# Pseudo-Allomorphy of Articles and Articulated Prepositions in Llanito<sup>1</sup>

Shanti Ulfsbjorninn University of Deusto s.ulfsbjorninn@deusto.es

In this study, I will provide a decompositional analysis of Llanito's articles, both definite and indefinite, as well as the many fused preposition + article combinations. Prima facie, Llanito seems to show phonologically conditioned allomorph (PCA) selection, including a melodically-conditioned allomorphy triggered exclusively by /w/. However, taking a Strict CV approach, building on work on Standard Italian (Larsen 1998; Faust et al. 2018), Galician (Ulfsbjorninn 2020) and central Italo-Romance dialects, including Old Tuscan varieties, (Russo & Ulfsbjorninn 2021), I will show that the whole system of articles in Llanito can be generated without the use of allomorphy at all. Instead, all the surface variants are generated from the combination of a unified set of syntactic exponents fed through the language's regular phonology. This analysis joins the Llanito phenomena to the research program started by Scheer (2016) where PCA analyses are reanalyzed in purely phonological terms.

Keywords: Phonologically conditioned allomorphy, Llanito, mixed languages, Ibero-Romance.

#### 1 Introduction

English is the official language of the 25'000+ inhabitants of the Overseas Territory of Gibraltar, however, Llanito is the day-to-day language in regular use in informal contexts on the peninsula. Llanito is a fascinating 'mixed language'; the grammatical base of Llanito is clearly Andalusian (Ibero-Romance), however, its lexicon has been contributed to a very significant extent from English (West Germanic), but also from Genoese (Italo-Romance) and Maltese and Hebrew (Semitic). Gibraltarians identify their mixed language (Llanito) as distinctly separate from both Spanish and English, and Llanito is marked as the primary language for informal conversation that one would 'have with your friend' and on 'social media' (Chevasco 2021:4). For general literature on the linguistic situation of Gibraltar and Llanito see Lipsky (1986); Archer (2006); Levely (2008), Vázquez Amador (2018) and references therein.

The data for this short paper has been obtained from my fieldtrip to the territory (2020). It has also been augmented from data listed in the grammatical sketch and online dictionary available at: *LlanitoLlanito.com*, the local organization for the promotion of the language.

## 1.1 Allomorphy and Pseudo-allomorphy and why it matters

Allomorphy is commonly described as any situation where the same grammatical information is realized in more than one way (multiple realization). However, this common definition is not theoretically insightful because it obscures the distinction between two very different situations (Bonet & Harbour 2010).

1

<sup>&</sup>lt;sup>1</sup> Special thanks to Tobias Scheer for comments on the manuscript.

The first is where multiple realization is solely due to phonological processes that differentiate the surface form of a single underlying exponent. For a straightforward example of this think of the possessive suffix of Turkish which can be: -im, -im, -um, -ym depending on the final vowel of the stem (Charette & Göksel 1998; Nevins 2010; Kabak 2011).

The second is where multiple realization is due to the contextual insertion of one underlying exponent in place of another underlying exponent. These cases would seem to be necessary to handle cases of allomorphy that cannot be derived by the phonology. For a common example of this, see the Korean Nominative suffix: -ka after V-final stems and -i after C-final stems: se-ka 'bird-NOM' vs. pap-i 'rice-NOM' (Cho 2016). Here one cannot derive the two surface forms from a single underlying form, so there have to be two underlying forms inserted contextually.

From a theoretical standpoint, the former should not be classified as allomorphy at all, otherwise any phonological operation or phonetic realization could be classed as allomorphy and the phenomenon would have no coherence. This situation (such as the Turkish case above), in which the surface variation is generated entirely by the phonology is referred to as pseudo-allomorphy. Conversely, the second situation does have a clear characterization and can be referred to technically as allomorphy, a definition is provided below.

# (1) Allomorphy (Paster 2014:220)

Any situation where the same set of morphosyntactic features are expressed by two or more surface forms in complementary distribution that have different underlying forms.

When the context for insertion of an allomorph is defined phonologically, this is called: *Phonologically-Conditioned Allomorphy* (henceforth PCA) (ibid.).

