole des Chartes* 155. 149-183.
- Benoît, Robert & René Lavaud. 1932. *Abrégé de grammaire périgourdine*. Périgueux: Editions du Bournat du Périgord.
- Berretta, Monica. 1994. 'Il futuro italiano nella varietà nativa colloquiale e nella varietà d'apprendimento'. *Zeitschrift für Romanische Philologie* 110. 1-36.
- Bianco, Giovanna, Franco Bronzati, Jean-Michel Effantin, Philippe Martel, Rosella Pellerino (Comission internacionala per la normalizacion linguística de l'occitan alpin). 2008. *Nòrmas ortograficas, chausias morfològicas e vocabulari de l'occitan alpin oriental*. Espaci Occitan Regione Piemonte: Coni.
- Birabent, Jean-Pierre & Jean Salles-Loustau. 1989. *Memento grammatical du gascon*. Pau: Escòla Gaston Febus & Nosauts de Bigòrra.
- Blanchet, Philippe. 1992. *Le Provençal: essai de description sociolinguistique et différentielle*. Louvain: Peeters.
- Blaquière, Jan. 1997. *La Conjugaison instantanée de tous les verbes nissart*. Nice: Campanile.
- Blevins, James. 2006. 'Word-based morphology'. *Journal of Linguistics* 42. 531-573.
- Blinkenberg, Andreas. 1939. *Le Patois d'Entraunes*. Copenhagen: Munksgaard.
- Borillo, Andrée. 2005. 'Parmi les valeurs énonciatives du futur, le futur conjectural'. In Frédéric Lambert & Henning Nølke (eds.) *La Syntaxe au cœur de la grammaire*. Rennes: Presses Universitaires de Rennes. 35-44.

- Bosque, Ignacio & Violeta Delmonte. 1999. *Gramática descriptiva de la lengua española*. Madrid: Espasa Calpe.
- Bouras, Alain, Christian Espinas, Gérard Bayle, Isabelle Méjean. 2002. *Petite Grammaire de l'occitan dauphinois*. Montélimar: I.E.O. Drôme.
- Bouvier, Jean-Claude. 1992. 'La notion d'ethnotexte', in *Les Voies de la parole*, Aix-en-Provence: Université de Provence. 12-22.
- Bouzet, Jean. 1975. *Manuel de grammaire béarnaise*. Pau: Marrimpouey Jeune. [reprint of 1928 edition]
- Bowern, Claire. 2008. *Linguistic Fieldwork*. Basingstoke & New York: Palgrave Macmillan.
- Boyer, Henri, Georges Fournier, Philippe Gardy, Philippe Martel, René Merle & François Pic. 1989. *Le Texte occitan de la période révolutionnaire 1788-1800*. Montpellier: AIEO.
- Brunel, Clovis. 1926. *Les plus anciennes chartes en langue occitane*. Paris: Picard.
- Bybee, Joan L. 1985. *Morphology: a study of the relation between meaning and form*. Amsterdam: John Benjamins.
- Bybee, Joan. 2001. *Phonology and language use*. Cambridge: CUP.
- Bybee, Joan & Mary Brewer. 1980. 'Explanation in morphophonemics: changes in Provençal and Spanish preterite forms'. *Lingua* 52. 201-242.
- Bybee, Joan & William Pagliuca. 1987. 'The evolution of future meaning'. In Anna Giacalone-Ramat, Onofrio Carruba & Giuliano Bernini (eds.) *Papers from the 7th International Conference on Historical Linguistics*. Amsterdam: Benjamins. 109-122.
- Bybee, Joan, Revere Dale Perkins & William Pagliuca. 1994. *The evolution of grammar: tense, aspect and modality in the languages of the world*. Chicago: University of Chicago Press.
- Camproux, Charles. 1958. *Etude syntaxique des parlers gévaudanais*. Paris: PUF.
- Camproux, Charles. 1962. *Essai de géographie linguistique du Gévaudan*. Montpellier: PUF.
