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Morphologically autonomous structures in the Romance languages

Summary

This contribution analyses morphologically autonomous structures within the context of the Romance languages, the family of languages which, along with Latin, have most served as an evidence base for these structures. Autonomous morphological structures are defined as an abstract representation of paradigmatic cells which form a cohesive group and reliably share exponents with each other, and the forms which realise them are thus to a large extent interpredictable. In this contribution I restrict my discussion to the most canonical type of these structure and those which have sparked the most controversy in the linguistic literature. I analyse this controversy and suggest that it is due to (a) their overlapping meaning with the term morphome, a concept which embodies an empirical claim about all morphology and (b) the controversy surrounding what morphology actually is and the basic units of morphological analysis and storage. Following Blevins (2006), I make a distinction between abstractive and constructive models of morphology and suggest that historical tendencies within the latter encourage scholars to view morphologically autonomous structures either as not synchronically relevant or as phonologically or semantically derivable due to their theoretical assumptions about the nature of language and the mental storage of words. These assumptions constitute the horizons of intelligibility (Schatzki 1996) of such models regarding the functioning of language and its governing principles, including outdated ideas of the capacity of mental storage. Unfortunately, however, the different theories furnish scholars with an expansive array of devices through which they can seemingly explain away the synchronic generalisations of the data while relegating the most recalcitrant data to the domain of memorised forms which are not relevant to the grammar. I present evidence in favour of the psychological reality of morphologically autonomous structures in diachrony and I argue that synchronically, these structures are necessary to explain the distribution of the data and capture the fact that speakers do not memorize every inflectional form of a paradigm but rely on patterns of predictability and implicational relationships between forms (Stump and Finkel 2013; Stump 2006; Bonami 2014; Ackerman, Blevins, and Malouf 2009; Blevins 2006; O'Neill 2014a; Blevins 2016). Morphologically autonomous structures, I suggest, encourage a revaluation of the basic units of memorisation and the structure of the lexicon along the lines of a theory of abstractive morphology as espoused in Blevins (2016).

1 What are morphologically autonomous structures?

Morphologically autonomous structures, which are synonymous at times with the concept of the morphome (Aronoff, 1994), are controversial in the linguistic literature; they are defended by some scholars (Cruschina et al. 2014; Maiden 2004, 2011, 2018; O'Neill 2011c, 2011a, 2015),

rejected or questioned by others (Bermúdez-Otero and Luís 2016; Luis and Bermúdez-Otero 2016; Nevins, Rodrigues, and Tang 2015) but ultimately not rigorously defined or formalized by anyone (see O'Neill 2014: 26-32, for an overview).

The source of the controversy seems to derive from both (a) the way in which the usage of the term morphologically autonomous structures overlaps with that of the term morphome, and the polysemy of this latter term, and (b) the lack of consensus amongst theoretical linguists as to what morphology actually is (see Stewart (2016: 1-9) for an overview[i]). Regarding the latter, the main causes of conflict and disagreement within theories of morphology centre around the basic unit of mental storage and how best to account for the internal structure of words: by means of memorised morphemes and deterministic symbolic rules or memorised words within complex networks governed by probabilistic structures[ii]. That is, is the frequent Spanish word *perros* 'dogs' produced by a deterministic rule which combines the memorised lexical morpheme PERRO with the memorised grammatical morpheme –S to produce a word which is the sum of its parts (PERRO+PLURAL), or is the word simply present in the mind due to its frequency? In the latter case, its internal structure and plural meaning would be explainable on the basis of its mental connections with other similar words and their plural meanings: *gatos, patos, ratas, cachorros, humanos*.

Blevins (2006, 2016) terms models of the first type *constructive* and those of the second *abstractive*. It is in an intellectual climate in which constructive theories were predominant that the concept of autonomous morphology was first introduced and for which autonomous morphological structures are the most controversial. Constructive models of morphology

typically 'isolate recurrent bases and exponents within a system, encapsulate each of these elements in an individual rule or entry that represents their grammatical properties, and then derive surface word forms form these simple elements by rules or other combinatoric principles' (Blevins 2006: 533). Within such theories, meaning is mentally represented as inherent lexical features which are associated with memorized roots/stems and syntactico-semantic features associated with grammatical morphemes. However, as evidenced by the examples of 'parasitic' or 'Priscianic' formations (Matthews 1972, 1991) and pointed out explicitly by Zwicky (1987) in reference to his principle of syntax-free morphology, there are cases in which the distribution of a form does not correspond to any coherent functional usage and it is not phonologically licenced. Such is the case of the Latin third stem which forms the basis of a collection of semantically heterogeneous wordforms, one of which, the past participle, is listed as the third principle part for Latin verbs in traditional grammars and dictionaries. Thus, the verb 'write' is cited as SCRĪBŌ, SCRĪPSĪ, SCRĪPTUS, SCRĪBERE, and its third stem serves as the base of the past participle (SCRĪPTUS), the supine (SCRĪPTUM) and the future participle (SCRĪPTŪRUS). Moreover, derivationally the third stem was also used to form desiderative verbs, iterative verbs and nouns with the suffixes -OR-, -ŪR- and -IŌ(N) (c.f. SCRĪPTITŌ, SCRĪPTOR, SCRĪPTŪRA, SCRĪPTIŌ). Below in (1) I give the different wordforms which display the third-stem allomorph for the Latin verbs TONDEŌ, TOTONDĪ, TŌNSUS, TONDĒRE'shear' and EMŌ, ĒMĪ, EMPTUS, EMERE 'buy'.

(1) The different verbal and nominal forms which take the third stem of the Latin verbs 'shear' and 'buy'.

	'to shear'	'to buy'
Past Participle	TŌNSUS	EMPTUS
Supine	TŌNSUM	EMPTUM

Future Participle	TŌNSŪRUS	EMPTŪRUS
Desiderative	-	EMPTŪRIO
Iterative	TŌNSITŌ	-
-OR-	TŌNSOR	EMPTOR
-ŪR-	TŌNSŪRA	-
-IŌ(N)	TONSIŌ	EMPTIŌ

Within a constructive theory of morphology in which the distribution of form is determined by a common syntax/semantics/phonology, one could postulate that the specifications in (1) were all associated with different but homophonous forms of the lexemes. However, the generalisation seems to be that the forms in (1) simply share the same morphological form (see also (Zwicky 1987 for English examples). This basic notion of multiple syntactic and semantic values being realized by the same morphological form is the theme of Aronoff's 1998 seminal monograph 'Autonomous Morphology'. He specifically analyses the Latin third stem and defines the relations between the forms in (1) as a morphologically autonomous structure, or morphome, which is the formalised abstract function which determines the recurrent and systematic appearance of form. Morphomes, however, also embody an empirical claim about the structure of language and the place of morphology within this structure: it is an autonomous system which mediates between the syntax/semantics and the phonology via functions = morphomes. That is morphomes determine all types of morphology not just cases in which the recurrent and systematic appearance of form appears in different and unrelated morphosyntactic and phonological contexts[iii].

An analysis of perfective and passive constructions in a number of Romance Languages will help to illustrate this point. The vast majority of the Romance languages employ the same past participle form in periphrastic constructions expressing perfectivity and passive. Portuguese is

the noted exception (see Maiden (2013) for other varieties) since it has a selection of verbs which display distinctive forms for the different periphrases. This is illustrated below in (2)

(2)

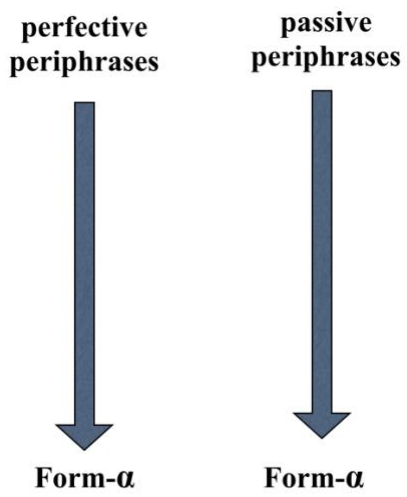
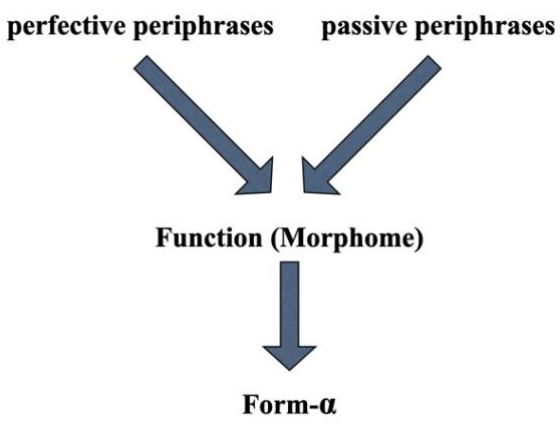
	a. Portuguese	b. Spanish	c. Italian
I had accepted (it) it was accepted	tinha aceitado foi aceito	había aceptado fue aceptado	avevo accettato è stato accettato
I had completed (it) it was completed	tinha concluído foi concluso	había concluido fue concluido	avevo concluso è stato concluso
I had saved (it) it was saved	tinha salvado foi salvo	había salvado fue salvado	avevo salvato è stato salvato
I had paid (it) it was paid	tinha pagado foi pago	había pagado fue pagado	avevo pagato è stato pagato
I had broken (it) it was broken	tinha rompido foi roto	había roto fue roto	avevo rotto è stato rotto
I had chosen (it) it was chosen	tinha elegido foi eleito	había elegido fue elegido	avevo scelto è stato scelto
I had sung (it) it was sung	tinha cantado foi cantado	había cantado fue cantado	avevo cantato è stato cantato

Disregarding the Portuguese examples for the moment, the point about this shared form for the differing usages is that it is not coincidental but, as with the Latin examples above in (1), it is systematic. This fact can be confirmed diachronically since any morphological innovation in one of the forms is mirrored in the other. Thus, from their Latin etyma the Spanish forms *concluido, elegido* in (2)b) differ from Italian ones *concluso, scelto*[iv] (2c) in that they are the result of morphological innovations. Crucially, however, these innovations occur in both passive and perfective periphrases: both contexts always share the same form. Portuguese, on the other hand, has adopted the novel forms only in the perfective periphrases for *concluir,* and *elegir*.