Though they might appear superficially similar, pseudo-allomorphy and allomorphy are radically different from an architectural perspective. Since, if the variation is generated entirely in the phonology, its derivation is architecturally identical to the spell out of any exponent. However, if there is phonologically conditioned allomorphy, this has implications for modularity, since both syntactic and phonological information seem to need to be visible at the same time, i.e. when the decision is made to insert one or the other lexical item (allomorph). This is to some extent a violation of strict modularity.

Modularity is a desideratum for both current leading linguistic architectures: Distributed Morphology (Halle & Marantz 1993, 1994; Harley & Noyer 1998; Embick 2010)<sup>2</sup> and Nanosyntax (Starke 2009; Caha 2009; Baunaz et al. 2018). However, cases of PCA have motivated the claim that strict modularity is suspended at precisely the moment of Vocabulary Insertion (Bonet et al. 2007). This has been formalized into a mechanism to regulates this precise moment in the derivation where both types of information are visible, known as Priority (Bonet et al. 2007).

Priority is a mechanism by which allomorphs that are in competition for insertion are lexically marked for their order of insertion. This order can be trumped, however, by the relative

<sup>2</sup> In practice, DM has not achieved Modularity since, amongst other issues, it uses many post-syntactic operations which are not proper to a Minimalist architecture (Scheer 2011, 2012; Collins & Kayne to appear).

ranking of the Priority constraint viz various (actual) phonological constraints. The way this operates is shown for a slightly simplified presentation of the Haitian definite article allomorphy.

Haitian has non-optimising definite article allomorphy, the CV form occurs after C-final stems, and the V form occurs after V-final stems, as shown in (2). It is classed as 'non-optimising' because the choice of allomorph creates marked structures that cannot be simply solved by using the language's already active phonological constraints such as \*CC or \*VV.

(2) Haitian (Non-Optimising: C.C & V.V)   
a. 
$$\int at + la$$
 'the cat'   
b.  $lapli + a$  'the rain'

This can be accounted for with straight PCA insertion rules, such as those used by Embick (2010:91; 2015:175). However, these render arbitrary the shapes of the variants and their context.

This automatically nullifies the problem of non-optimising PCA (it need not optimize because it is just listed), however, in cases such as Haitian, this phonologically arbitrary analysis will be vulnerable to approaches that can generate the shapes phonologically, since they are clearly phonologically related and even if it is not optimising, the relationship between the variants and their phonological context does not look random.

Meanwhile, the Priority approach, works by explicitly marking variants for their order of insertion. For a case such as Haitian, the allomorphs are listed and labelled for their priority of insertion as shown beneath.

(4) Priority (Bonet et al. 2007) 
$$\left\{ -a_a, \, \text{-}la_b \right\}$$

In this model Priority is stated as an Optimality Theory constraint: PRIOR, which is somehow just ranked along with all the other phonology constraints.

Since PRIOR is ranked above and below certain constraints, the preferred order of insertion will be usurped by certain candidates, this is shown in (5).

## (5) Haitian PRIOR ranking

/papa-{a>la}/	R-ALIGN	*C.V	Prior	Ons	DEP
a. papa.la			*!		
☞ b. papa.a				*	

/liv-{a>la}/	R-ALIGN	*C.V	Prior	Ons	DEP
☞ a. liv.la			*		
b. liv.a		*!		*	
c. li.va	*!				

One complication of this approach comes from the fact that if there are multiple cases of Priority in the same language, then PRIOR will presumably have to be item-specific, one for each allomorph in a Priority relationship.

This approach suffers from the need to establish various mechanisms as formal universals: indexing/diacritics, a special kind of mapping constraint PRIOR, and it still requires true allomorphy: multiple underlying forms listed in the vocabulary. When these items are also so similar phonologically:  $\{-a_a, -la_b\}$ , listing allomorphs seems wasteful. Moreover, the mixing of a PRIOR constraint amongst bona fide phonological constraints violates modularity. Moreover, it suffers from the same problem as Embick's PCA in that there is no relationship between the phonological shape of the selected allomorph and its context.