- Camps, Christian. 1985. *Atlas linguistique du Biterrois [ALB]*. Toulouse: Institut d'Estudis Occitans.

- Canestrier, Paul. 1950. 'Documents dialectaux du Haut-Var au XVIe siècle'. *Nice Historique* 1950. 53-58.
- Carstairs, Andrew. 1987. *Allomorphy in Inflexion*. London: Croom Helm.
- Castellani, Franco Elia. 2002. *Grammatica del dialetto di Cascinagrossa*. Alessandria: Edizioni dell'Orso.
- Caudéran, Hippolyte. 2004. *Petite Grammaire du parler gascon bordelais*. Pau: Princi Negue [reprint of 1861 edition].
- Chabaneau, Camille. 1876. *Grammaire limousine*. Paris: Maisonneuve.
- Chenal, Aimé. 1986. *Le Franco-provençal valdôtain*. Aoste: Musumeci Editor.
- Cherchi, Marcello. 1997. *Modern Georgian morphosyntax*. Wiesbaden: Harrassowitz.
- Cheshire, Jenny. 1982. *Variation in an English dialect: a sociolinguistic study*. Cambridge: CUP.
- Chontoclar [Albert Brunel] & Charles Camproux. 1931. *Petite Grammaire du dialecte lozérien*. Marseille: Les edicions del Ferre.
- Compan, André. 1981. *Grammaire niçoise*. Nice: Serre.
- Corbett, Greville. 2007. 'Canonical typology, suppletion, and possible words'. *Language* 83. 8-42.
- Costabile, Norma. 1973. *La flessione in italiano*. Roma: Bulzoni.
- Courouau, Jean-François. 2001. *Premiers Combats pour la langue occitane : manifestes linguistiques occitans XVIe-XVIIe siècles*. Biarritz: Atlantica.
- Courouau, Jean-François. 2008. *Moun lengatge bèl: Les choix linguistiques minoritaires en France (1490-1660)*. Geneva: Droz.
- Croft, William. 2003. *Typology and Universals*. Cambridge: CUP [second edition].
- Dalbera, Jean-Philippe. 1994. *Les Parlers des Alpes-Maritimes : étude comparative, essai de reconstruction*. London: AIEO.
- Deledar, Jòrdi. 2006. *Les Parlers couserannais*. Villeneuve-sur-Lot: Massourre.¹¹⁰

¹¹⁰Attributed in error to Jacques Allières, whose name appears on the cover and title page.

- Dendale, Patrick. 2001. 'Les problèmes linguistiques du conditionnel en français'. In Dendale, Patrick & Liliane Tasmowski (eds.) *Le conditionnel en français*. Metz: Université de Metz. 7-18.
- Dressler, Wolfgang (ed.). 1987. *Leitmotifs in Natural Morphology*. Amsterdam/Philadelphia: Benjamins.
- Duneton, Claude. 1978. *Parler croquant*. Paris: Stock.
- Durand, Bruno. 1941. *Grammaire provençale*. Aix-en-Provence: Fabré.
- Field, Thomas. 2003. 'Décalages entre forme et fonction dans la morphologie verbale gasconne'. In Rossana Castano, Saverio Guida & Fortunata Latella (eds.) *Scène, evolution, sort de la langue et de la littérature d'oc : Actes du Septième Congrès de l'Association Internationale d'Études Occitanes*, vol.II, 889-894. Roma: Viella.
- Fintel, Kai von & Sabine Iatridou. 2008. 'How to say *ought* in foreign: the composition of weak necessity modals'. In Jacqueline Guéron & Jacqueline Lecarme (eds.), *Time and modality*. New York: Springer. 115-141.
- Fleischman, Suzanne. 1982. *The Future in Thought and Language*. Cambridge: CUP.
- Fourvières, Xavier de. 2000. *Grammaire provençale*. [Avignon]: Aubanel. [reprint of edition c.1952]
- Gasiglia, Rémy. 1984. *Grammaire du nissart : essai de description d'un dialecte d'oc*. Nice: Institut d'Etudes Niçoises.
