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Identity effects in Uruguayan Spanish

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This paper describes a case of paradigm leveling recently attested in the present subjunctive of a Spanish dialect spoken in Uruguay. With the aim of shedding some light on the type/nature of identity effects in inflectional paradigms, the paper explores the phonological representations and properties found in the leveled paradigm. Additionally, it reviews some of the shortcomings of models that place most of the burden of explanation for analogical changes on the phonological grammar. In contrast to such models, this paper suggests that the difference between the innovative dialect and standard dialects without leveling does not rely on their phonology, but rather in the choice of a morphological exponent.

1. Introduction: identity effects in morphology

It is cross-linguistically common to find identity effects (i.e. phonological similarity relations) among morphologically related forms. This is true not only for derivational morphology but also for inflectional morphology. Traditionally, the specific way in which certain forms influence others has been assumed to diverge in derivation and inflection. However, recent research has questioned this. Whereas derived forms have usually been assumed to have clear 'bases of affixation', there is much debate on whether inflected forms are constructed from a single base (Kenstowicz 1996; Benua 1997; Albright 2002, 2008a; Bachrach & Nevins 2008), or if they exhibit a more egalitarian structure with all forms in the paradigm affecting each other in a more symmetrical way (Burzio 1996; Steriade 2000; McCarthy 2005). Additionally, it is still an open question whether a morphological base must correspond to a single surface form or, in contrast, it is an abstract underlying representation from which the rest of the paradigm can be derived without necessarily having a surface correspondent. Finally, morphological bases are often equated with the most phonologically/morphologically unmarked member within a paradigm. However, it is not always obvious what it means to be universally unmarked or why bases should be selected only on the basis of markedness (for discussion, see Bachrach & Nevins 2008).

With the aim of contributing to the ongoing debate of identity effects in inflectional paradigms, this paper presents new dialectal data from Spanish verbal morphophonology. In particular, it focuses on a puzzling case of paradigm leveling in the present subjunctive of some speakers of Uruguayan Spanish, whereby a phonologically marked form has been

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extended to all members in the paradigm. In addition to the descriptive contribution, this paper attempts to grasp a better account of identity effects in the Spanish verbal paradigm. Firstly, by exploring in detail the phonological representations and properties involved in the innovative pattern of Uruguayan Spanish, we aim at deepening our understanding of the type of phonological relations that exist within members of the same inflectional paradigm. Secondly, the new data is used to empirically test some of the predictions of two morphophonological models dealing with identity effects in inflectional paradigms: (i) McCarthy's Optimal Paradigms model (henceforth, OP; McCarthy 2005) and (ii) Albright's Base Priority model (henceforth, BP; Albright 2002, 2008). Within these models, identity effects in inflectional paradigms are the result of a high-ranked phonological correspondence requirement enforcing similarity between members of the same paradigm. In the OP model, this requirement is symmetrical (i.e. all surface forms have a potential influence on each other), whereas the BP model is an asymmetrical requirement (i.e. one surface base has priority over the rest and may influence their shape). Although the two models bring clear insights into the properties of leveling in non-standard Uruguayan Spanish (henceforth, NUS), this paper shows that they also encounter some problems in accounting for the direction of leveling. This is especially due to the burden of analogical change being placed on the phonological grammar, i.e. leveling in these models results from high-ranking a constraint enforcing identity between members of the same paradigm. I argue that the main difference between the non-levelling varieties of Spanish and the variety of Uruguayan Spanish with leveling is not due to a disparity in their phonological systems. On the contrary, I argue that the phonological grammar of the two dialects is identical. The difference between them crucially relies on the morphosyntactic exponent of the present subjunctive in each dialect (i.e. the input to the phonology). Finally, the data presented here is of particular interest because it sheds light on a classic puzzle in Spanish morphophonology: the stress-driven alternation between /jé, wé/ and /e, o/ (e.g. *b[wé]no* vs. *b[o]ndád*, *b[o]ndadóso*). In particular, the new data seems to verify Bermúdez-Otero's hypothesis, which suggests that diphthongization in Spanish is a property of stems, rather than roots or words (Bermúdez-Otero 2011, 2013).

The paper is organized as follows. Section 2 briefly discusses the phonology and morphology of the Spanish present subjunctive and describes the innovative pattern attested in some speakers of Uruguayan Spanish. In section 3 it is proposed that this variety shows leveling because speakers have reanalysed a phonologically derived property (i.e. stress) as part of the morphology of the present subjunctive. In particular, it is suggested that, whereas standard Uruguayan Spanish (henceforth, US) assign stress in the present subjunctive by some phonological default rule or general hierarchy of constraints, in NUS stress must be stored in the lexical entry as a part of the morphological exponent of the present subjunctive. This type of *morphologization* is frequently attested in the history of languages (Bermúdez-Otero 2008; Bermúdez-Otero & Trousdale 2012). Section 4 presents two alternative accounts of the analogical change. The first one is couched within McCarthy's OP model (McCarthy 2005) and the second one in Albright's BP model (2002). This section reviews the main predictions of the models, highlighting some of the challenges they encounter when accounting for the NUS data. Section 5 summaries the main conclusions of this study.

2. The Spanish Present Subjunctive

The Present Subjunctive (PresSubj) in Uruguayan Spanish (US) contains five different forms. This is illustrated in (1) with three regular verbs from each of the three conjugation classes. The thematic vowel preceding the infinitive marker *-r* indicates the affiliation to a specific conjugation class. The first conjugation contains the thematic vowel *-a* in the infinitive, the second conjugation has an *-e*, and the thematic vowel of the third conjugation is *-i* (the stressed syllable is highlighted in bold face, syllable boundaries are indicated by dots and the hyphen separates the root from the rest of affixes, including the theme vowel and the inflectional endings). Note that the present subjunctive displays a clear contrast between the unstressed root in the first person plural (1pl, in white) and the rest of the forms in the paradigm (1sg, 2sg, 3sg, 3pl, shaded)[1]:

(1) *Present Subjunctive in regular verbs in Standard Uruguayan Spanish*

	I Conjugation ***am-ar*** **'to love'**	**II Conjugation** ***com-er*** **'to eat'**	**III Conjugation** ***viv-ir*** **'to live'**
1sg.	**á**.m-e	**có**.m-a	**ví**.v-a
2sg.	**á**.m-es	**có**.m-as	**ví**.v -as
3sg.	**á**.m-e	**có**m -a	**ví**.v -a
1pl.	a.m-**é**.mos	co.m -**á**.mos	vi.v-**á**mos
3pl.	**á**.m-en	**có**.m -an	**ví**.v -an

Interestingly, in irregular verbs, segmental alternations that are stress dependent also participate in this type of contrast (i.e. 1pl vs. 1sg, 2sg, 3pl, 3sg). Namely, the stressed roots in the 1sg, 2sg, 3sg and 3pl have the diphthongs [jé, wé], whereas the unstressed root in the 1pl has a mid vowel [e, o]. This is exemplified in (2) with the irregular verb *pod-ér* 'can, be able to', from the second conjugation:

(2) *Present Subjunctive in irregular verbs in Standard Uruguayan Spanish*

	II Conjugation: ***pod-ér*** **'can, to be able to'**
1sg.	**p[wé]**.d-e
2sg.	**p[wé]**.d-es
3sg.	**p[wé]**.d-e
1pl.	p[o].**d-é**.mos
3pl.	**p[wé]**.d-en

From the data in table (1) and (2) we can observe that US, as the vast majority of Spanish dialects, does not contain a specific grammatical form for the 2nd plural. This is not the case in Northern-Central Peninsular Spanish, where the verbal paradigm contains a specific grammatical form for the 2nd person of the plural:

[1] Throughout the paper, I will use the abbreviations 1sg, 2sg, 3sg, 3pl to refer to the first person singular, second person singular and third person singular and plural respectively.