## 1.2 Representational solution to pseudo-allomorphy

The alternative to this type of solution has been to follow Scheer (2016) in using the representational tools available to us to help generate surface variants from a single underlying form instead of having to use PCA, thereby eliminating many instances of PCA and recategorising them as pseudo-allomorphy with no modularity implications.

Running this kind of re-analysis on presumed cases of PCA has become a central focus in Strict CV in recent years (Scheer 2016; Lampitelli 2017; Barillot et al. 2018; Faust et al. 2018; Scheer 2019; Ulfsbjorninn 2020; Russo & Ulfsbjorninn 2021; Ulfsbjorninn 2021; Ziková & Faltýnková 2021; Balogné Bérces & Ulfsbjorninn 2021; Lahrouchi & Ulfsbjorninn 2022; Newell to appear; Dolatian 2022; Fortuna 2022). The full set of configurational possibilities afforded by our autosegmental representations actually derive the surface variants.

(6) Available configurations (Bendjaballah & Haiden 2008:28; Faust et al. 2018:10)

a.	Fixed		b.	Floating	c.	Emp	ty	d.	Unfix	xed
	$\mathbf{C}$	V				$\mathbf{C}$	V		$\mathbf{C}$	V
	α	β		α					α	β

Having more configurational possibilities, and being outside of OT, reduces the difficulty in obtaining non-optimising patterns phonologically. For instance, in Haitian all that is required is to have attribute a floating consonant (shown in angle brackets) to the lateral of the definite article /<l>a/ (Nikiema 1999; Cadeley 2003; Lahrouchi & Ulfsbjorninn 2022).

Without going into the details of the analysis, the broad strokes of such an analysis are as follows: <l> has no association line to the C-slot<sup>3</sup>, and as such, <l> will only be parsed if it obtains a link to the C-slot's structure. If it does so, it will surface as [la]. If it does not link, it will not be phonetically interpreted and the surface variant will be: [a].

## (7) UR of definite article in Haitian



This way both variants are produced from the same underlying form. The advantage over the PCA and Priority accounts are three-fold: (a) there is no allomorphy (b) there is a derivational reason for the shape of the variants in their given context. (c) everything is done in the phonology and there is no need to appeal to softening of strong modularity (to be determined case-by-case).

We will now turn to the pattern of Llanito. In Part 2, I will quickly introduce some previous work on the article pseudo-allomorphy from the vantage of this approach, this will also serve as detailed introduction for the unfamiliar reader as to the principles of the framework. Part 3, then presents the Llanito pattern and provides its analysis in this framework. After this some conclusions will be drawn.

## 2 Deriving pseudo-allomorphy of articles

#### 2.1 Strict CV basics

Before getting into the data, I will present the core mechanisms of Strict CV for the unfamiliar reader.

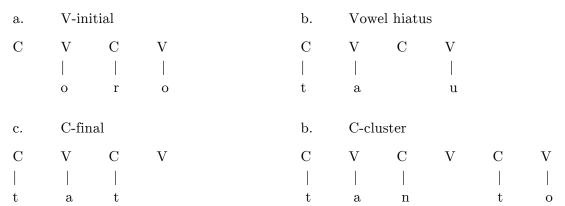
Strict CV is a model of syllable structure first proposed by Lowenstamm (1996) and extended by Ségéral & Scheer (2001) and Scheer (2004). It was a revision of Government Phonology (Kaye et al. 1985, 1990; Charette 1991).

Strict CV is an autosegmental theory that takes phonological representations to have two main and independent tiers. These are linked to each other by association lines: a segmental layer that hosts features/segments and a skeletal layer. The skeleton is made up of strictly alternating C & V units. The least structurally complex structure will be (any number of) a consonant-vowel

<sup>&</sup>lt;sup>3</sup> As shown by (♠), though it is usually omitted, there is a root node/segmental/x-slot level in Strict CV. This is often irrelevant and omitted, however there are analyses where it is important (ibid.; Ulfsbjorninn 2021; Scheer to appear). In this paper the root-node level is irrelevant so it does not figure in any of the representations.

sequence: CV. Any deviation from this involves the addition of empty slots, either empty C-slots as shown in (8a-b) for vowel-initial words and hiatuses, or empty V-slots for consonant clusters and word-final consonants (8c-d).