- Gleise Bellet, Augusta. 2003. *Appunti morfologici della parlata occitano alpina di Bardonecchia*. Oulx: Comunità montana alta valle Susa.
- Gourdon, Marie-Louise. 1975. *La gramatica nissarda de Joseph Micèu*. Nice: Pierrotti.
- Grévisse, Maurice & André Goosse. 1980. *Nouvelle Grammaire du français*. Paris: Duculot.
- Griffin, David A. 1994. 'On the origin of Spanish *eres*'. *Hispanic Review* 62. 469-476.
- Grosclaude, Michel & Gilabèrt Nariò. 1999. *Répertoire des conjugaisons occitanes de Gascogne*. Orthez/Pau: Per Nòste/La Civada.

- Halle, Morris & Alec Marantz. 1993. 'Distributed Morphology and the Pieces of Inflection'. In Hale, Kenneth & Samuel Jay Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*. Cambridge, Mass.: MIT Press. 111-176.
- Harris, James W. 1969. *Spanish Phonology*. Cambridge, Mass.: MIT Press.
- Harris, Martin. 1978. *The Evolution of French Syntax: a comparative approach*. London: Longman.
- Haspelmath, Martin. 2006. 'Against markedness (and what to replace it with)'. *Journal of Linguistics* 42. 25-70.
- Henrichsen, Arne-Johan. 1955. *Les Phrases hypothétiques en ancien occitan: étude syntaxique*. Bergen: A/S John Griegs Boktrykkeri.
- Hirsch, Ernst. 1978. *Provenzalische Mundarttexte aus Piemont*. Tübingen: Niemeyer.
- Hornstein, Norbert. 1990. *As Time Goes By: Tense and Universal Grammar*. Cambridge, Mass.: MIT Press.
- Hopper, Paul J & Elizabeth Closs Traugott. 2003. *Grammaticalisation*. Cambridge: CUP
- Iatridou, Sabine. 2000. 'The grammatical ingredients of counterfactuality'. *Linguistic Inquiry* 31, 231-270.
- Imbert, Léo. 1937. 'L'enquête sur les dialectes dans les Alpes-Maritimes en 1812'. *Nice Historique* 1937. 147-59.
- Imbs, Paul. 1960. *L'Emploi des temps verbaux en français moderne*. Paris: Klincksieck.
- Isnard, Emile. 1912. 'Deux lettres niçoises du XVI^e siècle'. *Nice Historique* 1912. 21-23.
- Jayme, Giovanna. 2003. *Appunti morfologici della parlata occitano provenzale alpina di Oulx*. Oulx: Comunità montana alta valle Susa.
- Jaszczolt, Kasia. 2009. *Representing Time*. Cambridge: CUP.
- Jensen, Frede. 1994. *Syntaxe de l'ancien occitan*. Tübingen: Niemeyer.
- Jourdan, Rino. 2010. *Lo vernantin*. La Ròcha: Chambrà d'Oc.
- Kattán-Ibarra, Juan & Christopher J Pountain. 2003. *Modern Spanish Grammar: a practical guide*, London: Routledge.

- Kelly, Reine Cardaillac. 1973. *A Descriptive Analysis of Gascon*. The Hague & Paris: Mouton.
- Kirsch, F Peter. 2002. 'Langue et littérature', in F. Peter Kirsch, Georg Kremnitz & Brigitte Schlieben-Lange, *Petite histoire sociale de la langue occitane : usages, images, littérature, grammaires et dictionnaires*. Perpignan: Trabucaire. 137-162.
- Koschwitz, Eduard. 1973. *Grammaire historique de la langue des Félibres*. Genève: Slatkine Reprints & Marseille: Laffitte Reprints.
- Kremnitz, Georg. 1981. *Das Okzitanische, Sprachgeschichte und Soziologie*. Tübingen: Niemeyer.