For Portuguese, therefore, one could argue that there is a direct relationship between function and form, as expressed pictographically in (3)a, in which it is also possible that both forms merely coincide, as is the case for the great majority of participles (*subido* 'gone up', *falado* 'spoken',

comprado 'bought').[v] For Spanish and Italian, however, disparate functions always share the same form and historical evidence show that this a psychological reality for speakers. In order to express this mapping between the same form and multiple grammatical meanings Aronoff (1994), with reference to other languages, proposed the morphomic level, which mediates between meaning and form via functions called morphomes. This is illustrated in (3) for the Italian and Spanish past participles. Without this level it is difficult to envisage how to ensure the consistency in the distribution and account for the diachronic data.

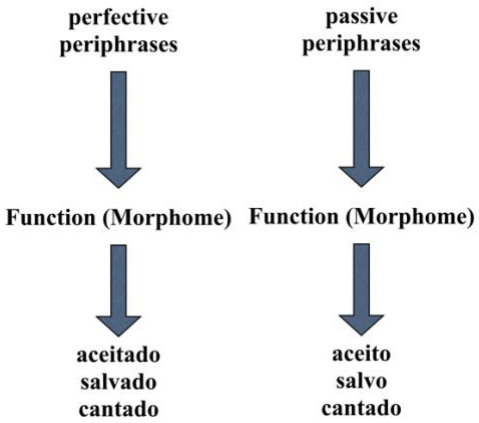
(3)

(a) Some Portuguese Past Participles	(b) All Spanish and Italian Past Participles
	

As explained above, Aronoff proposes a model of morphology which applies to *all* types of exponence; any type of morphological process takes place within the morphological 'autonomous' component and is subject to morphomes. Thus the Portuguese past participles in (2) would be represented as in (4) and not (3)a. For many theorists this level represents an

unnecessary level of complexity and redundancy since there is a correspondence between form and meaning.

(4) Portuguese past participles as morphomic functions



For Aronoff, who originally coined the term, however, morphomes govern all types of morphological processes, even ones in which there is a transparent and regular relationship between meaning and form, such as plural marking in nouns in English or Spanish where, in the great majority of cases, /s/ is concatenated to the end of a noun and general phonological principles can explain the corresponding allomorphs (*gato* - *gatos* 'cat - cats', *perro* - *perros* 'dog - dogs', *autobús* - *autobuses* 'bus - busses').

The question arises therefore: if autonomous morphological structures are morphomes and morphomes are present in all types of morphology, then is this current contribution merely about Romance morphology in general? The answer, of course, is no. The term morphome has come to be reserved for those cases which 'truly earn their name' (Aronoff 1994:25), in that there is a systematic recurrence of (usually several) forms which cannot be aligned with any conceivable coherent semantic, syntactic or phonological generalisation. In these structures, the discontinuous relationship between form and meaning is most apparent and they constitute the robust pillars of

evidence for the autonomous morphological level—they are canonical morphomes, morphomes in the narrow sense (Bermúdez-Otero and Luís 2016)) or simply autonomous morphological structures. These structures have come under intense criticism, since the most effective way to have the autonomous morphological level come crumbling down is to chip away at these pillars and claim that they are 'functionally' motivated (Bermúdez-Otero and Luís (2016) for Spanish; Steriade (2016) for the Latin 3rd stem); if the canonical morphomes are not morphologically autonomous then the whole idea of autonomous morphology is seriously compromised.

These are the structures which will be described and discussed in this chapter. The historical origin of these morphomes and the variation they display within the various Romance languages has been addressed in numerous publications (Maiden 2004, 2011, 2016) including a dedicated monograph (Maiden 2018). The current contribution, therefore, will focus more on the main theoretical issues at stake which are: are these morphomes really morphologically autonomous? Do they constitute grammatical realities for native speakers of Romance languages of the 21st century? And, what is the best way to formalise them theoretically? Anticipating my conclusions, I argue that there is solid evidence to consider morphomes as grammatical realities, that they are not derivable phonologically or explainable in terms of semantics without seriously compromising one's model of phonology and semantics and rendering them so powerful as to be invalid and that the only way to formalise morphomes in order to capture both the synchronic facts and diachronic tendencies is within an abstractive theory of morphology (Blevins 2006, 2016).

2 The PYTA morphome

The strongest candidate for morphomehood is the PYTA morphome, an acronym of the phrase *perfecto y tiempos afines* (or *pretérito y tiempos afines*) 'perfect and related tenses' describing the paradigmatic distribution of a certain type of identical allomorphy within a number of Spanish verbs. The tenses in which this allomorphy was present were the historical continuants of the Latin Perfective tenses and the particular allomorphy was the result of an inherited Strong Perfect Root (hereafter SPR) from Latin. In Latin the appearance of a SPR was aligned with the aspectual notion of perfectivity (FACIŌ 'I do' vs. FĒCĪ 'I did'; FACIAM 'I will do' vs. FĒCERO 'I will have done'). From Latin to Romance this aspectual property, common to all the PYTA tenses, was lost but, despite these tenses not being aligned with any coherent set of semantic or morphosyntactic properties, there still exist in several modern Romance Languages a number of lexemes which display a SPR exclusively in these cells (see Maiden 2018:ch.4 for a detailed overview). Spanish and Portuguese are the best examples: in modern Spanish the PYTA tenses consist of the preterite, and the imperfect subjunctive—two alternative paradigms, and there are approximately twelve verb roots[vi] (not counting their prefixal derivatives) that display a particular type of allomorphy exclusively in the PYTA tenses. In Portuguese the PYTA tenses are four in number (the preterite, the imperfect subjunctive, the pluperfect and the future subjunctive) and there are fifteen lexemes[vii] with SPRs. In (5) I give the inflectional paradigm for the Portuguese verb *saber* 'know' and in (6) that of the corresponding verb in Spanish.

(5) The Portuguese verb *saber* ‘know’

	Present IND	Present SBJ.	Future	Conditional	Conjugated Infinitive
1SG	sei	saiba	saberei	saberia	saber
2SG	sabes	saibas	saberás	saberias	saberes
3SG	sabe	saiba	saberá	saberia	saber
1PL	sabemos	saibamos	saberemos	saberíamos	sabermos
2PL	sabeis	saibais	sabereis	saberíeis	saberdes
3PL	sabem	saibam	saberão	saberiam	saberem
	IPFV IND	Preterite	Pluperfect	IPFV SBJ (se)	Future SBJ
1SG	sabia	soube	soubera	soubesse	souber
2SG	sabias	soubeste	souberas	soubesses	souberes
3SG	sabia	soube	soubera	soubesse	souber
1PL	sabíamos	soubemos	soubéramos	soubéssemos	soubermos
2PL	sabíais	soubestes	soubéreis	soubésseis	souberdes
3PL	sabiam	souberam	souberam	soubessem	souberem
	Imperative	Infinitive	Gerund	Participle	
2SG	sabe	saber	sabendo	sabido	
2PL	sabei				

(6) The Spanish verb *saber* ‘know’

	Present IND.	Present SBJ.	Future	Conditional
1SG	sé	sepa	sabré	sabría
2SG	sabes	sepas	sabrás	sabrías
3SG	sabe	sepa	sabrá	sabría
1PL	sabemos	sepamos	sabremos	sabríamos
2PL	sabéis	sepáis	sabréis	sabríais
3PL	saben	sepan	sabrán	sabrían
	IPFV SBJ (ra)	IPFV SBJ (se)	Preterite	IPFV IND.
1SG	supiera	supiese	supe	sabía
2SG	supieras	supiese	supiste	sabías
3SG	supiera	supiese	supo	sabía
1PL	supiéramos	supiésemos	supimos	sabíamos
2PL	supierais	supieseis	supisteis	sabíais
3PL	supieran	supiesen	supieron	sabían
	Imperative	Infinitive	Gerund	Participle
2SG	sabe	saber	sabiendo	sabido
2PL	sabed			

2.1 Can PYTA be motivated extramorphologically?

This distribution of allomorphy cannot be determined by a shared semantic or phonological conditioning element (O'Neill 2011c, 2011b; Maiden 2001b; O'Neill 2014a). The SPR defy any straightforward phonological explanation since, not only is there no coherent phonological conditioning environment which captures all the PYTA cells[viii], but their derivation would require several diverse phonological modifications (e.g., vowel raising plus the addition/substitution of a consonantal sound) which in some cases are restricted to one particular lexeme. Likewise, the allomorphy cannot be determined on the basis of a shared semantics since the preterite exclusively indicates past time, perfect aspect and indicative mood; the past subjunctive indicates subjunctive mood and is neutral regarding aspect[ix]. No conceivable semantic label or morphosyntactic semantic feature can exclusively subsume the various usages of the PYTA tenses in either language; the usages are semantically and syntactically heterogeneous but, despite this fact, they all share a root for the SPR verbs in the modern languages.

2.2 Evidence of PYTA being grammatically and psychologically real for speakers

This shared root is also not a case of accidental homonymy since historically the roots display what Maiden (2004c:139) has termed **coherence**:

> [the] '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 all the others in the same way. The relationship of mutual implication between "cells" always survives intact'.

There is ample historical evidence to illustrate this point in a number of Romance languages (see Maiden (2011: 181-87; 2018: ch. 4). Thus, the history of Spanish is characterised by either the

substitution of the SPR of many a lexeme by the root of the present/infinitive (*visco* > *vivió, visquesse* > *viviese*) or morphonological changes to the original SPR (FĒCĪ > *fize* and so *fezo* > *fizo*, *fezieron* > *fizieron*, *feziese* > *fiziese*, see O'Neill 2011c for more details). Crucially, the same root appears in all of the PYTA cells. That is, a change in one verbal form is either blocked or extends to all PYTA forms, the cells act as a group and share the same form.

Finally, it should be noted that a characteristic of the sets of lexemes which display allomorphy in morphomes is that their allomorphs tend to converge phonologically and assume a common phonological shape. Thus, in in the passage from Latin to old Spanish, the SPR of *haver* 'have', *ove,* directly or indirectly influenced the forms *tove* < TENUĪ 'had', *estove* < STETĪ 'was', *andove* < *ambitavi 'walked', *sove* SĒDĪ 'was', *crove* < CRĒDIDĪ 'believed' and *atrove* < ATTRIBUĪ 'granted'. In a later development of the language all SPR verbs came to be characterised by a high-vowel[x] in the root (*tuve*, *estuve, anduve*) which is still the case in the modern language (see footnote vi) with the exception of *traje* 'I brought', which was often *truje* in old Spanish. This would suggest that these allomorphs are somehow cognitively marked as belonging together despite their diverse semantics; the only aspect which unites them is their use in the cells of the PYTA morphome.