# (8) Strict CV representations (hypothetical words)



The following are the conditions on phonetically empty positions, they are expressed in a slightly simpler way than the standard literature but the meaning is identical. As shown in (25b), this mechanism handles vowel-zero alternations. The underlined V-slots are empty.

# (9) Silencing of empty positions (hypothetical words)

a. Domain-Final Parameter (DFP) (based on Kaye 1990)

Domain-final empty V slots are silenced (no phonetic interpretation)

$$\begin{array}{ccccc} C & V & C & V \\ | & | & | \\ p & a & s \end{array}$$

b. Gov(ernment) (based on Charette 1991)

An empty V-slot can be silenced by Gov iff it is followed by a V-slot that is not itself silenced.



These principles are general to Strict CV phonology, and presently we will see them applied to deriving the pseudo-allomorphy of the article in Italian.

## 2.2 Deriving article pseudo-allomorphy phonologically

Standard Italian has pseudo-allomorphy of the definite article. The main variants are: /il, l(o), i,  $\Lambda(i)$ /. The set contains items that look quite different from each other: /lo/ vs. /i/, and these are selected by PCA in a non-optimising way as shown beneath. In (10a) we see that before singletons we get /il/, in (10b) we see /l/ before vowels and as is shown in (10c) and (10d) before s+C and initial geminates (ts, p, j,  $\Lambda$ ...) we get /lo/.

# (10) Standard Italian

		SG	PL	
a.	C(C)-initial	[il + tremo]	[i + 'tre:ni]	'train'
b.	V-initial	[l + 'albero]	$[\Lambda + \text{'alberi}]$	'tree'
c.	s+C-initial	[lo + skwa:lo]	[	'shark'
d.	Initial geminates	[lo+t's:ijo]	[ʎi + tˈtˈsːii]	'uncle'
		[om:cin + ol]	$[\mathrm{imicin} + \mathrm{i}\lambda]$	'gnome'

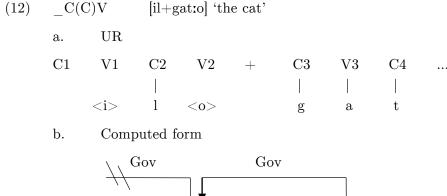
This data could be taken as a prime example of PCA. However, Larsen (1998) proposed an ingenious solution based on the autosegmental possibilities discussed in the previous section. Specifically, he noted that the vowels of the definite article variants could be floating, and he would be able to use the usual principles of Strict CV phonology to generate their linking to the structure and consequently their parsing (for previous literature on floating segments see Charette 1991; Zoll 1993; Guerssel & Lowenstamm 1996; Zimmermann 2017).

#### (11) Italian article (Larsen 1998)

Following general Strict CV rules, floating segments remain afloat under government (Scheer 2000: 151ff). This has been since confirmed by multiple other papers in this approach (Pagliano 2003; Scheer 2016; Faust et al. 2018; Barillot et al. 2018; Ulfsbjorninn 2020, 2021; Lahrouchi & Ulfsbjorninn 2022).

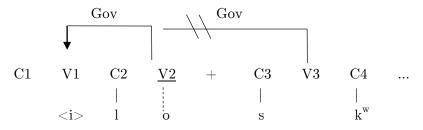
Given these conditions on linking floating segments, and the conditions on Gov presented in the previous section, the underlying form that Larsen proposes generates a vocalic alternation in response to the shape of the rightwards stem. This correctly generates the singular forms of the article. Faust et al. (2018) then significantly extend this analysis to include the plural forms which are harder to generate since they are appear so different in form: [i] and  $[\mathfrak{K}(i)]$ .

The derivation of the singular is shown beneath. Numerical indices have been added to the CV slots in order to facilitate their discussion. As shown in (12), when /<i>l<o>/ comes before a C(C)V-initial stem, the V3 of the stem is filled and it will Govern V2. This leaves the <o> beneath V2 floating and it will remain phonetically uninterpreted. V2, being empty and silenced, cannot Gov V1 and, as such, V1 must host the docking of the floating <i>. This leads to the pronunciation of <i> and the non-pronunciation of <o> generating the correct surface form: [il]. In fact, this explains the mutual exclusivity of <i> and <o> in the variants.