- Kremnitz, Georg. 2002a. 'La langue au miroir de l'histoire', in F. Peter Kirsch, Georg Kremnitz & Brigitte Schlieben-Lange, *Petite Histoire sociale de la langue occitane : usages, images, littérature, grammaires et dictionnaires*. Perpignan: Trabucaire. 13-44.
- Kremnitz, Georg. 2002b. 'Une approche sociolinguistique', in F. Peter Kirsch, Georg Kremnitz & Brigitte Schlieben-Lange, *Petite histoire sociale de la langue occitane : usages, images, littérature, grammaires et dictionnaires*. Perpignan: Trabucaire. 103-136.
- Labov, William. 1972. *Sociolinguistic Patterns*. University of Pennsylvania Press: Philadelphia.
- Labov, William. 2007. 'Transmission and diffusion.' *Language* 83. 344-387.
- Lafitte, Jean. 1996. *Le Gascon, langue à part entière*. Paris: LiGam-DiGam.
- Lafont, Robert. 1967a. *La Phrase occitane*. Paris: PUF.
- Lafont, Robert (ed.) 1967b. *Compendion de l'Abaco*. Montpellier: Université de Montpellier.
- Lafont, Robert. 1974. *Anthologie des baroques occitans*. Avignon: Aubanel.
- Lafont, Robert. 2003. *Petita istòria europèa d'Occitània*. Girona: Trabucaire.
- Lanly, André. 1971. 'Sur des formes occitanes de conditionnel sans -r-'. In Irénée Cluzel & François Pirot (eds.), *Mélanges de philologie romane dédiés à la mémoire de Jean Boutière (1899-1967)*. Liège: Soledi.
- Lass, Roger. 1997. *Historical Linguistics and Language Change*. Cambridge: CUP.
- Laurent, Jean-Pierre. 2001. *Le Dialecte de la vallée de Massat*. Montséron: J-P Laurent.
- Laurent, Jean-Pierre. 2002a. *Les Dialectes du Séronais, suivi de Le Séronais, histoire exemplaire d'un pays occitan*. Montseron: J-P Laurent.

- Laurent, Jean-Pierre. 2002b. *Le Dialecte gascon d'Aulus*. Montseron: J-P Laurent
- Lausberg, Heinrich. 1966. *Lingüística románica*. Madrid: Gredos.
- Ledgeway, Adam. 1998. 'Variation in the Romance infinitive: the case of the southern Calabrian inflected infinitive'. *Transactions of the Philological Society* 96. 1-61.
- Lepschy, Anna Laura & Giulio Lepschy. 1977. *The Italian Language Today*. London: Hutchinson.
- Lieber, Rochelle. 1992. *Deconstructing Morphology: Word Formation in Syntactic Theory*. Chicago: University of Chicago Press.
- Lieutard, Hervé. 2004. *Phonologie et morphologie du parler occitan de Graulhet (Tarn): Structure, contenu et rôle de la syllabe*. Montpellier: Université Paul-Valéry.
- Lignières, Marcel. 1951. *Grammaire pratique de langue d'oc, avec vocabulaire*. Béziers: Sudiep.
- Lodge, R Anthony. 1993. *French: from dialect to standard*. Routledge: London & New York.
- Lodge, R Anthony. 2006. *Les Comptes des Consuls de Montferrand (1273 – 1319)*. <<http://elec.enc.sorbonne.fr/montferrand/>>
- Loporcaro, Michele. 1986. 'L'infinito coniugato nell'Italia centro-meridionale: ipotesi genetica e ricostruzione storica'. *L'Italia dialettale* 49. 173-240.
- Loporcaro, Michele. 1999. 'Il futuro cantare-habeo nell'Italia meridionale'. *Archivio Glottologico Italiano* 84. 87-114.
- Maiden, Martin. 1995. *A Linguistic History of Italian*. London: Longman.