The foregoing has provided evidence that the allomorphy in the PYTA tenses is neither derivable semantically nor phonologically and that the underlying generalisation of the structure is that all forms share the same root allomorph. However, there is also evidence to suggest that the abstract structure itself is psychologically and grammatically real independently of the SPR verbs and thus the PYTA morphome could be a statement pertaining to the organisation and geometry of the

inflectional paradigm. The evidence for this bold statement is that historically the PYTA morphome can act as a domain within which morphophonemic alternations are levelled.

Witness, for example, the distribution of the rhotic consonants in (7), which are the *-ar* verb desinences for a selection of PYTA tenses in a number of Romance languages, and in proto-Romance. Spanish is the only language in the table which displays the rhotic consonant exclusively where it is etymologically motivated, in the 3PL preterite. The Romanian forms are of particular interest since the rhotic consonant has spread to all plural forms of the preterite and the other PYTA tense, which in modern Romanian is the pluperfect (see Maiden (2009) for justification of these two tenses not corresponding to any coherent semantic category).

(7) The desinences of the PYTA tenses in Proto-Romance and a number of modern Romance varieties

	Proto-Romance	**Castilian**	**Occitan**	**Catalan**	**Romanian**
	CONTINUANT OF LATIN PERFECT				
1sg	-ái	-é	-èri	-í	-ai
2sg	-asti	-aste	-ères	-ares	-aşi
3sg	-at ~ -aut	-ó	-èt	-à	-ă
1pl	-amus	-amos	-èrem	-àrem	-ărăm
2pl	-astis	-asteis	-èretz	-àreu	-ărăţi
3pl	-arunt	-aron	-èron	-aren	-ară
	CONTINUANT OF LATIN PLUPERFECT SUBJUNCTIVE				
1sg	-asse	-ase	-esi	-és	-asem
2sg	-asses	-ases	-eses	-essis	-aseşi
3sg	-asset	-ase	-ese	-és	-ase
1pl	-assemus	-ásemos	-esen	-éssim	-aserăm
2pl	-assetis	-aseis	-ests	-essiu	-aserăţi
3pl	-assent	-asen	-esen	-essin	-aseră

This analogical extension of desinences of regular *-ar* verbs within the domain of the PYTA morphome is remarkable since these verbs do not display allomorphy in the PYTA tenses. The

idea is that the patterns of allomorphy in a set of frequent verbs have marked out a domain within the morphology of the language and within this domain morphophonological alternations can be levelled. Here the assumption is, following evidence from Bybee (1985: 64-69; 1988, 2001), that the levelling of morphological alternations is indicative of forms being somehow mentally and linguistically connected.

What is striking is that the same phenomenon is observable in certain Southern-Gallo-Romance varieties and Western Ibero-Romance varieties but in these varieties it is the etymological /e/ of the 1SG preterite (*canté*) which spreads to other PYTA forms of *-ar* verbs (*cantara* > *cantera*). Observe the data in (8). In the first column I have given the probable desinences for the Proto-Romance forms in which all endings have the regular theme vowel /a/. The Portuguese forms are the most regular in that they are all explainable via regular sound change.[xi] All the other Romance varieties, however, cannot be explained via regular sound change, but rather via the extension of the vowel /e/or sequence /ei/ of the 1SG to other forms of the preterite. Thus, in the varieties termed Asturian 1, the /ei/ is present in all the forms of the preterite save the 3rd person forms, in which the 3PL is the only person to retain the etymological theme vowel /a/ in the preterite; the other PYTA tenses, however, all have the same theme conjugation vowel /a/. However, in those varieties, termed Asturian 2, in which there is no longer any /a/ in the preterite, the vowel /e/ has passed to the other PYTA tenses and, importantly, only to these tenses. This phenomenon is most prominent in Miranda and the geographically distant varieties of central and southern Gascon (Romieu and Bianchi 1995: 278-81).

The only possible explanation for the spread of this element from the forms of the preterite to the other PYTA tenses of the paradigm (and exclusively only these tenses) is that they are marked as being the domain of SPR allomorphy in a small number of very frequent verbs. That is, speakers have internalised the autonomous morphological structure valid for a handful of frequent verbs and it has become a way of structuring all verbs, even those verbs which do not or did not possess any formal features to justify such an organisation.

In sum, the diachronic evidence reveals that the PYTA morphome is not only psychologically and grammatically real in that it governs the distribution of SPR allomorphy but it can be grammatically determinative. That is, it can act as a template or mould to structure the inflectional morphology.

(8) The desinences and verbal forms of a number of tenses in a number of Romance varieties. In all but the Gascon varieties the diacritic accent marks the stressed vowel.

	Proto Romance	**Portuguese**	**Asturian 1**	**Asturian 2**	**Tras os Montes**	**Central & southern Gascon**
CONTINUANT OF LATIN PERFECT (PYTA)						
1SG	-ái	-éi (pt.)	-éi	-é	salté	cantèi
2SG	-áste	-áste	-éisti	-ísti	saltéstes	cantès
3SG	-áut / -á	-óu	-ó	-ó	saltóu	cantè(c)
1PL	-ámus	-ámos	-éimus	-émos	saltémos	cantèm
2PL	-ástis	-ástes	-éistis	-éstes	saltéstes	cantètz
3PL	-árunt	-áram	-ánun	-óren	saltéram	cantèn
CONTINUANT OF LATIN PLUPERFECT INDICATIVE (PYTA)						
3SG	-ára	-ára	-ara	-ára, -éra	saltéra	cantèri
CONTINUANT OF LATIN PLUPERFECT SUBJUNCTIVE (PYTA)						
3SG	-ase	-áse	-	-	saltése	cantèssi
CONTINUANT OF LATIN FUTURE PERFECT INDICATIVE & PERF. SUBJ. (PYTA)						
	-áre	-ár	-	-	saltér	-
CONTINUANT OF LATIN ACTIVE INFINITIVE (**NOT** PYTA)						
	-ár	-ár	-ár	-ár	saltár	cantár
CONTINUANT OF LATIN IMPERFECT INDICATIVE (**NOT** PYTA)						
3SG	-áva	-áva	-ába	- ába	saltáva	cantava
CONTINUANT OF LATIN PRESENT INDICATIVE (**NOT** PYTA)						
1PL	-ámos	-ámos	-ámos	-ámos	saltámos	cantam

3 The patterns of the present tenses

The present tenses of all the Romance languages are the locus of considerable amount of allomorphy due to the phonological historical effects of (a) stress, (b) yod, and (c) palatalization and/or affrication of velars before front vowels (Maiden 2004). These processes affected some cells of the present tenses and not others, producing different patterns of phonetically motivated allomorphy which were then morphologized and now the distribution of the allomorphy corresponds to different paradigmatic patterns which will be listed below.

3.1 The N-Pattern

The 'N-pattern'[xii] refers to a pattern of alternation, recurrent across the Romance languages, whereby the forms of the first, second and third persons singular and third person plural of the present indicative and of the present subjunctive, and the second person singular of the imperative, share a distinctive common form or phonological characteristic (rhizotonicity). This common form ranges from cases of vocalic allomorph of the root (9)&(10), to an augmented stem of various types (11), to suppletive forms ((12)&(13)). The latter cases are usually instances of incursive suppletion (used in the sense of Corbett (2007).

(9) A selection of Italian verbs which display N-pattern vocalic allomorphy: *morire* 'die', *udire* 'hear', *sedere* 'sit'

	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG.	muoio	muoia	odo	oda	siedo	sieda

2SG.	muori	muoia	odi	oda	siedi	sieda
3SG.	muore	muoia	ode	oda	siede	sieda
1PL.	moriamo	moriamo	udiamo	udiamo	sediamo	sediamo
2PL.	morite	moriate	udite	udiate	sedete	sediate
3PL.	muoiono	muoiano	odono	odano	siedono	siedano
2SG.	Imperative	muori	Imperative	odi	Imperative	siedi
1SG.	Imp. indic	morivo	Imp. indic	udivo	Imp. indic	sedevo

(10) A selection of Spanish verbs which display N-pattern vocalic allomorphy: *sentar* 'sit', *perder* 'loose', *poder* 'be able', *sentir* 'feel', *convertir* 'convert', *morir* 'die'.

	Indicative	Subjunctive	Indicative	Subjunctiv	Indicative	Subjunctive
1SG	siento	siente	pierdo	pierda	puedo	pueda
2SG	sientas	sientes	pierdes	pierdas	puedes	puedas
3SG	sienta	siente	pierde	pierda	puede	pueda
1PL	sentamos	sentemos	perdemos	perdamos	podemos	podamos
2PL	sentáis	sentéis	perdéis	perdáis	podéis	podáis
3PL	sientan	sienten	pierden	pierdan	pueden	puedan
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	siento	sienta	convierto	convierta	muero	muera
2SG	sientes	sientas	conviertes	conviertas	mueres	mueras
3SG	siente	sienta	convierte	convierta	muere	muera
1PL	sentimos	sintamos	convertimos	convirtamos	morimos	muramos
2PL	sentís	sintáis	convertís	convirtáis	morís	muráis
3PL	sienten	sientan	convierten	conviertan	mueren	mueran

(11) Augmented stems which display N-pattern allomorphy for the Catalan verb *servir* 'serve', the Occitan verb *obrir* 'open' and the Italian verb *finire* 'finish'.

	Catalan		Occitan		Italian	
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG.	serveixo	serveixi	orbéishi	orbéishi	finisco	finisca
2SG.	serveixes	serveixis	orbéishes	orbéishas	finisci	finisca
3SG.	serveix	serveixi	orbéish	orbéisha	finisce	finisca
1PL.	servim	servim	orbím	orbam	finiamo	finiamo
2PL.	serviu	serviu	orbítz	orbatz	finite	finiate

3PL.	serveixen	serveixin	orbéishen	orbéisham	finiscono	finiscano

(12) The verb 'go' in Italian and Catalan, which contains reflexes of Latin VĀDERE 'to go forward in an aggressive way', surviving exclusively in the N-pattern cells but reflexes of AMBULĀRE 'walk' exclusively in the remainder of the paradigm.