(3) *Present Subjunctive in regular verbs in Northern-Central Peninsular Spanish*

	I Conjugation ***am-ar*** **'to love'**	**II Conjugation** ***com-er*** **'to eat'**	**III Conjugation** ***viv-ir*** **'to live'**
1sg.	**á**.m-e	**có**.m-a	**ví**.v-a
2sg.	**á**.m-es	**có**.m-as	**ví**.v -as
3sg.	**á**.m-e	**có**m -a	**ví**.v -a
1pl.	a.**m-é**.mos	co.**m -á**.mos	vi.**v-á**mos
2pl.	a.**m-é**is	co.**m -á**is	vi.**v-á**is
3pl.	**á**.m-en	**có**.m -an	**ví**.v -an

This dialectal difference is due to a difference in the pronominal systems of Spanish dialects. Whereas speakers of Northern-Central Peninsular Spanish use the subject pronoun *vosotros* 'you pl', which behaves referentially and grammatically as a second person plural, in the rest of the dialects this pronoun has disappeared. To refer to a 2pl subject pronoun, speakers use the form *ustedes* 'you pl' instead. Strikingly, although the pronoun *ustedes* refers to a second person plural, it grammatically behaves as a 3pl. That is, in cases of cliticization or the use of a verbal form, it always enforces third person plural agreement. This is illustrated in (4) and (5), where the two dialects choose a different clitic to substitute a referential 2nd plural object (4a *vs.* 5a) (for ease of presentation, the examples contain in square brackets the preposition and pronoun that the clitic is substituting):

(4) *Northern-Central Peninsular Spanish*

a. **Os** he visto [a vosotros]
CLOBJ-2pl. see-1SGPRESPERF PREP OBJ.PRON2PL
'I have seen you (pl.).'

b. **Los** he visto [a ellos]
CLOBJ-3pl. see-1SGPRESPERF PREP OBJ.PRON3PL
'I have seen them.'

(5) *Rest of Spanish dialects*

a. **Los** he visto [a ustedes]
CLOBJ-3pl. see-1SGPRESPERF PREP OBJ.PRON2PL
'I have seen you (pl.).'

b. **Los** he visto [a ellos]
CLOBJ-3pl. see-1SGPRESPERF PREP OBJ.PRON3PL
'I have seen them'

This has clear consequences in the verbal paradigm of these dialects. As opposed to Northern-Central Peninsular dialects, most Spanish dialects lack a specific form for the 2pl. As a consequence of this, the contrast between stressed and unstressed roots is weaker in these dialects. Since this paper is concerned with a variety of Uruguayan Spanish and, thus, one without a specific verbal form for the 2pl, the form used to refer to 2pl persons in Northern-

Central Peninsular Spanish is left out from the examples and tables. Recall that when speakers of Uruguayan Spanish want to refer to a 2pl, they will use the form of the 3pl.[2]

2.2. Paradigm leveling in non standard Uruguayan Spanish (NUS)

The case of leveling reported here has been attested in some speakers of a non standard variety of Uruguayan speakers. In this variety, the contrast between the 1pl and the rest of the forms is lost, and stressed roots have been generalized to all forms of regular and irregular verbs (see (6)). In the latter, stress dependent alternations, such as diphthongization have been also extended to the 1pl (7):

(6) *Present Subjunctive in regular verbs in NUS*

	***am-ár* 'to love'**	***com-ér* 'to eat'**	***viv-ír* 'to live'**
1sg.	**á**.m-e	**có**.m-a	**ví**.v-a
2sg.	**á**.m-es	**có**.m-as	**ví**.v -as
3sg.	**á**.m-e	**có**m -a	**ví**.v -a
1pl.	**á**.m-e.mos (~~a.**m-é**mos~~)	**có**.m-a.mos (~~co.**m-á**mos~~)	**ví**.v-amos (~~vi.**v-á**mos~~)
3pl.	**á**.m-en	**có**.m-an	**ví**.v -an

(7) *Irregular verbs*

***pod-ér* 'can, to be able'**
p[wé].d-a
p[wé].d-as
p[wé].d-a
p[wé].d-amos ~~(po.**d-á**.mos)~~
p[wé].d-an

Speakers who show leveling are generally associated with those who have not had much access to education or have not constantly been exposed to the standard. Additionally, it seems that speakers of the standard are aware of this negative nuance and try to avoid it.[3] The precise extension (register and geographic areas) of the phenomenon is well beyond the scope of this paper: future investigation of the negative associations of this phenomenon remains a topic ripe for sociolinguistic research.[4]

Examples in (8) contain data uttered by some Uruguayan speakers exemplifying the leveled variety. Both (8a) and (8b) exhibit the new form for the 1pl in two irregular verbs:

[2] It is important to hightlight that the fact that *ustedes* is combined with verbs in their 3pl form should not be analysed as a case of syncretism, by which one form (the 3pl form, e.g. *cóman, pwédan, vívan, ámen*) covers two different meanings (2pl and 3pl). Quite the contrary, the clitization diagnostic presented in (4)-(5) makes it clear that the pronoun *ustedes* is referentially a 2pl, but grammatically a 3pl.

[3] As an anecdote of this, there is a group on *www.facebook.com* which proscribes the innovative forms in NUS ('Se dice podamos, no puédamos' – 'We must say podamos and not puédamos').

[4] The same type of leveling has been attested in other Spanish dialects, not only in Latin-America (areas of Cuba and Mexico), but also in areas of the West of Spain (Enguita Utrilla 2010:292), Andalousian Spanish (Mondéjar Cumpián 1970) and some dialects of Chicano Spanish (Reyes 1974)

(8) a. *Espero que mañana* ***p[wé]damos*** [~~podámos~~] *responder con el compañero Danilo, porque el sábado tenemos que tomar una decision*
'I hope that tomorrow we can negotiate with our colleague Danilo, because we must make a decision on Saturday.' (from the journal *El País*. José Mújica, President of Uruguay, Montevideo)

b. *La terminamos cuando* ***v[wé]lvamos*** [~~volvamos~~]
'We will finish it once we are back.' (speaker from Nueva Palmira)

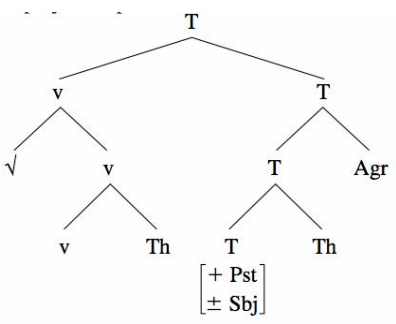
Instead of having an unstressed root with a mid vowel (e.g. *pod-, volv-*), the stressed diphthong has been extended to the 1pl. Since leveling in NUS is closely related to stress and the diphthongization process in Spanish, the next subsection briefly discusses some general considerations regarding verbal stress and the diphthong-vowel alternation in Spanish.