- Maiden, Martin. 1996a. 'Ipotesi sulle origini del condizionale analitico come 'futuro del passato' in italiano'. In Paola Benincà, Guglielmo Cinque, Tullio De Mauro & Nigel Vincent (eds.) *L'italiano nel tempo. Studi di grammatica offerti a Giulio Lepschy*. Rome: Bulzoni. 149-73.
- Maiden, Martin. 1996b. 'The Romance gerund and System-Dependent Naturalness in morphology'. *Transactions of the Philological Society* 94. 167-201.
- Maiden, Martin. 1997. 'A propos d'un changement analogique remarquable en roumain: le type *carte – cărți*'. *Vox Romanica* 56. 24-57.
- Maiden, Martin. 2000. 'Di un cambiamento intramorfologico: origini del tipo *dissi dicesti* ecc., nell'italoromanzo'. *Archivio glottologico italiano* 85. 137-71.

- Maiden, Martin. 2001. 'A strange affinity: perfecto y tiempos afines'. *Bulletin of Hispanic Studies* 58. 441-64.
- Maiden, Martin. 2004. 'Verb augments and meaninglessness in Romance morphology'. *Studi di grammatica italiana* 22. 1-61.
- Maiden, Martin. 2005a. 'Morphological autonomy and diachrony'. *Yearbook of Morphology* 2004. 137-75.
- Maiden, Martin. 2005b. 'Il problema del congiuntivo nell'insegnamento dell'italiano: verso una soluzione?' In Anna Laura Lepschy & Anna Rita Tamponi (eds.), *Prospettive sull'Italiano come Lingua Straniera*. Perugia: Guerra Edizione. 109-18.
- Maiden, Martin. 2009. 'Osservazione sul futuro dalmatico (e guascone)'. *Bolletino Linguistico Campano* 11/12. 1-19.
- Maiden, Martin. 2011a. 'Morphological persistence'. In Martin Maiden, John Charles Smith & Adam Ledgeway (eds.), *The Cambridge History of the Romance Languages*. Cambridge: CUP. 155-215.
- Maiden, Martin. 2011b. 'Morphophonological innovation'. In Martin Maiden, John Charles Smith & Adam Ledgeway (eds.), *The Cambridge History of the Romance Languages*. Cambridge: CUP. 216-67.
- Maiden, Martin. 2011c. 'Allomorphy, autonomous morphology and phonological conditioning in the history of the Daco-Romance present and subjunctive'. *Transactions of the Philological Society* 109. 59-91.
- Maiden, Martin. 2011d. 'Glimpsing the future. Some rare anomalies in the history of the Italo-Romance future and conditional stem, and what they suggest about paradigm structure'. Unpublished paper given to conference on Italian Dialects in Diachrony, Leiden, 19-25 May 2011.
- Maiden, Martin. 2011e. 'Morphemes and 'Stress-Conditioned Allomorphy' in Romansh'. In Martin Maiden, John Charles Smith, Maria Goldbach & Marc-Olivier Hinzelin (eds.),

- Morphological Autonomy: Perspectives from Romance Inflectional Morphology*. Oxford: OUP.
- Maiden, Martin & Paul O'Neill. 2010. 'On morphomic defectiveness: evidence from the Romance languages of the Iberian peninsula'. In Matthew Baerman (ed.), *Defective Paradigms*. London: British Academy/OUP. 103-24.
- Maiden, Martin, Paul O'Neill & Andrew Swearingen. 2009. 'Imperative Morphology in Diachrony: evidence from the Romance languages'. In M. Dufresne, F. Dupuis & E. Vocaj (eds.), *Historical Linguistics 2007*. Amsterdam: Benjamins. 99-108.
- Markopoulos, Theodore. 2009. *The future in Greek*. Oxford: OUP.
- Marantz, Alec. 1998. 'No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon'. In A. Dimitriadis, L. Siegel, et al. (eds.), *University of Pennsylvania Working Papers in Linguistics*, vol. 4.2, Proceedings of the 21st annual Penn Linguistics Colloquium, 1997. 201-225.