	Italian		Catalan	
	Indicative	Subjunctive	Indicative	Subjunctive
1SG.	vado	vada	vaig	vagi
2SG.	vai	vada	vas	vagis
3SG.	va	vada	va	vagi
1PL.	andiamo	andiamo	anem	anem
2PL.	andate	andate	aneu	aneu
3PL.	vanno	vadono	van	vagin

(13) More incursive suppletion in present indicative of the N-pattern; the verb 'give' in localities in Italy (Liguria-Piedmont border (Schädel 1903: 108), conflates Latin DARE 'give' and DONARE 'donate'; the verb 'find' in Sicily (Leone 1980: 36-39;91f.) conflates **tropare* 'find' and reflexes of AD + FLARE 'sniff (out)'; and, the verb 'pull' in various Romansh varieties (Decurtins 1958: 31f) conflates Latin TRAHERE 'pull, draw' and *tirare 'pull'.

	Liguria-Piedmont border	Varieties of Sicilian	Varieties of Romansh
1SG.	[ˈdau]	[ˈtrwovu]	[ˈtir]
2SG.	[ˈdas]	[ˈtrwovi]	ˈtiras]
3SG.	[ˈda]	[ˈtrova]	[ˈtira]
1PL.	[duˈnaŋ]	[ˈʃamu]	[tarˈɟaŋ]
2PL.	[duˈna]	[ˈʃati]	[tarˈɟais]
3PL.	[ˈdaŋ]	[ˈtrovunu]	[ˈtiran]

For a full discussion of the origins of this pattern, its different instantiations in the different Romance languages and questions related to its autonomous morphological status, see Maiden (2018:ch. 6)

3.2 The L-pattern

The L-pattern[xiii] denotes an alternation within the verbal paradigm whereby an allomorph distinct from the rest of the paradigm is shared by the 1SG present indicative and all of the present subjunctive[xiv] (Maiden 2004c). This is a characteristic of some non-first conjugation verbs in Portuguese[xv] (14) and Spanish[xvi] (15) and is attested in many other Romance languages; again, see Maiden (2018: ch. 5) for a full and detailed historical and theoretical discussion.

(14) Portuguese verbs *ter* 'have', *ver* 'see', *fazer* 'do', *vir* 'come', *medir* 'measure', and *caber* 'fit'

	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG.	tenho	tenha	vejo	veja	faço	faça
2SG.	tens	tenhas	vês	vejas	fazes	faças
3SG.	tem	tenha	vê	veja	faze	faça
1PL.	temos	tenhamos	vemos	vejamos	fazemos	façamos
2PL.	tendes	tenhais	vedes	vejais	fazeis	façais
2&3PL.	têm	tenham	vêem	vejam	fazem	façam
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG.	venho	venha	caibo	caiba	meço	meça
2SG.	vens	venhas	cabes	caibas	medes	meças
3SG.	vem	venha	cabe	caiba	mede	meça
1PL.	vimos	venhamos	cabemos	caibamos	medimos	meçamos
2PL.	vindes	venhais	cabeis	caibais	medis	meçais
2&3PL.	vêm	venham	cabem	caibam	medem	meçam

(15) Spanish verbs *valer* 'be worth', *crecer* 'grow', *hacer* 'do', *caber* 'fit', *caer* 'fall', *salir* 'go out'.

	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	valgo	valga	crezco	crezca	hago	haga
2SG	vales	valgas	creces	crezcas	haces	hagas
3SG	vale	valga	crece	crezca	hace	haga

1PL	valemos	valgamos	crecemos	crezcamos	hacemos	hagamos
2PL	valéis	valgáis	crecéis	crezcáis	hacéis	hagáis
2&3PL	valen	valgan	crecen	crezcan	hacen	hagan
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	quepo	quepa	caigo	caiga	salgo	salga
2SG	cabes	quepas	caes	caigas	sales	salgas
3SG	cabe	quepa	cae	caiga	sale	salga
1PL	cabemos	quepamos	caemos	caigamos	salimos	salgamos
2PL	cabéis	quepáis	caéis	caigáis	salís	salgáis
2&3PL	caben	quepan	caen	caigan	salen	salgan

In dialects of central Italy and in Daco-Romance there is a historically motivated variant to the L-pattern, termed the U-pattern, which also includes the 3PL present indicative. In Italian, this U-pattern has been further modified by the exclusion of the 1PL and 2PL present subjunctive forms as illustrated in (16).

(16) The Italian verbs *cogliere* ‘pick’, *venire* ‘come’, *tenere* ‘have’, *dire* ‘say’, *leggere* ‘read’, crescere ‘grow’

	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	colgo	colga	vengo	venga	tengo	tenga
2SG	cogli	colga	vieni	venga	tieni	tenga
3SG	coglie	colga	viene	venga	tiene	tenga
1PL	cogliamo	cogliamo	veniamo	veniamo	teniamo	teniamo
2PL	cogliete	cogliate	venite	veniate	tenete	teniate
3PL	colgono	colgano	vengono	vengano	tengono	tengano
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	dico	dica	leggo	legga	cresco	cresca
2SG	dici	dica	leggi	legga	cresci	cresca
3SG	dice	dica	legge	legga	cresce	cresca
1PL	diciamo	diciamo	leggiamo	leggiamo	cresciamo	cresciamo
2PL	dite	diciate	leggete	leggiate	crescete	cresciate
3PL	dicono	dicano	leggono	leggano	crescono	crescano

3.3 Patterns due to the interaction and combinations of the N-pattern and L-pattern

Both the N-pattern and L-pattern make reference to overlapping forms as illustrated in (17) in which the light grey shading denotes cells which are exclusively part of the N-pattern, the dark grey shading marks cells which are exclusively part of the L-pattern, the diagonal lines designate those cells which are common to both patterns, and the clear cells mark those forms which do not form part of either.

(17)

	Present Ind	Present Sbjv
1sg.		
2sg.		
3sg.		
1pl.		
2pl.		
3pl.		
	Imperative	
2sg.		
2pl.		

If such morphologically autonomous structures generally determine the occurrence of similar morphological form, the overlapping structures are problematic since the tendency towards a certain common form (root/desinence) in one morphome could clash with demands of common form of another. The different Romance languages have dealt with such overlapping patterns in the following various ways:

- the patterns can merge producing a larger N&L-pattern as attested largely in varieties of Romansh (18) and also in Aragonese varieties[xvii] (19) spoken around the valley of Benasque (Saura Rami 2003).

- one pattern can take dominance over the other, reducing the former and producing either
    - the L>N-pattern (to be read as the L dominates the N-pattern) as attested largely by Portuguese (20),
    - or, the N>L-pattern (to be read as the N dominates the L-pattern) as attested in the 1PL & 2PL present subjunctive of Spanish *-ir* verbs which diphthongize in the N-pattern (21).
- the different patterns can be aligned to different types of allomorphy: the N-pattern is the domain of diphthongisation and of morphological roots and the L-pattern that of velar allomorphy and desinential endings. This pattern is attested in some Asturian[xviii] and Aragonese varieties, the latter are reproduced in (22) (see O'Neill (2018: 31-36) for a discussion of this pattern).

(18) Allomorphy according to the N&L[xix] pattern for the Savognin variety of Romansh for the verbs *cuntschier* 'tinker' *declarár* 'declare', *manár* 'lead', *ruschanar* 'speak', *tradéir* 'betray' and *néir* 'come' (Anderson (2008, 2011).).

	Indicative	Subjunctive	Indicative	Subjunctiv	Indicative	Subjunctive
1SG	ˈkuntʃ	ˈkuntʃə	daclér	dacléra	mágn	mágna
2SG	ˈkuntʃəs	ˈkuntʃəs	dacléras	dacléras	mágnas	mágnas
3SG	ˈkuntʃə	ˈkuntʃə	dacléra	dacléra	mágna	mágna
1PL	kʊnˈtʃaŋ	ˈkuntʃən	declarágn	dacléran	manágn	mágnan
2PL	kʊnˈtʃɛts	ˈkuntʃəs	declaráz	dacléras	manáz	mágnas
3PL	ˈkuntʃən	ˈkuntʃən	dacléran	dacléran	mágnan	mágnan
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	raschúng	raschúnga	tradésch	tradéscha	vígn	vígna
2SG	raschúngas	raschúngas	tradéschas	tradéschas	vígnst	vígnas
3SG	raschúnga	raschúnga	tradéscha	tradéscha	vígna	vígna
1PL	ruschanágn	raschúngan	tradígn	tradéschan	nín	vígnan
2PL	ruschanáz	raschúngas	tradíz	tradéschas	níz	vígnas
3PL	maséiran	raschúngan	tradéschan	tradéschan	vígnan	vígnan

(19) Diphthongized allomorphy associated with the N&L-pattern for the verbs *serner* and *dormir* in a Benasque variety of Aragonese

	Indicative	Subjunctive	Indicative	Subjunctive
1SG	siérno	siérne	dwérmo	dwérme
2SG	siérnes	siérnas	dwérmes	dwérmas
3SG	siérne	siérna	dwérme	dwérma
1PL	serném	siernám	dormím	dwermám
2PL	sernéts	siernáts	dormíts	dwermáts
3PL	siérnen	siernan	dwérmen	dwérman

(20) Two types of allomorphy corresponding to the L>N-pattern in Portuguese[xx] exemplified by the *-er* verbs *dever* 'owe', *mover* 'move', *beber* 'drink' and the *ir* verbs *servir* 'serve', *dormir* 'sleep', *vestir* 'dress'. Grey cells = L-pattern, lighter grey = reduced N-pattern