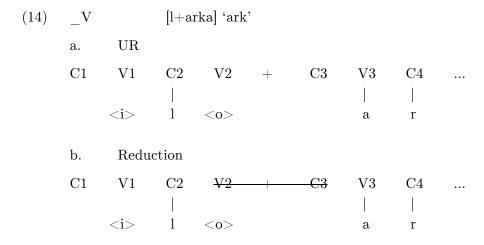
Meanwhile, in any stem where V3 is empty and silenced, as shown beneath for an s+C stem, V2 will not be silenced by Gov because V3 is empty and silenced. As such <0> will have to dock to V2. Then, since V2 is filled it will Gov V1, silencing it. This hinders the linking of <i>, which remains afloat and is uninterpreted. This correctly generates the form: [lo]. This is all shown in (13) beneath.

b. Computed form

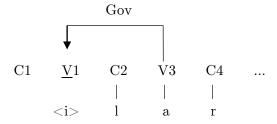


Next what needs to be explained is the concatenation with vowel-initial stems. This has one more aspect that needs to be explained. In these cases, Standard Italian also undergoes an extra process of skeleton deletion called: Reduction.

Reduction (Gussmann & Kaye 1993) is a structure deleting operation, it occurs immediately as its context is met, that is to say, immediately on concatenation and therefore before the linking of any floating structure. Specifically, there is VC-Reduction: an empty V-slot followed by an empty C-slot are removed from the representation. This is a common occurrence across morpheme-boundaries and it is parametric. This is shown below. As we see in (14c), V2 and C3 are a Reduction site and are removed from the representation. This results in the V-slot (V3) now being local to V1, so V3 silences V1 by Government. The lateral relations in the fully computed form are shown in (14c).



c. Computed form

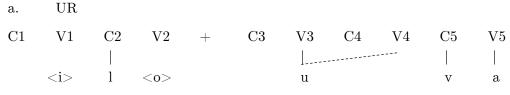


Interestingly, as remarked upon in Russo & Ulfsbjorninn (2021), Medieval and Modern Italo-Romance varieties from Tuscany show the same underlying form.

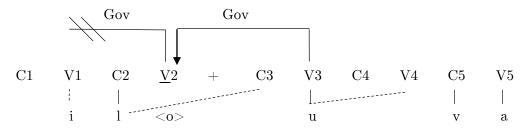
b.	Modern Tuse	Modern Tuscan (source: NavigAIS)						
	[ilːɔːka] [ilːaːko]	'goose' 'needle'	Pitigliano (pt. 582)	Maremma/Grosseto				
	[ɛlːeska]	'bait'	Vinci (pt. 522)	Florence				
	[ilːuːva] [ilːɔsːe]	'grapes' 'bones'	Elba/Pomonte (pt. 570) Elba/Capolivieri (pt. 568)	Livorno				

In these varieties, the underlying shape of the definite article is the same (except for vowel quality), the only difference is the non-application of Reduction. The fact that V2 and C3 are not deleted by VC-Reduction means that these skeletal slots remain part of the representation, and this leads to prevocalic gemination.

# (16) No Reduction [ilːuːva] 'grapes' Elba/Pomonte



#### b. Computed form



In addition to VC-Reduction (Gussmann & Kaye 1993), which we see is parametric, there are two other Deletion-type operations that apply at the skeleton.

The first is well known, it is caused by Hiatus, when two filled V-slots are adjacent: VV. This (parametrically) leads to the deletion of a whole CV unit. The specific rules on Hiatus deletion in Llanito offer a little intricacy and they immediately relate to the derivation of the feminine article allomorphs, so the specific rules will illustrated in section (3.3.3).

The second occurs when a wholly empty CV unit can neither be silenced nor filled. In this context there is no 'saving' the empty CV unit and so it is deleted.

#### (17) Deletion operations

a.	VC-Reduction	$Empty\ C\text{-}slot\ +\ Empty\ V\text{-}slot$	(parametric)
b.	CV-Deletion	Hiatus	(parametric)
		Unsilenceable and unfillable	(universal)

Having seen in some detail how the system works, why it matters, and some of the parametric variation in their computation, we now turn to explaining the pseudo-allomorphy in Llanito.