- Martel, Philippe. 2007. 'Qui parle occitan ?'. In *Langues et cité, bulletin de l'observatoire de pratiques linguistiques*, décembre 2007 no.10. 3.
- Martin, Guy & Bernard Moulin. 1998. *Grammaire provençale et cartes linguistiques*. Aix-en-Provence: Comitè Sestian d'Estudis Occitans.
- Massourre, Jean-Louis. 2006. *Le Gascon haut-pyrénéen. Vallées de Luz, de Barèges et de Gavarnie*. Villeneuve-sur-Lot: Massourre.
- Matthews, Peter. 1972. *Inflectional morphology*. Cambridge: CUP.
- Matthews, Peter. 1974. *Morphology: an Introduction to the Theory of Word Structure*. Cambridge: CUP.
- Matthews, Peter. 1982. 'Two problems in Italian and Spanish Verbal Inflection'. In Nigel Vincent & Martin Harris (eds.), *Studies in the Romance Verb*. London: Croom Helm. 1-18.
- Maurer, Theodoro Henrique Jr. 1968. *O Infinito Flexionado Português*. São Paulo: Companhia Editora Nacional.

- Meisenburg, Trudel. 1985. *Die Soziale Rolle des Okzitanischen in einer kleinen Gemeinde im Languedoc (Lacaune/Tarn)*. Tübingen: Niemeyer.
- Milroy, Lesley. 1987. *Observing and Analysing Natural Language*. Oxford: Blackwell.
- Milroy, Lesley & Matthew Gordon. 2003. *Sociolinguistics: method and interpretation*. Oxford: Blackwell.
- Morgenstern, Aliyah, Christophe Parisse & Martine Sekali. 2009. 'A la source du futur : premières formes verbales dans les productions spontanées de deux enfants français de 18 mois à 3 ans'. *Faits de Langues* 33. 163-75.
- Moulin, Bernard. 2006. *Grammaire occitane : le parler bas-vivarois de la région d'Aubenas*. Aubenas: IEO.
- Newmeyer, Frederick J. 2002. 'Uniformitarian assumptions and language evolution research'. In Alison Wray (ed.), *The Transition to Language*, Oxford: OUP. 359-375.
- O'Neill, Paul. 2011. 'The notion of the morpheme'. In Martin Maiden, John Charles Smith, Maria Goldbach & Marc-Olivier Hinzelin (eds.), *Morphological Autonomy*. Oxford: OUP. 70-94.
- Paden, William. 1998. *An Introduction to Old Occitan*. New York: Modern Language Association of America.
- Pastre, Louis. 1913. *Le Sous-dialecte bas-languedocien de Clermont-l'Hérault: notes historiques, philologiques, grammaticales, lexicographiques, folkloriques et bibliographiques*. Perpignan: Comet.
- Piat, Louis. 1911. 'Grammaire générale populaire des dialectes occitaniens. Essai de syntaxe.' *Revue des langues romanes* 54. 230-313.
- Pons, Teofilo. 1973. *Dizionario del dialetto valdese della Val Germanasca*. La Tour: Società di studi valdesi.
- Portal, Emanuele. 1914. *Grammatica provenzale (lingua moderna)*. Milano: Hoepli.
- Poujade, Patrice. 2009. *Répertoire toponymique des communes de Midi-Pyrénées/Repertòri toponimic de las comunas de la region Miègjorn-Pirinèus*. Toulouse: Loubatières.

- Proudfoot, Anna & Francesco Cardo. 1997. *Modern Italian Grammar: A Practical Guide*. London: Routledge.
- Quint, Nicolas. 1997. 'Etude de l'emploi du conditionnel deuxième forme dans la seconde partie de *la Canso de la crozada*'. *Estudis Occitans* 21. 2-12.
- Quint, Nicolas. 1998. *Le Parler occitan alpin du pays de Seyne*. Paris: L'Harmattan.