	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	d[e]vo	d[e]va	m[o]vo	m[o]va	b[e]bo	b[e]ba
2SG	d[ɛ]ves	d[e]vas	m[ɔ]ves	m[o]vas	b[ɛ]bes	b[e]bas
3SG	d[ɛ]ve	d[e]va	m[ɔ]ve	m[o]va	b[ɛ]be	b[e]ba
1PL	devemos	devamos	movemos	movamos	bebemos	bebamos
2PL	devis	devais	moveis	movais	bebeis	bebais
2PL/3PL	d[ɛ]vem	d[e]vam	m[ɔ]vem	m[o]vam	b[ɛ]bem	b[e]bam
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	sirvo	sirva	durmo	durma	visto	vista
2SG	s[ɛ]rves	sirvas	d[ɔ]rmes	durmas	v[ɛ]stes	vistas
3SG	s[ɛ]rve	sirva	d[ɔ]rme	durma	v[ɛ]ste	vista
1PL	servimos	sirvamos	dormimos	durmamos	vestimos	vistamos
2PL	servis	sirvais	dormis	durmais	vestis	vistais
2PL/3PL	s[ɛ]rvem	sirvam	d[ɔ]rmem	durmam	v[ɛ]stem	vistam

(21) Two types of allomorphy corresponding to the N>L-pattern for the Spanish verbs *dormir* 'sleep', *morir* 'die', *preferir* 'prefer', *sentir* 'feel', *convertir* 'become', *hervir* 'boil'. Grey cells = N-pattern, darker grey cells = reduced L-pattern

	Indicative	Subjunctive	Indicative	Subjunctiv	Indicative	Subjunctive
1SG	duermo	duerma	muero	muera	prefiero	prefiera
2SG	duermes	duermas	mueres	mueras	prefieres	prefieras
3SG	duerme	duerma	muere	muera	prefiere	prefiera

1PL	dormimos	durmamos	morimos	muramos	preferimos	prefiramos
2PL	dormís	durmáis	morís	muráis	preferís	prefiráis
3PL	duermen	duerman	mueren	mueran	prefiern	prefieren
	Indicative	Subjunctive	Indicative	Subjunctive	Indicative	Subjunctive
1SG	siento	sienta	convierto	convierta	hiervo	hierva
2SG	sientes	sientas	conviertes	conviertas	hierves	hiervas
3SG	siente	sienta	convierte	convierta	hierve	hierva
1PL	sentimos	sintamos	convertimos	convirtamos	hervimos	hirvamos
2PL	sentís	sintáis	convertís	convirtáis	hervís	hirváis
3PL	sienten	sientan	convierten	conviertan	hierven	hiervan

(22) The verbs *torzer* 'twist', *tener* 'have' and *doler* 'hurt' in the Ansotano variety of Aragonese (Barcos 2007:90). The N-pattern is the domain of diphthongisation and morphological roots and is in the shaded cells; the L-pattern is the domain of velar allomorphy and desinential endings, which are highlighted in bold.

	Indicative	Subjunctive	Indicative	Subjunctiv	Indicative	Subjunctive
1SG	tuerz**co**	tuerz**cai**	tien**go**	tien**gai**	duel**go**	duel**gai**
2SG	tuerces	tuerz**cas**	tienes	tien**gas**	duels	duel**gas**
3SG	tuerce	tuerz**ca**	tiene	tien**ga**	duele	duel**ga**
1PL	torcemos	torz**camos**	tenemos	ten**gamos**	dolemos	dol**gamos**
2PL	torcez	torz**caz**	tenez	ten**gaz**	dolez	dol**gaz**
3PL	tuercen	tuerz**can**	tienen	tien**gan**	duelen	duel**gan**

3.4 Are these patterns motivated extra-morphologically?

I shall not address the arguments which attempt to motivate the N-pattern on semantic grounds but, due to space restrictions, refer readers to Maiden's (2018:§6.3.1-:§6.3.2) critique of these arguments. As for the L-pattern, whilst it is true that all cells of this pattern share present tense features, they differ with respect to mood and person and number features. Furthermore, the common present tense features are also shared by all forms of the present indicative and the only cell of these which belongs to the L-pattern is the 1SG. The inclusion of the 1SG present indicative within the L-pattern also defies any generalisation about these cells in terms of markedness

principles, as proposed by Klausenburger (1984). Although all the present subjunctive forms can be considered to be marked with respect to the rest of present tense, this cannot be claimed to be the case for the frequently occurring 1SG present indicative. Thus, the L-pattern, N-pattern and their different combinations do not share any coherent set of semantic features nor markedness features sufficient to determine the common allomorphy present in these cells.

Regarding a phonological motivation for such allomorphy, there is an ongoing and unresolved debate in the literature. The debate has centred around the N&L-pattern allomorphy in Savognin Romance (18), the N-pattern distribution of diphthongised forms in Spanish (10) and the L-pattern distribution of velar allomorphy in Italian (16).

Regarding the latter, the distribution of velar allomorphy in both Italian and Spanish can be expressed in terms of a simple phonological generalisation: all the cells in which velar allomorphy occurs exclusively have a non-front vowel in the desinence. This correlation has been considered a conditioning phonological factor for its distribution (cf. St. Clair and Park (1974), for Spanish; Burzio (2004), for Italian). A number of authors have argued at length against the assumption of synchronic phonological conditioning of velar allomorphy in both Spanish (O'Neill 2015, 2014b) and Italian (Maiden 2001a, 2009; Pirrelli 2000: 79f.;178-84; Pirrelli and Battista 2000). Concentrating on the Italian data, the main point of the argument is that there are numerous surface counterexamples to a phonological rule which bans velar allomorphs before front vowels but licenses it before back vowels (*amiche* 'friends', *alghe* 'seaweed', *laghi* 'lakes', *pacchi* 'packages'; and the verb forms *paghi*, *pagherà* from *pagare* 'pay'; *rischi*, *rischierà* from *rischiare* 'risk').[xxi] Burzio (2004), however, notes that this phonological alternation is widely attested in

the verbal paradigm and beyond and that this massive statistical correlation is necessarily relevant to how speakers account for the distribution of allomorphy. He claims that 'whatever identity relations have a statistical presence in the data, also have, ipso facto, a grammatical status, expressible as a faithfulness constraint in the O[ptimality] T[heory] formalism'. Thus he advocates a theory of phonological conditioning for the velar allomorphy in Italian and explains away the counterexamples in terms of the ranking order of violable constraints. Maiden (2009a), however, rejects such claims and, on the basis of comparative Italo-Romance data, strongly argues that the correlation between the velar allomorphy and the following front vowel is a synchronic accident and not a synchronic conditioning factor.[xxii]

The same arguments based on the cooccurrence of a phonological feature, this time stress, are targeted at the N-pattern in order to undermine its status as an autonomously morphological structure/morphome. All cells of the N-pattern share the exclusive property of being rhizotonic. This correspondence is therefore viewed by some to be a conditioning factor of the allomorphy in these cells. The assumption, identical to that of phonological conditioning of velar allomorphy, is that a recurrent phonological correlation between two elements, say X and Y, is tantamount to a causal relationship such that X conditions Y. Such assumptions are widespread in linguistics. I question this assumption and maintain that the correlation between the N-pattern, N&L pattern and rhizotonicity is an accident of history (see also Maiden (2009, 2011). Allomorphy in the N-pattern is not phonologically conditioned by stress since the placement of stress in the majority of the Romance languages became morphologized and is synchronically determined in the present tenses by either the N-pattern or N&L- patterns (see also Maiden 2018: §6.3.4).

That stress has been morphologized in Spanish is clear from the minimal pairs in regular *-ar* verbs: *canto*(1SG.PRS.IND) *vs. cantó* (3SG.PRET)*, cante* (1/3SG.PRS.SBJ) *vs, canté* (1SG.PRET)*, cantara* (1/3SG.IPFV.SBJ) *vs. cantará* (3SG.FUT.IND). All phonological accounts of stress have had to factor in certain amounts of stress morphologization (Den Os and Kager 1986; Harris 1983, 1987, 1989; Hooper and Terrell 1976; Lipski 1997; Saltarelli 1997) and especially Roca (1988; 1990: 334). However, all such accounts have refused to recognize that stress is entirely morphologized in the N-pattern cells, since these cells are the locus of diphthongized allomorphy, which has always been considered phonologically conditioned. The resultant accounts of stress rely on a series of ad hoc stipulations or doubtful and/or tenuously supported empirical facts and recourse to various theory internal devices. The collective combined result is that various different factors manage to (a) produce the pattern of accentuation in the present tenses and thus phonologically condition the allomorphy and (b) predict the lack of such allomorphy in unstressed position outside the verb, e.g. in words such as *cuentecita* 'little short story', *cuentista/cuentón* 'person given to telling exaggerated stories/ spreading gossip' related to the diphthongizing verb *contar* 'tell a story'.

The account of Spanish diphthongization[xxiii] by Bermúdez-Otero (2013) is one such account, and in a very similar vein Anderson (2008, 2011) has claimed that the N&L-pattern allomorphy in Savognin Romansh (see examples in (18)(18)) is phonologically conditioned. These two authors share the view that the allomorphy in the respective Romance varieties which they analyse is not derived phonologically from a single underlying representation (Anderson 2011:19-22) but that there are two different stored allomorphs for each lexeme and their distribution is a matter of phonologically conditioned allomorph selection. Their rigorous and theoretically sophisticated

phonological analysis of stress manages to account for all attested patterns of allomorphy. However, as Eddington (2004: 3) has rightly pointed out, 'a detailed, rigorous, or sophisticated description of a linguistic phenomenon does not necessarily indicate that the phenomenon has any relevance to linguistic cognition' (see also Derwing, Prideaux, and Baker (1980); Goyvaerts (1978); Lass (1976); Morin (1988); Skousen (1989); Botha (1971)). Space does not permit us here to detail the weaknesses and faults in their phonological account for stress patterns (for a full discussion see O'Neill (forthcoming)). In what follows therefore, I briefly overview their model of phonology and provide comparative data from other varieties of Ibero-Romance which support the view that the cooccurrence of stress and diphthongized allomorphy in the Spanish verb is an accident of history; the same situation I argue is valid for Savognin Romansh.

One would think that the strongest argument against phonologically conditioned allomorphy is the presence, outside the verb, of direct counterexamples of the conditioning relationship between stress and diphthongised stems in Spanish and stored stem allomorphs in Romansh. Witness the examples in (23) for Spanish and (24) for Savognin Romansh.

(23) Infinitive and 3SG present indicative verb forms of Spanish verbs which display the diphthong-monophthong alternation correlated with stress and semantically related words in which the diphthongized allomorph appears in unstressed position.