2.2. Verbal stress

One can find different proposals in the literature with respect to the location of stress in the Spanish verbal domain. These proposals range from analyses that view stress as purely morphosyntactic — i.e. stress is computed by looking only at the syntax of the word — (for a recent morphosyntactic proposal and references see Oltra-Massuet & Arregi 2005) to approaches that compute stress based on the weight of the word-final syllable (Bermúdez-Otero 2013). In either case, some kind of lexical specification or additional ad-hoc rule applying after the general stress algorithm must be posited, since stress cannot always be predicted. For instance, Oltra-Massuet & Arregi (2005), whose analysis is couched in the Distributed Morphology framework, provide a general algorithm that locates stress before the tense affix (Oltra-Massuet & Arregi 2005:49). This algorithm (exemplified below in 9b), together with some specific assumptions about the morphological structure of Spanish verbs, correctly locates stress in most of the cases. This is illustrated in (9), with an example from the imperfect indicative, which exhibits stress in the theme vowel of every form in the paradigm (i.e. before the tense affix):

(9) *Imperfect Indicative*

a. *Morphological structure*



b. *Examples of the linearization*

I Conj. *amábas* [am- á] -ba] - s]
love-2SGIMPIND Rt -TV- Tense-Agr

II Conj. comías [com- í] -a] -s]
eat-2SGIMPIND Rt -TV- Tense-Agr

III Conj. vivías [viv- í] -a] -s]
live-2SGIMPIND Rt -TV-Tense-Agr

As mentioned above, the algorithm has trouble in accounting for the stress patterns in some verbal forms. Namely, it cannot predict stress in the 1sg, 2sg, 3sg and 3pl of the indicative and subjunctive present tenses, as well as some forms in the imperative, which has been

analysed as a present by some (see Zagona 1990). Although stress in the 1pl and 2pl is correctly predicted (e.g. 1pl present indicative: *[am]$_{Rt}$-á]$_{TV}$-mos]$_{Tense/Agr}$*, 1pl present subjunctive: *[am]$_{Rt}$-é]$_{TV}$-mos]$_{Tense/Agr}$*), an additional rule that retracts stress must be posited in order to get the correct location of stress in the rest of the forms (10a). The application of the rule in the 2sg present indicative is illustrated in (10b). As can be seen from this example, the algorithm incorrectly locates stress in the final syllable of the 2sg present indicative. Then, a stress deletion rule applies, which deletes a word final stress (10a). In order to avoid word-final stress, this rule has the effect of retracting the position of stress one syllable to the left:

(10) *Present tenses (Oltra-Massuet & Arregi 2005:61)*

a. Stress Deletion (in present tense)

x → x ____) #

b. *After Stress Algorithm*

2Sg present indicative: *partés

Line 1					x				
Line 0		x			x	)			
String	p	a	r	t	Ø	e		s	
Syntax	[		√		[	v	Th	]]	**T/Agr**

c. *After Stress Deletion Rule*: *pártes*

2Sg present indicative

Line 1		x							
Line 0		x			.	)			
String	p	**a**	r	t	Ø	e		s	
Syntax	[		√		[	v	Th	]]	**T/Agr**

There are two possible explanations that can account for the new forms in the 1pl present subjunctive of NUS (e.g. *ámemos, cómamos* and *vívamos*). The first one, which is sketched out in a footnote in Oltra-Massuet and Arregi (2005:60), is to assume that the morphological structure of the present subjunctive in the dialects that have antepenult stress in the 1pl and 2pl, like NUS, is different: 'We tentatively assume that the theme vowel following the root in the present subjunctive is the one adjoined to T in those dialects, instead of being the one adjoined to v, as we have proposed for Iberian Spanish' (Oltra-Massuet & Arregi 2005:60). However, it is not clear what the motivation is for adjoining the theme vowel in these dialects to T, instead of v. A second option, following the same strategy that accounts for the retraction of stress in some forms in the present, would be to reformulate the rule in (10a) in a way that it also applies to the 1pl in dialects like NUS, retracting its stress, although it is not word-final. Thus, after the algorithm has applied, a rule retracting stress in those forms would get the innovative forms in NUS (e.g. *amémos* > *ámemos*). Such a rule would correctly relocate stress in regular verbs (e.g. *amémos* (US) > *ámemos* (NUS)). However, this mechanism encounters some problems when trying to generate the 1pl in irregular verbs (see § 3 for further details).

Within Bermúdez-Otero's (2013) approach to verbal stress, verbs show default stress. That is, following the general tendency in nominal forms, verbs have penultimate stress when the word ends in a vowel or a consonant that is part of an inflectional affix (e.g. *ámo* 'love.1SG.PRESENT.INDICATIVE' *amába* 'love.1SG.IMPERFECTIVEPAST.INDICATIVE', *amába<n>* 'love.3PL.IMPERFECTIVEPAST.INDICATIVE') and final stress when the word ends in a falling diphthong or consonant that is not an inflectional affix (e.g. *am[áj]<s>* 'love.2PL.PRESENT.INDICATIVE'). However, default stress can be overridden if the verbal morphological entry contains a prespecification with the particular location of stress. Thus, within this account, a general hierarchy of constraints gets default stress, whereas deviance from default results by high-ranking a faithfulness constraint to an underlying specification of stress. For instance, according to Bermúdez-Otero, the presence of an underlying accent on

the theme vowel of verbs can be easily diagnosed in the past imperfective tenses: all person and number forms bear stress on the theme vowel, with the falling diphthong in the final syllable of the second person plural unexpectedly failing to attract stress: am-á-bais (2plural) (Bermúdez-Otero 2013). Additionally, the existence of minimal pairs within the verbal paradigm provides further support for the need to prespecify stress in some forms (e.g. *llégue* 'arrive.3SG.PRESENTSUBJUNCTIVE' *vs.* *llegué* 'arrive.1SG.PERFECTIVEPAST.INDICATIVE'; *cánto* 'sing.1SG.PRESENT.INDICATIVE' *vs.* *cantó* 'sing.3SG.PERFECTIVEPAST.INDICATIVE'). Within this model, the present subjunctive of standard varieties of Spanish exhibits default stress (i.e. penultimate). The new form in the 1pl of NUS with antepenultimate stress (i.e. non-default) should contain, then, an underlying accent specified in the input to the phonology, which permits it to escape from default stress. This proposal is presented in further detail in § 3.

To conclude this section, it should be noted that no matter what analysis one assumes for Spanish verbal stress — whether one adopts a morphosyntactic approach to stress, or a metrical view of the facts — some kind of lexical marking or additional rule is needed in order to correctly locate stress in all the forms in the verbal domain.