- Quint, Nicolas. 1999. *Le Parler occitan ardéchois d'Albon*. Paris: L'Harmattan.
- Rebuschi, George. 2009. 'La référence au futur en basque du nord.' *Faits de Langues* 33. 119-32.
- Rémi-Giraud, Sylviane (ed.). 1988. *L'infinitif*. Lyon: Presses Universitaires de Lyon.
- Revaz, Françoise. 2009. 'Valeurs et emplois du futur simple et du présent prospectif en français'. *Faits de Langues* 33. 149-62.
- Ricketts, Peter, Alan Reed, FRP Akehurst, John Hathaway & Cornelis van der Horst. 2005. *Concordance de l'Occitan Médiéval (COM2)*. Turnhout: Brepols.
- Rini, Joel. 1999. *Exploring the role of morphology in the evolution of Spanish*. Amsterdam: John Benjamins.
- Rixte, Jean-Claude, in preparation. *Comptes des consuls de Montélimar*. Unpublished ms.
- Rohlf, Gerhardt. 1935. *Le Gascon : études de philologie pyrénéenne*. Halle/Saale: Niemeyer.
- Rohlf, Gerhardt. 1954. "Un type archaïque de futur et de conditionnel en Haute-Bigorre (Gascogne)". In Toribio Lucero & Alfredo Dornheim (eds.), *Homenaje a Fritz Krüger*, vol.II. Mendoza: Universidad Nacional de Cuyo. 129-34.
- Rohlf, Gerhardt. 1968. *Grammatica storica della lingua italiana e dei suoi dialetti. Morfologia*. Torino: Giulio Einaudi.
- Rohlf, Gerhardt. 1969. *Grammatica storica della lingua italiana e dei suoi dialetti. Sintassi e formazione delle parole*. Torino: Giulio Einaudi.
- Romieu, Maurice & André Bianchi. 2005. *Gramatica de l'occitan gascon contemporanèu*. Bordeaux: Presses Universitaires de Bordeaux.
- Ronjat, Jules. 1930. *Grammaire istorique des parlers provençaux modernes, vol. I*, Montpellier: Société des Langues Romanes.

- Ronjat, Jules. 1932. *Grammaire istorique des parlars provençaux modernes, vol. II*, Montpellier: Société des Langues Romanes.
- Ronjat, Jules. 1937. *Grammaire istorique des parlars provençaux modernes, vol. III*, Montpellier: Société des Langues Romanes.
- Ronjat, Jules. 1941. *Grammaire istorique des parlars provençaux modernes, vol. IV*, Montpellier: Société des Langues Romanes.
- Roques, G. 1940. *Grammaire gasconne, dialecte de l'Agenais*. Genève: Slatkine Reprints.
- Saint-Guilhem, René. 1989. 'Le futur du passé en béarnais'. *Langues en Béarn. Cahiers de l'Université de Pau et des Pays de l'Adour* 15. 55-67.
- Savinian [Joseph Lhermitte]. 1978. *Grammaire provençale: précis historique de la langue d'oc*. Raphèle-lès-Arles: Marcel Petit [reprint of 1882 edition].
- Schäfer-Priess, Barbara. 2001. 'Le futur de probabilité'. *Revue de Sémantique et Pragmatique* 9/10. 9-17.
- Schlieben-Lange, Brigitte. 2002. 'Grammaires et dictionnaires' in F. Peter Kirsch, Georg Kremnitz & Brigitte Schlieben-Lange, *Petite histoire sociale de la langue occitane : usages, images, littérature, grammaires et dictionnaires*. Perpignan: Trabucaire. 45-101.
- Sibille, Joan. 1997. 'Nòta sus la subrevivéncia de la segonda forma de condicional de l'occitan vièlh dins l'Auta Val Doira e la Val Cluson (Itàlia)'. *Estudis Occitans* 21. 13-18.
- Sicre, Paul. 1909. *Eléments de grammaire du dialecte de Foix*. Foix: Société Ariégeoise.