Alternation within the verb	Gloss	Related Word	Gloss
contar - cuenta	tell a story	cuentista	(s)he who tells stories
gobernar – gobierna	govern	gobiernista	governmental
empedrar – empiedra	pave with stones	piedrecita	little stone
cegar – ciega	blind	ciegamente	blindly
fregar – friega	wash	friegaplatos	dish-washer
apernar – apierna	grab by the legs	piernón	a big leg

(24) Infinitive and 3SG present indicative verb forms from Savognin Romansh which respectively display a stressed and unstressed allomorph and semantically related words in which the verbal stressed allomorph appears in unstressed position. Examples taken from Anderson (2011: 29-30).

Alternation within the verb	Gloss	Related Word	Gloss
satgér - sétga	dry [INTR]	setgantár	dry [TR]
preschentár -prescháinta	present	preschentaziún	presentation
accumpagnér - accumpógna	accompany	accumpognamáint	accompaniment
acccumadár - accumóda	adjust	accumodabel	adjustable
durméir - dórma	sleep	dormulent	sleepy
anganár - angíona	defraud	angionaréia	deceit (colloquial)

These counterexamples are apparently explained, however, via a theory of Phonology, Stratal Optimality Theory (Bermúdez-Otero forthcoming), in which a language has multiple subgrammars and each distinct grammar can be composed of a different ordering of rules and constraints after the fashion of Optimality Theory. The different grammars are called strata/levels and they are indexed to different morphological constructions. The levels of interest for the present discussion are: the stem level and the word level. On both levels, the appearance of the diphthong/monophthong (Spanish) or stressed/unstressed stem (Romansh) is an instance of phonological optimization in which the phonology chooses the best candidate among the possibilities afforded by two lexically listed allomorphs. However, the ranking of constraints can be different for the different levels.

Regarding the working of the different levels, Bermúdez-Otero (2013) states that 'a [[base-affix]] expression is said to be *stem-level* if it constitutes a domain for the stem-level phonology…. and it is said to be *word-level* if it constitutes a domain for the word-level phonology. Whether the expression is stem-level or word-level depends on properties of both the base and the affix: a stem-based expression may itself be stem-level or word-level depending, among other things, on

the idiosyncratic stratal affiliation of the affix.' For Spanish, Bermúdez-Otero (2013:24) admits that 'one of the phonological phenomena that distinguish between stem-level and word-level forms is the stress-driven alternation between the diphthongs [jé, wé] in tonic syllables and the mid vowels [e, o] in non-tonic syllables: if a derivative exhibits overapplication of diphthongization, i.e. if it displays an alternating diphthong in a non-tonic syllable, then it is word-level'. This, however, creates circularity in the argument: the conclusion that diphthongal allomorphy is phonologically conditioned in the verb is drawn from the premise that the phonological conditioning of the monophthong-diphthong alternation is relevant to words that are built on the stem-level and not the word-level. The inflectional morphology takes place on this level, and the evidence for this is that verbs undergo a monophthong-diphthong alternation correlated with stress.

Verbs such as those in (25), which display a verb throughout the paradigm in both stressed and unstressed position, do not constitute counterexamples since these verbs have only one stored stem allomorph and thus there is no phonological competition with another form. Indeed, the only way to argue against such a theory would be to provide evidence within the inflectional morphology whereby there is a lexeme which participates in the monophthong/diphthong alternation but which either displays the diphthong in unstressed position or the monophthong in stressed position. Such examples do not exist in Spanish. However, this fact is not, I maintain, evidence of an active phonological synchronic rule but merely a pattern which the language inherited; it is a historical legacy (see also Maiden (2017: 203-04).

(25) Spanish verbs which display a diphthong throughout their paradigm.

[je]: *diezmar* 'decimate', *adiestrar* 'train', *alienar* 'alienate', *frecuentar*, 'frequent', *bienquerer* 'love well', *entibiecer* 'cool down', *atiesar* 'stiffen', *despiezar* 'break up', *arriesgar* 'risk',

orientar ‘position’, *inquietar* ‘unease’, *concienciar* ‘rase someone’s awareness’, *ambientar* ‘set, produce an atmosphere’, *impacientar* ‘grow impatient’, *rielar* ‘shimmer’, *agrietar* ‘crack’.

[we]: *deshuesar* ‘bone’, *encuerar* ‘strip’, *engruesar* ‘get fat’, *amueblar* ‘furnish’, *ahuecar* ‘hollow’, *cuestionar* ‘question’, *secuestrar* ‘kidnap’, *alcahuetear* ‘pimp’, *influenciar* ‘influence’, *presupuestar* ‘budget’.

That stress and diphthongization is a historically legacy and that the former does not condition the latter is apparent upon analysis of other varieties of Ibero-Romance which also have verbs that display the diphthongal alternation but where, due to a number of historical processes which did not take place in Spanish, the diphthong is not always exclusively correlated with stress, as is the case of the N&L-pattern allomorphy in (19).

Likewise, in the Asturian locality of Lena (Neira Martínez 1955:33) there is a large number of verbs that display the diphthongized stems in the rhizotonic forms of the present tenses, as in Spanish; however, in this variety the rhizotonic 2SG imperative forms not only lack the diphthong but display a high-vowel. This is illustrated in (26) in which these forms are given alongside the 3SG present indicative forms and alongside the congener forms in Spanish.

(26) Comparison between present and imperatives forms in Asturian (Lena) and Spanish. Orthographic stress marks have been inserted for ease in the exposition.

Asturian (Lena)	*correr* ‘run’	morrer ‘die’	*golver* ‘return’
3sg present indicative	cuérre	muérre	güélve
2sg imperative	cúrre	múrre	gúlve

Spanish	*correr* ‘run’	morrer ‘die’	*golver* ‘return’

3sg present indicative	córre	muére	vuélve
2sg imperative	córre	muére	vuélve

The lack of identity between the 2SG imperative and the 3SG present indicative, based on the presence or lack of a diphthong, is also present in the localities of Alto Aller (Rodríguez-Castellano 1952:147) and Sobrescobio (Conde Sáiz 1978:166). Historically, this lack of identity is due to the presence of a Latin or proto-Romanace high vowel Ī in the desinences of the 2SG imperative which, before merging with /e/, had a metaphonic effect on the preceding vowel and thus rendered these vowels insensitive to diphthongization and could also cause metaphonic raising. This phonological conditioning, however, is no longer present on the surface (because -Ī generally lowered to -e) and synchronically there exists a paradigmatic pattern in which verbs that contain both diphthongs and mid-vowels in the 3SG present indicative alternate with high-vowels in the 2SG imperative[xxiv]. The important point, however, is that in these varieties of Ibero-Romance the diphthongized stem is not correlated with stress but rather constitutes a paradigmatic pattern, a type of N-pattern, which in these varieties excludes the 2SG imperative.

The importance of patterns, their tendency to be correlated with a certain type of allomorphy and their possible independence of prosodic stress is also evidenced in the Aragonese varieties of the Alta Ribagorza (Haensch 2003:141-143). In certain varieties (and in contrast to the Ibero-Romance varieties in (22)), when diphthongisation and velar allomorphy co-occur, the velar is analysed as part of the lexemic root together with the diphthong and thus, in accordance with the tendency towards convergence in the L-pattern, the diphthong spreads to all the other cells of the

L-pattern in which it is not present: the arrhizotonic 1PL and 2PL present subjunctive forms as illustrated in (27) (see also Maiden 2012).

(27) The verbs *tórse* 'twist' and *tínrre* 'have' in Aragonese varieties (Haensch 2003:128; 121-122).

	Indicative	Subjunctive	Indicative	Subjunctive
1SG	twérsko	twérska	tjéngo	tjénga
2SG	twérses	twérskas	tjénes	tjéngas
3SG	twérse	twérska	tjéne	tjénga
1PL	torsém	twerskám	tením	tjengám
2PL	torséts	twerskátz	teníts	tjengáz
3PL	twérsen	twérskan	tjénen	tjéngan

In this variety the L-pattern dominates the N-pattern, and the latter is reduced, as in Portuguese[xxv], to the 2SG, 3SG and 3PL present indicative which still display diphthongized roots. This particular pattern, however, is only associated with those lexemes in which velar allomorphy and diphthongization coincide. Lexemes which only display diphthongized allomorphs, distribute this allomorphy according to the N-pattern only as illustrated in (28).

(28) The verbs *poder* 'be able' and *dormir* 'sleep' in Aragonese varieties (Haensch 2003:130, 145)

	Indicative	Subjunctive	Indicative	Subjunctive
1SG	pwédo	pwéda	dwérmo	dwérma
2SG	pwéts	pwédas	dwérmes	dwérmas
3SG	pwéde	pwéda	dwérme	dwérma
1PL	podém	podám	dormim	dormám
2PL	podéts	podátz	dormíts	dormátz
3PL	pwéden	pwédan	dwermen	dwérman

In this variety, therefore, the N-pattern still retains its original distribution associated with the class of lexemes which *only* display diphthongised allomorphs. However, when diphthongization

and velar allomorphy coincide, there must have been a historic conflict between the 'coherent' tendency for there to appear the same allomorph over both the N-pattern cells and L-pattern cells. The result was that different patterns became correlated with different classes of lexemes depending on the type of allomorphy they exhibit.

Within a Stratal OT account of diphthongisation such examples pose serious problems to explanations of phonologically conditioned allomorph selection since the inflectional morphology is subject to the same stem-level phonology. The data from the Ibero-Romance varieties show that velar allomorphy, stress, and diphthongisation are all variables which are subject to being aligned to different morphological patterns. In Spanish, the result has been that diphthongisation and stress have maintained their etymological pairing. The continued existence of a phonological correlation between two formatives allows for the hypothesis that a formative X (stress) licenses formative Y (diphthongisation), but such a hypothesis needs to be supported by evidence of a more empirical kind (Baker, 1979:141; Black and Chait, 1981:51-54; Derwing, 1979:125; Eddington, 2004:20; Kac, 1980:243; Pierrehumbert et al., 2000) and which is not related to the theoretical framework.

I maintain that comparative diachronic change and dialectology can constitute this type of empirical research: they can both be categorised as constituting external evidence (Zwicky 1980, 1975:154-155) in that they correspond to *real* changes which have taken place in language structure as a consequence of the *real* usage of language by speakers. The comparative data from Ibero-Romance confirm that stress placement and the diphthong/monophthong alternation can be entirely coincidental. I argue that such is the case in the Spanish verb and it is the autonomous

morphological structure termed the N-pattern which conditions not only the allomorphy in these cells but also its stress patterns.