2.3. Diphthongization

The stress driven alternation between diphthongs [jé, wé] and mid vowels [e, o] is not specific to the verbal domain (see (2) above) but is also present in nominal forms (e.g. ***b[wé]****no* 'good' *vs*. *b[o]n.**dád*** 'goodness', *b[o]n.da.**dó**.so* 'kind'; *cal[**jé**]nte* 'hot' vs. *cal[e]ntadór* 'heater'). This alternation is not completely predictable, since there are non alternating diphthongs (*qu[jé]to* 'quiet' ~ *qu[je]túd* 'calm') and non alternating mid-vowels (*qu[é]so* 'cheese' ~ *qu[e]sería* 'cheese house') (Bermúdez-Otero 2006, 2011; Ohannesian & Pons 2009). Therefore, diphthongization has been analysed as a case of allomorphy that involves phonological selection between listed allomorphs (Kager 1996; Mascaró 1996; McCarthy 2002; Rubach & Booij 2001; Bermúdez-Otero 2006). That is, 'the phonological constraint hierarchy preserves the quality of input vowels, but, when given the choice, favours diphthongs in tonic syllables and monophthongs elsewhere' (Bermúdez-Otero 2006:285). The following tableau from Bermúdez-Otero (2006) illustrates this fact. As can be seen from the evaluation of the two first inputs, when there is an option of choosing an allomorph, the hierarchy selects the mid vowels in unstressed positions, and the diphthongs in stressed positions (e.g. *p[wé]rta* 'door' vs. *p[o]rtéro* 'doorman, porter'). When there are no listed allomorphs, as in *p[ó]zo* 'well' and *p[o]céro* 'person who works, builds or cleans wells', the high-ranked faithfulness constraint preserves the vowel in the input.[5]

[5] There are also cases of overapplication, such as *p[we]rtecíta 'door-DIM'* where the diphthong appears in unstressed position. This and similar cases can be accounted for by introducing constraints on intraparadigmatic pressures in phonology (Ohannesian & Pons 2009) or within a Stratal approach to the grammar, where some suffixes such as the diminutive are considered to be word level and, thus, applying after the stem level diphthongization process (Bermúdez-Otero 2006).

(11) Phonological selection of listed allomorphs (Bermúdez-Otero 2006:285)

morphology	phonology		IDENT	TONIC→ DIPHTHONGAL	*DIPHTHONG
	input	output			
[p{o,we}ɾt-a]	/poɾt-a/	[pwéɾ.ta]	*!		*
		[póɾ.ta]		*!	
	☞ /pweɾt-a/	☞ [pwéɾ.ta]			*
		[póɾ.ta]	*!	*	
[[p{o,we}ɾt-a]eɾ-o]	☞ /poɾt-a-eɾ-o/	[pweɾ.té.ɾo]	*!	(*)	*
		☞ [poɾ.té.ɾo]		(*)	
	/pweɾt-a-eɾ-o/	[pweɾ.té.ɾo]		(*)	*!
		[poɾ.té.ɾo]	*!	(*)	
[poθ-o]	/poθ-o/	[pwé.θo]	*!		*
		☞ [pó.θo]		*	
[[poθ-o]eɾ-o]	/poθ-o-eɾ-o/	[pwe.θé.ɾo]	*!	(*)	*
		☞ [po.θé.ɾo]		(*)	

A similar approach can be taken to account for diphthongization in the verbal domain. That is, it can be assumed that irregular verbs contain at least two listed allomorphs and the phonological grammar selects the appropriate one depending on the tonicity of the syllable. In that sense, the forms of the 1pl present subjunctive in US (e.g. *p[o]dámos* 'can.1PL.PRESENT.SUBJUNCTIVE') and the leveled forms in NUS (e.g. *p[wé]damos* 'can.1PL.PRESENT.SUBJUNCTIVE') both respect the phonological grammar of the languages. This idea is explored in the next section.

3. Restructuring an underlying form

Following Bermúdez-Otero (2008) and much of the existing work on phonological change, the innovation attested in the 1pl present subjunctive in NUS is interpreted here as an instance of reanalysis. In particular, it is assumed that the change in the stress pattern in the 1pl present subjunctive illustrates a process of *morphologization*. That is, a property that was originally derived in the phonology (i.e. stress, see § 2), is now given by the morphological exponent of the present tense of the subjunctive. More specifically, NUS speakers have equated stressed roots with present subjunctive, therefore, restructuring the underlying form of this tense. This type of reanalysis, by which a phonological property is incorporated into the morphological exponent of a given category, is frequent in the life of phonological processes (Bermúdez-Otero & Trousdale 2012).

A similar type of change was already attested in the history of Spanish verbs. Take the case of the Latin imperfect indicative (stressed vowel are highlighted in boldface) (see 12). In Latin, the present imperfect indicative showed a contrast between stressed (1sg, 2sg, 3sg, 3pl) and unstressed roots (1pl, 2pl), just as the present subjunctive in standard varieties of Spanish. Later, the 1pl and 2pl changed their default penultimate stress to the antepenult position, in order to have columnar stress, i.e. stress falls in the same affix in all the members of the paradigm (Penny 1991). This is illustrated in (12) with the verb *cantar* 'sing':

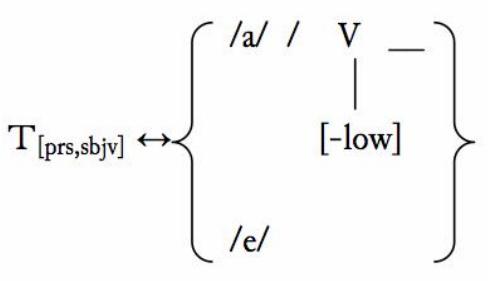
(12) a. *Latin Imperfective past Indicative* b. *Spanish Imperfective past indicative*

1sg	CANTÁBAM			cantába
2 sg	CANTÁBAS			cantábas
3 sg	CANTÁBA (T)			cantába
1pl	CANTABÁMUS	>> stress shift	>>	cantábamos
2pl	CANTABÁTIS	>> stress shift	>>	cantábais
3pl	CANTÁBANT			cantában

The 1pl and 2pl forms of this tense retracted their stress from penultimate to antepenultimate syllable in order to regularize the position of the accent in all the forms of the paradigm. Therefore, forms like CANTABÁMUS (1pl), CANTABÁTIS (2pl) underwent a stress-shift and became *cantábamos* and *cantábais* in Spanish (Penny 1991:168). The stress in *cantábamos* ('sing.1PLIMPERFECTIVE.PAST.IND' and *cantábais* 'sing.2PL.IMPERFECTIVE.PAST.IND' is non default and, thus, it must be specified in the underlying form. This can be done within the *Generalized Nonlinear Affixation* theory (Bermúdez-Otero 2012), whereby the underlying form of allomorphs can consist of segmental and prosodic material. Thus, together with /ba/ (i.e. the allomorph for the first conjugation: *cant-á-ba* 'sing-1SGIMPERFECTIVEPASTIND') and /a/ (i.e. the allomorph for the 2nd and 3rd conjugation: *com-í-a* 'eat-1SGIMPERFECTIVE.PAST.IND' *viv-í-a* 'live-1SGIMPERFECTIVE.PAST.IND'), there is a prosodic specification consisting of the head of the prosodic word. Furthermore, this specification contains alignment information indicating that the syllable at the head of the foot must dominate the last segment of the stem (Bermúdez-Otero 2008). This explains why stress always falls on the theme vowel in the imperfect indicative.