- Skårup, Povl. 1997. *Morphologie élémentaire de l'ancien occitan*. Copenhagen: Copenhagen Museum Tusculaneum Press
- Smith, John Charles. 2010. 'The morpheme as a gradient phenomenon?'. Unpublished paper given to 2nd Oxford Workshop on Romance Morphology, 8-10 October 2010.
- Spencer, Andrew & Ana Luís. 2005. 'A Paradigm Function account of 'mesoclisism' in European Portuguese (EP)'. *Yearbook of Morphology* 2004. 177-228.

- Squartini, Mario. 2010. 'Where mood, modality and illocution meet'. In Martin G Becker & Eva-Maria Remberger (eds.), *Modality and Mood in Romance*. Berlin/New York: Walter de Gruyter. 109-30.
- Stich, Dominique. 1998. *Parlons Francoprovençal : une langue méconnue*. Paris: L'Harmattan.
- Stump, Gregory. 2001. *Inflectional Morphology*. Cambridge: CUP.
- Stump, Gregory. 2006. 'Heterocclisis and paradigm linkage', *Language* 82. 279-322.
- Sumien, Domergue. 2006. *La Standardisation pluricentrique de l'occitan: nouvel enjeu sociolinguistique, développement du lexique et de la morphologie*. Turnhout: Brepols.
- Talmon, Alberto. 1914. 'Saggio sul dialetto di Prigelato'. *Archivio Glottologico Italiano* 18. 1-101.
- Tintou, Michel. 1982. *Grammaire limousine*. Tulle: Lemouzi.
- Toscano, Reinat. 1996. *Conjugar en niçard*. Nice: Auba Novèla.
- Toscano, Reinat. 1998. *Gramàtica niçarda*. Toulouse: Princi Néguer.
- Touratier, Christian. 1996. *Le Système verbal français*. Paris: Masson & Armand Colin.
- Vet, Co. 2007. 'The descriptive inadequacy of Reichenbach's tense system: A new proposal'. *Cahiers Chronos* 17. 7-26.
- Vet, Co & Brigitte Kampers-Manhe. 2001. 'Futur simple et futur du passé : leurs emplois temporels et modaux'. In Dendale, Patrick & Liliane Tasmowski (eds.) *Le conditionnel en français*. Metz: Université de Metz. 89-104.
- Vetters, Carl & Audrey Lière. 2009. 'Quand une périphrase devient temps verbal : le cas d'aller + infinitif'. *Faits de Langues* 33. 27-36.
- Vignetta, Andrea. 1981. *Patuà. Grammatica del dialetto provenzale-Alpino della medio-alta Val Chisone*. Pinerolo: Alzani.
- Vouland, Pierre. 2005. *Du Provençal rhodanien parlé à l'écrit mistralien, précis d'analyse structurale et comparée*. Aix-en-Provence: Edisud.
- Walter, Henriette. 1998. *Le Français dans tous les sens*. Paris: Laffont.

- Weber, Eugen. 1976. *Peasants into Frenchmen: the modernization of rural France, 1870-1914*.
London: Chatto & Windus.
- Wheeler, Max. 1988. 'Occitan', in Harris, Martin & Nigel Vincent (eds.), *The Romance Languages*,
London: Routledge. 246-77.
- Wheeler, Max. 1993. 'On the hierarchy of naturalness principles in inflectional morphology'.
Journal of Linguistics 29. 95-111.
- Wheeler, Max, Alan Yates & Nicolau Dols. 1999. *Catalan: A Comprehensive Grammar*. London:
Routledge.
- Wolff, Carl. 1885. *Futur und conditional II im altprovenzalischen*. Marburg: N. G. Elwert.
- Wurzel, Wolfgang. 1987. 'System-dependent morphological naturalness in inflection'. In
Dressler, Wolfgang (ed.), *Leitmotifs in Natural Morphology*. Amsterdam/Philadelphia:
Benjamins. 59-96.