4 Are these morphomes psychologically real in the Romance Languages of the 21st century?

That the N-pattern and L-pattern have constituted grammatical realities for speakers has been strongly argued in various publications (see Maiden 2018 for an overview) since these structures have conditioned morphological change and provided a template for a wide range of diverse morphological phenomena, from patterns of allomorphy which were inherited from Latin and originally stress related (e.g. Spanish diphthongization) through novel consonantal alternations, and to phenomena as diverse as blending, verbal periphrasis, defectiveness, and heteroclisis (see Maiden 2018).

Nevins, Rodrigues, and Tang (2015) whilst conceding the point that, on the basis of diachronic evidence, morphomes must have been relevant in the history of the Romance languages, ask the very important question of whether morphomes are relevant in synchrony or are just an inert residue of the past. In their study they carry out psycholinguistic experiments on native Portuguese, Spanish, and Italian speakers in which they provide them with certain nonce forms of the L-pattern and elicit other corresponding forms. Their conclusion is that these patterns are no longer synchronically productive.

However, the entire study and especially its experimental design is based on a deep misunderstanding of what morphomes are. The authors quote Jim Blevins who states that morphomic patterns are ‘‘informative, because the deductions that they sanction reduce

uncertainty about the paradigmatic structure of a system" (Blevins 2010) but they erroneously conclude that 'Under this hypothesis learners should readily shoehorn new verbs into the L-pattern, regardless of what their phonological makeup is like: they are abstract statements over the geometry of inflectional paradigms that license implicational statements' (Nevins et al 2015: 107). They therefore design an experiment in which they present speakers with nonce forms displaying morphophonological alternations that are in no way attested in the L-pattern in the respective languages. They justify such odd morphophonological alternations since what they are seeking to test is 'the claim that "L-shapes", once incorporated into the grammar of the language, form an autonomous kind of paradigm knowledge, independent and above any of the specific phonological forms themselves' (Nevins et al 2015: 107).

However, it is not always necessarily the case that morphomic patterns can become generalisations for all verbs of the language. Indeed, Blevins' claim is merely that morphomes make predictions about 'the paradigmatic structure of a system'. Systems are not monolithic, homogeneous, entities but an interconnecting network of different parts. Likewise, not all morphomes are of the same type or have the same scope. The overview of the different morphomes above display this point perfectly. With reference to the patterns in the present tense I showed how in certain varieties of Ibero-Romance these patterns came to be associated with both (a) certain types of allomorphy (velar allomorphy or diphtongisation) (b) certain morphological entities (lexical roots and endings, see also O'Neill 2018: §6)

The view that all morphomes have to be an autonomous type of paradigm knowledge comes from a constructive conception of morphology in which there is a distinction and separation between

stored bits of words and the combinatorial symbolic rules to assemble these bits. In more abstractive theories of morphology there is no such dichotomy. The rules and generalisations emerge from the stored forms to which they are linked. The type, strength and nature of the link depends on numerous factors related to the actual characteristics of the stored forms in addition to factors such as their type and token frequency.[xxvi]

Nevins et al. (2015: 146) conclude that their experimental studies make the synchronic status of the L-pattern as a principle seem tenuous and therefore they suppose that 'the diagonal syncretisms present among this pocket of verbs has come to be treated as a list of memorized forms, rather than the result of an active principle of inflectional paradigm formation.'. This conclusion, however, is problematic for Spanish. In this language, the L-pattern consists of some six inflectional forms, two of which are rather infrequent (1PL and 2PL present subjunctive). Moreover, with the exception of the verb *caber* 'fit' and *saber* 'know', all the L-pattern allomorphy in Spanish is characterised by a velar consonant. This class of velar verbs, which according to Nevins et al (2015:139), constitute merely 'a list of memorized exceptional forms', are large in number and many are extremely infrequent. Modern Spanish contains approximately 11 verbal roots excluding derivatives, with a voiced velar allomorph and approximately 164 velar verbal roots, again excluding their derivatives, which display a voiceless velar allomorph in the L-pattern. The verbs with a voiced velar are some of the most common in the language (*tener* 'have', *poner* 'put', *salir* 'go out'). The voiceless velar ones are more of a mixed bunch: one verb, *parecer* 'seem' is very frequent, a handful of others could be classed as of medium frequency (e.g. *aparecer* 'appear', *ofrecer* 'offer', *establecer* 'establish', *agradecer* 'thank', *anochecer* 'become dark/nightime') but a significant number of this class of verbs are denominal or

deadjectival verbalisations (e.g. *humedecer* 'make humid', *entontecer* 'make stupid', *lividecer* 'become livid/pale) and are relatively or very infrequent.

For example, in the list of most frequent word forms of Spanish, based on the CREA 200 million word corpus, there were only three forms attested for the deadjectival verb *lividecer* 'become livid/pale' and these were all 3SG present indicative forms. Indeed a quarter of this class of lexemes had no attestations in the corpus at all[xxvii]. Moreover, of all the verbs, only nine[xxviii] (5.5% of verbs) verbs were attested in their 2PL present subjunctive L-pattern forms; even in a substantially larger corpus of 45 billion words (google books via the <http://corpusdelespañol.com>) this number only rose to 27 verbs, [xxix] which constitutes 16.5% of all verbs of this type.

The results of the corpora searches are compatible with other corpus-based studies which suggest that speakers do not encounter every inflectional form of even relatively frequent items in the data that they are exposed to (Blevins et al. 2017). It is clear therefore that not all the 2PL present subjunctive forms can have been heard and memorized by speakers. However, speakers have no problem producing these forms due to the predictive nature of this class of verbs which all share an infinitive in *-ecer*, which implies that their L-pattern forms are the following: *-zco, -zca, -zcas, -zca, -zcamos, -zcáis, -zcan*. This is the strongest case for the synchronic validity of morphomes; they are necessary to predict the distribution of form. Indeed, Blevins is totally right when he states that morphomic structures are "informative, because the deductions that they sanction reduce uncertainty about the paradigmatic structure of a system (Blevins 2010)". The point however, is that not all morphomes are the same; they can have differing scopes and domains,

they can be conflicting and can be correlated with different types of allomorphy. Given the dynamic conception of the lexicon as espoused in abstractive theories of morphology, this is to be expected. Lexical representations in the mind are not fixed but are the result of the experience of speakers (see also Libben 2014) in which type frequency, token frequency, the size of morphological families, and also the importance of paradigmatic patterns certainly play an influential role.

5 Conclusion

In historical linguistics, the importance of patterns of recurrent form in the absence of any functional or meaningful common denominator has long been recognised; e.g. the use of the term *perfecto y tiempos afines* 'perfect and related tenses' to refer to the PYTA morphome. Indeed, abstractive models of morphology are not new but are firmly rooted in the Western Indo-European grammatical tradition, most notably by the Neogrammarians (see Blevins 2016:16-19 for an overview), and in particular Paul (1920), who made a fundamental distinction between *production* and *reproduction* and considered utterances to be either '(1) a (perhaps imperfect) repetition of a form that [a person] has heard from others and memorized (reproduction); or (2) a product of the speaker's own mental grammar that she may have never encountered before (production) [original emphasis]' (Fertig 2013:9). As to the nature of the *speaker's own mental grammar*, this is conceived as a dynamic collection of fully inflected words similar to the model of morphology advocated by Blevins (2016:57) 'in which frequent forms and patterns support deductions about the shape and properties of unencountered (or infrequently encountered) forms.'

Such a conception of morphology and storage has largely been absent from mainstream theoretical linguistics since the post- Bloomfield tradition in which there was an assumption of minimal storage and maximum computation, reinforced by generative linguistics and influenced by developments in Information Technology and the generative capacity of computers. Morphemes were viewed as the basic units of storage, all allomorphy was a matter of semantic or phonological conditioning and paradigms and patterns were conceived of as epiphenomena. Morphologically autonomous structures are fatal for such assumptions but the recalcitrant data were and are explained away by theory-internal devices, which often lack any type of external justification but serve the purpose of explaining the data in line with the initial assumptions regarding the functioning of language and its governing principles, including outdated ideas of the capacity of mental storage.

The historical comparative data from the Romance languages demonstrate that morphologically autonomous patterns are psychologically real: they can be generalisations about the organization and geometry of the whole verbal morphology or specialized and relevant to a closed set of lexemes with specific phonological or morphological characteristics; they can overlap with one another and their scope can be expanded or reduced. They are morphologically autonomous in the sense that they are not simply deducible from or reducible to phonological and semantic generalisations, but this does not mean that they are self-contained structures which do not interact with and can be sensitive to phonology and semantics. Synchronically, autonomous morphological structures are necessary to explain the distribution of the data and capture the fact that speakers do not memorize every inflectional form of a paradigm but rely on patterns of predictability and implicational relationships between forms (Stump and Finkel 2013; Stump

2006; Bonami 2014; Ackerman, Blevins, and Malouf 2009; Blevins 2006; O'Neill 2014a; Blevins 2016). Autonomous morphological structures are an abstract representation of paradigmatic cells which form a cohesive group and reliably share exponents with each other, and the forms which realise them are thus to a large extent interpredictable.

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Notes

[i] Stewart (2016:1) lists the following definitions by scholars in the field: 'constructions in which bound forms appear among the constituents' (Bloomfield 1933: 207); 'the study of the word

formation process of language' (Siegel 1979:12); 'the syntax of words' (Selkirk 1982; Pinker 1999: 293); 'the complex process by which abstract morphosyntactic representations are realized morphophonologically' (Aronoff 1994:9); 'the study of morphemes and their arrangements in forming words' (Nida 1949: 1).

[ii] These are the two extremes in morphological theory, there are, of course, different gradations (see Blevins (2016) for an overview).

[iii] For a full discussion of the definition of the morphome and different usages, see Maiden (2016); (O'Neill 2014a).

[iv] Note that Italian *scegliere* is from *ex-elĭgĕre, not elĭgĕre, which in Italian is continued by *eleggere*, with semantic specialization (except for certain uses in high register style).

[v] Note that in Brazilian Portuguese irregular innovative participles are increasingly being attested (*subo, falo, compro vs subido, falado, comprado*). For more details see Scher et al. (2013a, 2013b).