Following this type of interpretation of the facts, a similar account could be given for the case of paradigm leveling in the present subjunctive in NUS. Speakers of US and the rest of Spanish dialects that do not exhibit leveling assign default stress to all the forms in the paradigm (i.e. penultimate: e.g. 1pl: *amémos* 'we love.SUBJ', *comámos* 'we eat.SUBJ', *podámos* 'we can.SUBJ') (see 13b, below). The input to the phonology does not contain any prosodic specification; it only contains segmental information indicating that after non low vowels (i.e. after /e/ or /i/, which are the theme vowels of the second and third conjugation), the allomorph selected for the present subjunctive is /a/ (e.g. *com**a**mos* 'we eat.SUBJ', *viv**a**mos* 'we live.SUBJ'); elsewhere (i.e. in verbs of the first conjugation, where the theme vowel is /a/), the selected allomorph is /e/ (e.g. *am**e**mos* 'we love.SUBJ') (see 13). Assuming Spanish stores stems with their theme vowels (Bermúdez-Otero 2008, 2013), this gets the right results in US:

(13) Morphological exponent of the present subjunctive in US



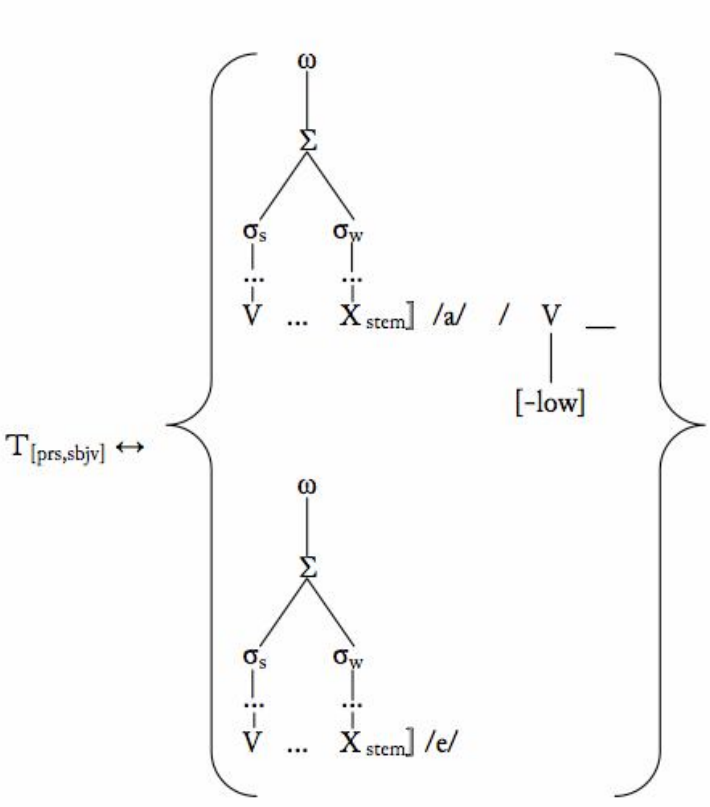
Spanish has a rule that deletes stem vowels that are not stressed (see Bermúdez-Otero 2006, 2008), which ensures that forms like [[*am-a*]$_{TV}$-*e*]$_{T}$-*mos*]$_{Agr}$] and [*com-e*]$_{TV}$ -*a*]$_{T}$ *mos*] $_{Agr}$] surface as *amemos* and *comamos* (Bermúdez-Otero 2008)

(14) love.1pl.pres.sbjv eat.1pl.pres.sbjv

UR [[*am-a*]-*e-mos*]] [*com-e*] -*amos*]]
stem-final vowel deletion
SR [a.mé.mos] [co.má.mos]

In contrast, the underlying form of NUS has been reanalysed and now, in addition to the segmental specification, it contains a prosodic specification ensuring that stress always falls on the last vowel of the root (i.e. in all the forms). This is done by specifying a metrical foot aligned with the right edge of the stem, as illustrated below in (15)[6]:

(15) Morphological exponent of the present subjunctive in NUS



Frequency must have played an important role in this type of reanalysis. Since NUS does not have a specific form for the 2pl and, thus, most of the forms in the present subjunctive have stressed roots (1sg, 2sg, 3sg, 3pl), it is not surprising that this pattern has been incorporated into the morpheme of the present subjunctive. Hence, also being extended to the only form that diverged from the rest (i.e. the 1pl).

[6] I am indebted to Ricardo Bermúdez-Otero for his insightful comments and suggestions on the possible ways to represent the underlying stress in this variety, and the morphological exponents of the present subjunctive in the two varieties, standard and non-standard.

Furthermore, under this account, the fact that diphthongized forms have been leveled in irregular verbs (e.g. *podámos* > *pwédamos*) is seen as a clear consequence of the phonology of Spanish, where diphthongs are preferred in stress positions. Diphthongization in irregular verbs is, therefore, analysed here in a similar way as the process of diphthongization in nominal forms. That is, the alternation between diphthongs and mid vowels is a process of allomorph selection. When the grammar has the option of choosing between two allomorphs, one with a diphthong and one with a mid vowel, it will prefer the diphthong in stressed positions and the mid vowel in unstressed positions (see (16) vs. (17) below). Specifically, I argue that stress in the present subjunctive is not assigned in the phonology of NUS speakers. By contrast, it is part of the morphosyntactic exponents of the present subjunctive in the input to the phonology (see (15) and (17) below). In US speakers, however, the input to the phonology does not contain any specification regarding the prosodic structure of the present subjunctive (see (16)) and, thus, penultimate stress arises. Since the antepenultimate syllable remains unstressed, the mid vowel allomorph is selected in US (the cover constraint DEFAULTSTRESS is used to refer to the hierarchy of constraints that assigns default stress in Spanish, i.e. penultimate stress when the word ends in a vowel or an inflectional suffix ending in a consonant, and final stress when the word ends in other consonants).

(16) *US*

morphology	phonology		DEFAULT STRES	IDENT	TONIC--> DIPHTONGAL	*DIPHTHONG
	Input	Output				
[p{o, we}d-e]-mos]	☞ /podemos/	[pwedémos]		*!	(*)	*
		☞ [podémos]			(*)	
	/pwedemos/	[pwedémos]			(*)	*
		[podémos]		*!	(*)	

(17) *NUS*

morphology	phonology		FAITH-PROSODICSPEC	IDENT	TONIC--> DIPHTONGAL	*DIPHTHONG
	Input	Output				
[p{o, we}d-e]-mos]	/pódemos/	[pwédemos]		*!		*
		[pódemos]			*!	
	☞ /pwédemos/	☞ [pwédemos]				*
		[pódemos]		*!	*	

Therefore, the difference between standard and non standard varieties of Uruguayan Spanish is not placed in the phonology, as a rule loss or rule deletion, but in the lexical entry. The next subsection briefly presents a potential problem with an account that places the burden of the dialectal variation in the phonology.

3.1. Leveling in NUS: rule loss (or rule addition)?

Recall from § 2 that under some approaches to Spanish stress, an algorithm that takes into account the morphological structure of the verbal form places stress before the tense affix. This kind of algorithm correctly located stress in most of the verbal forms, but needed an additional rule to retract stress in some of the forms in the present. For instance, in (18a) the algorithm locates stress in the final syllable in the 2sg present indicative: *comés* 'you eat'. And in fact, this form is present in those dialects that use the pronoun *vos*. US is among these former dialects. However, in order to correctly locate stress in the rest of the Spanish dialects, the stress deletion rule needs to apply and retract stress one syllable (18b):

(18) *Present Indicative* [Root [v Th]] T/Agr]

a. After stress algorithm:	2sg	*vos*	[com-**é**]s]	Uruguay, Argentina...
b. Stress retraction Rule:	2sg	*tú*	[c**ó**m-e]s]	Rest of varieties without *vos*

Now, if we look at the present subjunctive in NUS, it could be argued that a similar type of rule retracts stress in NUS (19b):

(19) *Present Subjunctive* [Root [v Th]] T/Agr]

a. After stress algorithm:	1pl	[com-**é**]mos]	All Standard varieties
b. Stress retraction Rule:	1pl	[c**ó**m-e]mos]	NUS

The difference between the dialects that show default stress (19a) and NUS (19b) would be placed in the addition of a stress retraction rule in NUS. However, even if this type of rule would derive the correct result in the paradigms of regular verbs, as illustrated in (19), it would not account for the leveled forms in irregular verbs (see 20b):

(20) *Present Subjunctive*: *irregular verbs* [Root [v Th]] T/Agr]

a. Present Subjunctive	1pl	[pod-á]mos]	All Standard varieties
b. Stress retraction Rule:	1pl	*[pód-a]mos]	(but NUS: *pwédamos*)

Once the stress is retracted, the form *pódamos* 'we can.SUBJ' with a stressed mid vowel in the root would emerge, rather than the stressed diphthong, i.e. *pwédamos* 'we can.SUBJ'. This is the case because, in a Distributed Morphology framework, allomorphy is seen as a property of roots rather than stems. Another rule, extrinsically ordered after the stress retraction rule, is needed to get the right result, changing the mid vowel to the diphthong. However, the postulation of this rule seems somewhat stipulative.

Crucially, the morphophonological innovation in NUS with the diphthongized forms seems to speak in favour of an analysis that sees allomorphy as a property of stems, rather than roots. Otherwise, it is not really clear why forms like *p[wé]damos* 'we can.SUBJ' and *v[wé]lvamos* 'we come back.SUBJ' (rather than *pódamos* and *vólvamos*) are attested (see Bermúdez-Otero 2011 for further evidence that dipthongization is a property of stems in Spanish).

The next section explores two alternative analyses of leveling in NUS. Contrary to the interpretation presented here, within these models similarity effects in morphology result from high-ranking a morphophonological constraint which enforces identity between the

members of the same paradigm. Whereas the two models bring clear insights in our understanding of phonological change, they exhibit some problems when trying to account for leveling in NUS.

4. Leveling as a satisfaction of a morphophonological constraint enforcing identity

4.1. Optimal Paradigms (McCarthy 2005)

Within the OP model, candidates are entire inflectional paradigms, which consist of all the words based on a single lexeme. The stem (output form of the shared lexeme) in each paradigm member is in a correspondence relation with the stem in every other paradigm member. Thus, this model assumes there are symmetrical relations among surface forms of the members of the same paradigm. That is, all forms in the paradigm influence each other. There is no distinctive base, rather, every member of a paradigm is a base of sorts with respect to every other member (McCarthy 2005:173). To encode this in the grammar, in addition to the traditional input-output faithfulness and markedness constraints, OP includes a second type of faithfulness constraint, a type of output-output restriction that enforces identity between the members of the same paradigm (OP constraints). When this type of constraint is high-ranked in a language, leveling takes place. To illustrate the way this model proceeds, consider the following example from Albright (2008a:273). Imagine there are two languages, X and Y, with final devoicing. In these languages, the markedness constraint FINDEVOI must dominate the constraint enforcing voicing identity between input-outputs, i.e. IO-ID(voi). In language X, illustrated in (21), the paradigm that shows devoicing in final position only surfaces as optimal (21a). In such a language, the constraint requiring voicing identity between the members of the same paradigm is low ranked and, thus, candidates (21b) and (21c) are ruled out. By contrast, in language Y, where the OP constraint is higher ranked (see 22), the candidate with devoicing in both members of the paradigm surfaces as optimal, i.e. (22b):

(21) *Language with final devoicing and no OP effect (from Albright 2008a:273)*

/bund/, /bund-ə/	FINDEVOI	IO-ID(voi)	OP-ID(voi)
☞ a. [bunt], [bundə]		*	* (t∼d)
b. [bunt], [buntə]		**!	
c. [bund], [bundə]	*!		

(22) Language with final devoicing and OP effect

/bund/, /bund-ə/	OP-ID(voi)	FINDEVOI	IO-ID(voi)
a. [bunt], [bundə]	*! (t∼d)		*
☞ b. [bunt], [buntə]			**
c. [bund], [bundə]		*!	

Note that within this model, paradigmatic pressures are exclusively induced by phonological markedness, i.e. only phonologically unmarked forms are extended. This is clear in (22), where the phonological unmarked form [*bunt*] acts as an attractor for the other forms in the paradigm. Although candidate (22c) performs equally good with respect to OP-ID(voi), since

the language has a process of final devoicing, the ranking FINDEVOI >> IO-ID(voi) selects the paradigm that shows leveling towards the phonological unmarked form, and not the one that exhibits leveling towards a marked form, i.e. a form without final devoicing. Furthermore, in this model there is no formal distinction between categories such as gender, number, tense or aspect and, thus, all forms have the same potential of influence among themselves. Finally, another important prediction within this model is that the most common form in the paradigm is also expected to act as an attractor for the others (the so called majority rule effects).

4.2. Some problems of Optimal Paradigms when accounting for the innovation in NUS

In NUS, the most frequent form (i.e. the stressed root in regular verbs, and the one with stress and diphthong in irregular verbs) is indeed the one that has been extended. That is, the majority rule effect is borne out. However, it is not so obvious that the leveled form is the most unmarked in the paradigm. From a phonological point of view, it is well known that antepenultimate stress in Spanish is marked (e.g. it is less frequent). Thus, changing the form *comámos* to *cómamos* 'we eat.SUBJ' or *podámos* to *pwédamos* 'we can.SUBJ' involves a change towards a phonologically marked form. Furthermore, not only is the stress pattern more marked, diphthongs with prevocalic glides seem to be structurally more complex than unstressed mid vowels. Prevocalic glides have traditionally been considered to be part of a complex nucleus, based on several phonotactic restrictions, sonority co-occurrence constraints and default stress (Harris 1983; Núñez-Cedeño & Morales Front 1999; cf. Cabré & Prieto 2006 for a different approach to historical diphthongs, which are the ones studied here). Thus, some authors have proposed that rising diphthongs in Spanish are sharing a mora (Bakovic 2006; Martínez-Paricio 2012), as in (23a):

(23) a. *Leveled form 1pl* b. *Eliminated form 1pl*

In addition, from a morphological point of view, it also looks like the unstressed roots in regular verbs (e.g. *com-*) and unstressed roots with mid vowels in regular verbs (e.g. *pod-*) are less marked than the stressed and diphthongized roots (e.g. *cóm-*, *pwéd-*). For instance, deverbal derived nouns generally select the form without stress and without diphthongs as a base:

(24) a. *poder* [po.ˈðeɾ] 'to be able to, can' b. *comer* [ko.ˈmeɾ] 'eat'

p[o]ténte	'strong, potent'	*c[o]mestíble*	'edible'
p[o]deróso	'powerful'	*c[o]medór*	'dining room'
p[o]derío	'power, wealth'	*c[o]medéro*	'eating vessel'

Additionally, there is acquisition data showing that Spanish children acquiring the language exhibit systematic errors in irregular verbs, and these errors involve leveling towards the

forms with the mid vowel, rather than the diphthong (Clahsen et al. 2002). Therefore, the NUS data pose a challenge to the specific OP prediction that leveling is always biased towards the phonologically unmarked.