[vi] I list the verbs which display particular allomorph in the Spanish PYTA tenses; in order to appreciate the allomorphic differences in the lexemes I provide for each lexeme the forms of the 3SG preterite, the 3SG present indicative, and the infinitive: *condujo – conduce – conducir* 'drive'; *cupo – cabe – caber* 'fit'; *dijo – dice – decir* 'say'; *estuvo – está – estar* 'be'; *fue – es – ser* 'be'; *fue – va – ir* 'go'; *hizo – hace – hacer* 'do'; *hubo – ha – haber* 'have' (auxiliary verb); *pudo – puede – poder* 'be able'; *puso – pone – poner* 'put'; *quiso – quiere – querer* 'want'; *supo – sabe – saber* 'know'; *trajo – trae – traer* 'bring'; *tuvo – tiene – tener* 'have'; *vino – viene – venir* 'come'.

[vii] It must be noted that, in Portuguese, there are four verbs *fazer* 'do', *estar* 'be', *ter* 'have', *vir* 'come' which display a different allomorph from the other 23 PYTA cells in the 3sg preterite (*fez, esteve, teve, veio*) and two verbs, *ser* 'be' and *ir* 'go', which display a different allomorph in the 1sg (*fui*). These 'aberrant allomorphs' most likely correspond to memorised whole forms since they occur in the most frequent and autonomous forms of the preterite (Bybee & Brewer 1980, Bybee 1995, 2001). For Portuguese SPR verbs, therefore, in order to appreciate the allomorphic differences, I provide for each lexeme the forms of the 3pl preterite, the 3pl present indicative, and the infinitive *deram – dão – dar* 'give'; *disseram – dizem – dizer* 'say'; *quiseram – querem – querer* 'want'; *houveram – hão – haver* 'have/there is'; *souberam – sabem – saber* 'know'; *trouxeram – trazem – trazer* 'bring'; *fizeram – fazem – fazer* 'do'; *estiveram – estão – estar* 'be'; *tiveram – têm – ter* 'have'; *vieram – vêm – vir* 'come'; *foram – são – ser* 'be'; *foram – vão – ir* 'go'.

[viii] PYTA cells can be rhizotonic or arrhizotonic (*ˈtuve* 'I had', *ˈtuvo* 'he had' vs. *tuˈviste* 'you had', *tuˈvimos* 'we had' *tuˈvieron* 'they had', *tuˈviera* 'had(imperfect subjunctive)') and, in Spanish, the SPR can be followed by a variety of desinences: a glide (*estuvieron* 'they were', *estuviese* 'be(imperfect subjunctive)'); a high vowel (*estuvimos* 'we were', *estuviste* 'you.SG were', *estuvisteis* 'you.PL were') and front and back mid-vowels (*estuve* 'I was', *estuvo* 'he was'). Such a set of phonological characteristics are neither common to all the PYTA tenses nor an exclusive property of these tenses.

[ix] Note that even if it were argued, following Iatridou (2000), that the preterite and past subjunctive are related semantically on the basis of both denoting a remoteness either in time (Spanish preterite: *de niño viví en Italia* 'when I was a child I lived in Italy') or in reality (the counterfactual uses of the past subjunctive in Spanish: *si estuviera en Italia, sería más feliz* 'if I were in Italy, I would be happier') such an analysis would ignore that (a) the distinctive

characteristic of preterites in Romance is *aspectual* (they are no more remote regarding the past than the imperfect indicative) and, (b) counterfactual statements only correspond to one of many varied semantic and syntactic uses of the past subjunctive.

[x] As usual, this convergence has being motivated as being conditioned by both phonological (Alvar and Pottier (1983: 270); Baist (1897: 32); Fouché (1929: 70); Penny (1991: 186)) and semantic factors (Rini 1999; Montgomery 1976, 1978, 1979). Explanations of this nature either depend upon tenuous semantic and functional assumptions of similarity and/or are incoherent with the documental data (see Maiden (2001) for an overview).

[xi] The diphthong in the 3SG being reduced to /o/ and the diphthong in the 1SG being reduced to /e/ in old Castilian whilst in old Galician-Portuguese, the diphthongs were changed to [ej] and [ow] respectively.

[xii] This label, coined by Maiden (2004), is arbitrary and has neither semantic nor phonological significance. It is due to the fact that the pattern, as conventionally set out on paper, resembled the form of the letter 'N' in Morse Code.

[xiii] As with the N-pattern, the label 'L-pattern' is arbitrary and was conceived due to the similarity between a rotated orthographic letter 'L' of this paradigmatic set of cells in conventional representations of the verbal paradigm.

[xiv] There exists a variant of the L-pattern, the 'U-pattern' (again an arbitrary label) in which a distinctive form also appears in the third person plural present indicative. The U-pattern is restricted to Italy, although it is also to be found in a certain class of verbs in Romanian (Maiden 2011a).

[xv] There are approximately 15 verbal roots which display this alternation: *medir* 'measure'*, pedir* 'ask for'*, vir* 'come'*, caber* 'fit'*, crer* 'believe'*, ler* 'read'*, fazer* 'do'*, dizer* 'say'*, perder* 'lose'*, pôr* 'put'*, trazer* 'bring'*, valer* 'be worth'*, ver* 'see'*, ouvir* 'hear'.

[xvi] With the exception of the verb *caber* 'fit', all the L-pattern allomorphy in Spanish is characterized by a velar consonant. Modern Spanish contains approximately 155 velar verbal roots, excluding their derivatives, which display a voiceless velar allomorph in the L-pattern and 11 verbal roots, again excluding derivatives, with a voiced velar allomorph. The latter are *decir* 'say', *hacer* 'do', *salir* 'go out', *valer* 'be worth', *poner* 'put', *venir* 'come', *tener* 'have', *caer* 'fall', *traer* 'bring', *roer* 'gnaw', *oír* 'hear', plus their derivatives.

[xvii] There is much variation between varieties in this valley and, in particular, with regard to the interaction between velar allomorphy, diphthongisation and word-stress (see Saura Rami (2003:221-240). However, in all zones apart from what the author designates 'Zone A', diphthongized allomorphy is associated with the N+L-pattern.

[xviii] In the Asturian variety of Cándamo (Díaz González 1986: 81), the verb *doler – duller* 'hurt' has the following present indicative and present subjunctive forms: *duelgo duelis, duel, dulemos, duleis, duelin; duelgo, duelgas, duelga, dulgamos, dulgais, duelgan*.

[xix] In these varieties, the N&L pattern also extends to all infinitives of exclusively the 5th conjugation, which also share the property of being rhizontonic.

[xx] This pattern of vocalic allomorphy is extremely prominent in the Portuguese verb; nearly all *-er* and *-ir* verbs which display an orthographic mid-vowel as the root-vowel exhibit L>N-pattern allomorphy in which, as the examples above, the L-pattern displays a high vowel in *-ir* verbs and a close mid-vowel in *-er* verbs and alternates with an open-mid vowel in the reduced N-pattern (2SG, 3SG & 3PL present indicative and the 2SG imperative). According to Cunha & Cintra (1994:416) the only exceptions to this rule for *-er* verbs are those whose root vowel is nasalized due to a following heterosyllabic consonant (*encher* 'fill up', *romper* 'break'); Brazilian

Portuguese verbs whose root vowel is followed by a nasal consonant (*temer* 'fear', *comer* 'eat'); the verbs *querer* 'want' and *poder* 'be able'.

[xxi] Where <gh> and <chi> represent velar stops.

[xxii] Subsequently Maiden also recognizes that whilst the front vowel does not condition or license the velar allomorph, the relationship between the two elements is also not entirely synchronically accidental (see Maiden (2018:164) for a summary).

[xxiii] For other phonological accounts of diphthongisation in Spanish, see Carreira (1991); García-Bellido (1986); Harris (1969, 1977, 1978, 1985); Schuldberg (1984).

[xxiv] Thus, the imperative forms *mite* 'send', *entinde* 'understand', *bibe* 'drink', *vinde* 'sell', *encinde* 'turn on', *prinde* 'set alight' , *fírvelo* 'boil it', *cume* 'eat', *gule* 'smell', *cuse* 'sow' (Neira Martínez 1955: 53). In the forms in which the root vowel is the reflex of an etymological mid-open vowel e.g. the verb *golver* 'return', the expected outcome would have been a mid-vowel, i.e. *golve*, the fact that the forms attested are all high-vowels must be due to analogy with the other forms.

[xxv] The patterns of allomorphy in this variety differ somewhat from the Portuguese examples in that both the L-pattern and L<<N-pattern share the same root vowels, in this case a diphthong.

[xxvi] Such frequency facts can explain the discrepancy that the study under question encountered in the results from speakers of Portuguese compared with Spanish and Italian speakers. Whilst for the latter two languages only 28.1% and 27.5% of respective responses to the elicitation of forms conformed to the L-pattern, Portuguese speakers produced 35% of such responses. The authors' explanation for this is that 'these participants may have been ones with a greater amount of metalinguistic knowledge, perhaps due to the demographics of our recruitment pool' (Nevins et al. 2015:136). A more convincing explanation is that whereas in Spanish and Italian the L-pattern forms are almost entirely correlated with velar allomorphy, in Portuguese they are characterised by different types of consonantal and vocalic allomorphy (see (14) and (20)).

[xxvii] I entered all the verbs with a voiceless velar allomorph in the list of the most frequent words in the CREA corpus (60 million words) of the Modern Spanish (RAE). Of the approximately 164 verbs, 41 were not attested in the corpora in any of their inflectional forms, although some were attested in the participle form and were interpreted as adejctives (e.g. *embobecido, emplumecido, adonecido*)

[xxviii] *parecer, merecer , ofrecer, establecer, padecer, permanecer, desfallecer, favorecer, entorpecer.*

[xxix] The forms were: *permanezcáis, favorezcáis, parezcáis, obedezcáis, ofrezcáis, merezcáis, establezcáis, entristezcáis endurezcáis agradezcáis compadezcáis crezcáis padezcáis, perezcáis, pertenezcáis, desfallezcáis, aparezcáis, aborrezcáis, fenezcáis, apetezcáis, envanezcáis, comparezcáis, restablezcáis, carezcáis, desaparezcáis, enorgullezcáis, desvanezcáis*