Another challenge to the OP model is that it is not very clear why leveling only occurs in the subjunctive, and not in the indicative, where a similar contrast between stressed vs. unstressed, diphthongs vs. mid vowels occur. Since there is no formal distinction between verbal moods, the same hierarchy that accounts for leveling in the subjunctive would predict leveling in the indicative. Nonetheless, a possible answer to this could be that in Uruguayan Spanish there is a greater contrast in the indicative than in the subjunctive, since the unstressed/mid vowel also appears in a dialectal form of the 2sg (e.g. *tú*/*vos podés*). Thus, the contrast between stressed vs. unstressed roots is not as weak as in the subjunctive[7]. However, there are other Spanish dialects where this form does not exist, and still, the same kind of leveling as in NUS has been reported. For instance, this is the case for some speakers of Western Spanish, where forms with antepenultimate stress such as *h[á]yamos* ('have AUX.1PL.PRESENTSUBJUNCTIVE'), *v[á]yamos* ('go. 1PL.PRESENTSUBJUNCTIVE'), *t[é]ngamos* ('have.1PLPRESENTSUBJUNCTIVE') have been attested (i.e. instead of the standard forms with penultimate stress: *hay[á]mos*, *vay[á]mos*, *teng[á]mos*, Enguita-Utrilla 2010:292). In these varieties the present subjunctive has undergone the same kind of leveling as in NUS but the indicative has remained unchanged.

4.3. Base Priority Model (Albright 2002, 2005, 2008a,b)

In this model, inflectional paradigms have a privileged base (Albright 2002, 2005, 2008a). This base corresponds to a single surface form and is maximally informative, i.e. it must preserve the most contrasts and permit accurate and productive generation of as many words as possible in the paradigm (Albright 2002:7). Albright's general hypothesis is that learners impose structure on paradigms as an effort to construct phonological and morphological grammars that are able to generate unknown forms as accurately and confidently as possible. Thus, the learner does not need to memorize the whole paradigm, but she can derive it by applying morphological and phonological rules (or constraints) to the privileged base. In that sense, this model assumes that there is an asymmetrical relation between forms of the same inflectional paradigm, i.e. a surface base has priority over the rest and may influence their shape. Albright's evidence for the use of bases is the ability of speakers to produce and comprehend novel forms that they have never encountered before and have thus not had the chance to memorize, based on other forms. However, it is not totally clear that the fact that speakers can produce novel forms shows that speakers use bases when generating new forms. This ability could also be interpreted as evidence of the use of abstract templates. The other type of evidence is historical: since forms are often rebuilt on the basis of other forms within the paradigm, speakers must construct relations between parts of the paradigm. In that sense, Albright's model makes two clear predictions with respect to the direction of leveling: (i) it should affect only non-basic forms and (ii) it should target only those contrasts that are not preserved in the base. Thus, within this model, leveling towards phonologically marked forms are possible. In particular, if the informative base happens to be phonologically marked, it can be used to generate the rest of the forms in the paradigm. To sum up, in BP, leveling in NUS could be analysed as an effect of the way speakers use their grammars to

[7] In the present subjunctive, there are 4 stressed roots vs. 1 unstressed root; in the present indicative, 3 stressed roots vs. 2 unstressed roots.

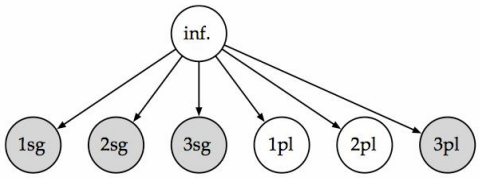
project unknown forms, i.e. an input(base)-output effect. However, the way in which the privileged base is selected in this dialect is not so clear. As discussed in the next section, the task of selecting a base is especially difficult in large paradigms, such as the Spanish verbal paradigm where, very often, multiple local bases would be needed to generate all the forms in the paradigm. In fact, Albright allows for the use of local bases in large paradigms. In particular, Albright (2002) suggests that apart from the infinitive, the 1sg indicative is used as a local base in Spanish verbs. However, this is problematic, as shown in the next section.

4.4. The problems of the Base Priority Model when accounting for the innovation in NUS

The infinitive form in Spanish is maximally informative: it unambiguously reveals the conjugation class of the verb, and it allows generating most of the forms in the paradigm. Thus, within a BP model, Spanish speakers could use the infinitive form as the global base within the verbal paradigm. The following table from Albright (2002:123) shows that the infinitive, but also the 1pl and 2pl, are the forms that allow to generate the greater number of forms in the paradigm using the fewest rules:

(25) *Deriving Spanish present tense paradigms* (from Albright 2002:123)

↓In/Out→	1sg	2sg	3sg	1pl	2pl	3pl	infin.	average
1sg		0.895	0.896	0.867	0.867	0.896	0.867	0.881
2sg	**0.986**		0.995	0.740	0.740	0.995	0.740	0.866
3sg	**0.986**	**1.000**		0.750	0.750	**1.000**	0.750	0.873
1pl	0.902	0.908	0.909		**1.000**	0.909	**1.000**	**0.938**
2pl	0.902	0.908	0.909	**1.000**		0.909	**1.000**	**0.938**
3pl	**0.986**	**1.000**	**1.000**	0.750	0.750		0.750	0.873
infin.	0.902	0.908	0.909	**1.000**	**1.000**	0.909		**0.938**



Results of global base selection for Spanish present tenses

The infinitive and the 1pl, 2pl perform equally well in the amount of forms they allow to generate when used as bases. Thus, any of them could in principle be selected as the global base in the verbal paradigm. In later work, however, Albright (2008b) argued that when there is a tie, frequency can disambiguate which form should be taken as a base, in this case favouring the infinitive. Nevertheless, if the 1pl is a potential base, or at least is generally identical to the infinitive, it is not so clear why leveling changes this form, since leveling is supposed to target only non basic forms. In other words, if the 1pl is as informative as the infinitive (i.e. the global base) it is unexpected that it undergoes a change deviating from the global base, as shown in (26):

(26) a. Infinitive: *co**mér*** ‘to eat’ 1pl Subj: *co**mé**mos* ----------> NUS: ***có**memos*

b. Infinitive: *po**dér*** ‘can’ 1pl Subj: *po**dé**mos* ----------> NUS: ***pwé**demos*

Furthermore, as already discussed, large paradigms like Spanish verbal forms need multiple local bases to generate all the forms in the paradigm. It is simply not possible to generate all the forms of irregular verbs using only the infinitive. That is, the learner needs several local bases to generate all the attested alternations. The question is then, which is the other form that Spanish speakers use as a base? In particular, which form do speakers use as a base to produce the present tense forms?

Albright discusses this issue in his dissertation and suggests that apart from the infinitive, Spanish speakers use the 1sg present indicative form as a base to generate the rest of the forms in the present. Albright builds this argument based on historical facts. Namely, in Spanish, some irregularities that were generally attested exclusively in the 1sg of the present indicative have been extended to all the forms of the subjunctive. For example, the verb *caber* 'to fit', which has two irregularities in the 1sg present indicative — an idiosyncratic realization of the stressed vowel and a following stop — is now present in all the forms of the subjunctive (the irregularities are highlighted in bold face):

(27) *Present Indicative and Subjunctive of the irregular verb cabér 'to fit'*

		1sg	2sg	3sg	1pl	2pl	3pl
a.	Pr. Ind.	**[kép]**o	[kaβ]es	[kaβ]e	[kaβ]emos	[kaβ]éis	[kaβ]en
	Pr. Subj.	**[kép]**a	**[kép]**as	**[kép]**a	**[kep]**ámos	**[kep]**áis	**[kép]**an

Another type of irregularity that has the same distribution (i.e. 1sg present indicative and all the forms of the present subjunctive) is illustrated in (28), with the verbs *oír* 'hear', *venir* 'come' and *conocer* 'to know'. The insertion of a velar in the present indicative 1sg, has been extended to the whole paradigm of the subjunctive. This pattern is also present in other Romance languages (Maiden 1992, 2004):

(28) *Present Indicative (PI) and Subjunctive (PS) of 3 irregular verbs with velar insertion* (verbs *oír* 'to hear' (28a), *venir* 'to come' (28b), *conocer* 'to know' (28c))

		1sg	2sg	3sg	1pl	2pl	3pl
a.	PI	ói**g**o	oyes	oye	oímos	oís	oyen
	PS	ói**g**a	ói**g**as	ói**g**a	oi**g**ámos	oi**g**áis	ói**g**an
b.	PI	vén**g**o	viénes	viéne	venímos	venís	viénen
	PS	vén**g**a	vén**g**as	vén**g**a	ven**g**ámos	ven**g**ás	vén**g**an
c.	PI	conóz[**k**]o	conoces	conoce	conocemos	conocéis	conocen
	PS	conóz[**k**]a	conóz[**k**]as	conóz[**k**]a	conoz[**k**]ámos	conoz[**k**]áis	conoz[**k**]an

A potential problem with this approach is that if we look carefully at the 1pl and 2pl forms of the subjunctive, we notice that they are not based exaclty on the 1sg present indicative. Crucially, although they contain the same segmental material, the prosodic structure of their stems is different. In the 1sg present indicative, the stress is in the final vowel within the root, but in the 1pl and 2pl the stress is moved one syllable to the right. Thus, it cannot be stated that the entire subjunctive takes the 1sg indicative as a surface base, unless something else is said about why stress is not carried over to some of the forms in the present subjunctive (i.e. 1pl, 2pl). Furthermore, recent experimental research on verbal morphology in Romance languages seems to contradict the hypothesis that 1sg indicative is the base speakers rely on to generate the present subjunctive. Namely, Nevins & Rodrigues' (2012) experiment on implicational generalizations with noncewords showed that given the choice between an

alternation in the 1sg and the 2sg present indicative (e.g. p~f, t~s, k~x), participants preferred the 2nd indicative base, rather than the 1sg indicative base. The task and results for Spanish are illustrated below in (29). 148 speakers participated in the task. They were presented with two different conditions. In the first one, exemplified in (29a), they were given the 2sg and the 1sg nonce form for the present indicative and were asked to produce the 2sg subjunctive. In 72% of the cases they chose to build this new form taking the 2sg indicative as a base for the subjunctive. In the second condition (29b) they were presented again with the 1sg indicative and the 2sg indicative (in that order), and asked to produce the 3sg subjunctive. In 71% of the cases they built this form choosing the 2nd indicative as the base:

(29) Example from condition I and II in Nevins & Rodrigues (2012)

a. Cond I: Ind (1st, 2nd) → Subj 2nd	b. Cond II Ind (1st, 2nd) → Subj 3rd
Tú llutes solamente con la mano derecha, pero yo lluso con cualquier mano. Es necesario que ____ con las dos manos para que así seas más productivo. 'You *llutes*2SG.IND only with your right hand, and but I *lluto*1SG.IND with either hand. It's necessary that you ____2SG.SBJ with both hands in order to be more productive.'	El periódico local dice que yo mifo desastrosamente. Tú mipes bien, pero el periódico no dice nada de ti directamente. Pero dijeron que esperan que mi hijo ____ como tú en la competición. 'The local newspaper says that I *mifo*1SG.IND disastrously. You *mipes*2SG.IND well, but the newspaper did not mention you directly. However, they said they hope that my son ____3SG.SBJ like you in the competition.'

Thus, this experiment does not support the hypothesis that the 1sg indicative is the base of the present subjunctive. Consequently, it is not clear that historical grammars can be taken as evidence for synchronic grammars. In an attempt to maintain Albright's explanation of the facts, it could be argued that NUS speakers have rebuilt these forms based on the 2sg instead. Even though this would account for the leveling of stress and diphthongs in some of the verbs of NUS speakers, we would still need to maintain the local base of the 1sg indicative to correctly generate the irregular verbs in (27) and (28). That is, three local bases would be needed to generate the present subjunctive. One wonders, however, in which way such an account is more explanatory than one that just stores two (or more) underlying allomorphs and then chooses among them depending on the specific phonological grammar. In fact, storing two different allomorphs is enough to generate the whole paradigm of many verbs' present tenses.

5. Conclusions

The change from unstressed roots to stressed roots in the 1pl present subjunctive in NUS (e.g. *am**é**mos* > ***á**mamos* 'we love', *com**á**mos* > ***ó**mamos* 'we eat', *viv**á**mos* > ***í**vamos* 'we live') is particularly interesting from a phonological point of view, because a phonologically marked form has been extended within a paradigm. That is, the dialect studied here has chosen to discard a phonologically unmarked form and has introduced a marked one, giving rise to a more uniform paradigm, in which all stems in the present subjunctive contain the same segmental and prosodic material. The fact that the only form that was different from the rest (i.e. the 1pl) has been modified, warrants an explanation that incorporates frequency or the

majority rule effects as a factor favouring leveling. This pattern suggests that the most common form in a paradigm can be extended, even if it is phonologically marked.

The last two models examined here, OP and BP, bring clear insights on the reasons of leveling: (i) a form that is different within a paradigm is changed so it becomes more similar to the rest of the forms within the paradigm (the OP *majority rule* prediction) and (ii) some forms are often rebuilt on the basis of other surface forms (BP prediction). However, it seems like those reasons should not be directly encoded in the NUS phonological grammar. Instead, it has been proposed that the phonology of US (without leveling) and NUS (with leveling) is identical. In both varieties, the phonology generally selects diphthongs in stressed positions and mid vowels in unstressed positions. Thus, rather than in their phonological systems, the difference between US and NUS is placed in their lexical entries for the present subjunctive. On the one hand, the input to the phonology in US contains only segmental information and, thus, the hierarchy of constraints places stress in its default position. On the other hand, in NUS the input to the phonology contains a stress specification in the final vowel of the root. This specification is preserved in the output of NUS due to a high-ranked faithfulness constraint, for which there is independent evidence (as argued in § 2.2). Crucially, since most of the forms in the paradigm of the present subjunctive (1sg, 2sg, 3sg, 3pl) had stressed roots, it is not surprising that stress has been incorporated in the morpheme of the present subjunctive and, hence, extended to the only unstressed form (i.e. the 1pl). In irregular verbs, the diphthong has also been extended as a natural consequence of stress.

This interpretation of the facts, however, does not really explain why restructuring of the morphological exponent of the present tense in NUS has taken place only in the subjunctive and not the indicative. A possible reason for this could be also due to frequency: it is more likely that less frequent forms undergo leveling. Since speakers are less frequently exposed to subjunctive forms than indicatives, it is expected that restructuring occurs within the subjunctive.

In any case, when language change takes place, there are several factors that can favor that change to happen. Here we have exclusively looked at some of the phonological properties of the morphophonological innovation attested in NUS, but the exploration of syntactic factors, frequency data and other factors external to the language faculty in its narrowest sense (see Chomsky 1986 for the dichotomy between internal and external language) can shed some light on the reasons for the type of leveling described here

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