# 3 Llanito pseudo-allomorphy

## 3.1 The data

The definite and indefinite article are mostly sensitive to the rightward phonological environment.

# (18) Definite and Indefinite article pseudo-allomorphy

#### a. M

M										
	$\mathbf{SG}$		P	L						
#_C	#_V	#_w	#_C	#_V						
(e)r pah'thiso	(e)l 'aŋko	lo 'weno	lo <sup>h</sup> san'flauwa <sup>h</sup>	lo <sup>h</sup> s ani'ma <sup>h</sup>						
mess	'uncle'	'good'	'sunflowers'	'animals'						
(u)n	(u)n	(u)no	(u)no <sup>h</sup>	(u)no <sup>h</sup> s						

b. F

F									
S	G		PL						
#_C	#_V	#_C	#_V						
la ya'ʒina 'chicken'	l a'miya 'friend'	la <sup>h</sup> 'βi∫a <sup>h</sup> 'snake'	la <sup>h</sup> s a'wela <sup>h</sup> 'grandmothers'						
(u)na	(u)n	(u)na <sup>h</sup>	(u)na <sup>h</sup> s						

#### 3.2 Explananda

As is the case in Italian, the variants are non-optimising. As the table in (18) shows, there are three forms of the masculine singular definite article are: [er], [el] and [lo]. However, [lo] is not selected before C-initial stems, though it would make an unmarked CV sequence at the juncture, instead, a CC is created by the selection of [er]: [er 'βraða] 'the brother'.

There are essentially six things to explain in the data. Firstly, there is the mutual exclusivity of [e] and [o] in the masculine singular (already this should be reminiscent from the discussion of Italian).

Secondly, the articles undergo vowel deletion if they follow a vowel-final word. In the tables in (18) this is shown with the vowel in round brackets, the deletion is shown in (19).

# (19) Vowel deletion

a. [era-l-aˈmigo] 'it was the friend' (cf. [el-ˈaŋko] 'the uncle') /era el amigo/
b. [era-r-teleˈβiʃon] 'it was the TV'

Thirdly, there is the alternation between [er] and [el].

/era el telebison/

# (20) r/l alternation

a. [era-r-'dolfm] 'it was the dolphin' /era el dolfm/
b. [era-l-a'miyo] 'it was the friend' /era el amigo/

Fourthly, there is the special selection of [lo] before word-initial /w/, in what looks like melody-conditioned allomorph selection; something that Scheer (2016; to appear) expects to be universally excluded.

Fifthly, there is the partial aspiration/debuccalisation of /s/. This occurs when the /s/ of the plural allomorphs appear in prevocalic context. In this eventuality, the plural /s/ is heard as a devoicing of the article's vowel (this is the same as any medial 'coda' /s/ in Llanito, this will be addressed in section 3.3.5). Following the aspiration, there by a full /s/ pronounced before the vowel.

# (21) Partial aspiration

a.  $[lo^h.s-a'migo^h]$  'the friends' b.  $[uno^h.s-a'migo^h]$  'some friends' /unos amigos/

Lastly, the rules that we have proposed should come together to explain the pseudo-allomorphy of the Preposition + Determiner contraction that gives rise to the articulated prepositions and their many variants.

# (22) P+D contraction

a. [era-na-ˈpaβana] 'it was a seagull' era una pabana
b. [era-n-la-ˈpaβana] 'it was in the seagull' era nV-la pabana

The prepositions do not have any fixed 'basic' form (even when used with bare nouns), their underlying form has to be understood through phonological analysis. Their shapes are shown in the table beneath.

In addition to r/l allophony, and s-debuccalisation, there are also preposition-specific phonological processes such as the vowel deletion of 'in': [ner, nl, nlo...]. The n/l fusion of 'with': [kon er, kol, kolo...], and r/l fusion in 'for/by' [por er, porl/pol, polo...].

The prepositions 'in' and 'of' are particularly interesting in the variety of their surface variants: [ner, nl, nlo...] vs. [der, del, delo...], their derivation will be illustrated in the final section.

# (23) Articulated prepositions pseudo-allomorphy

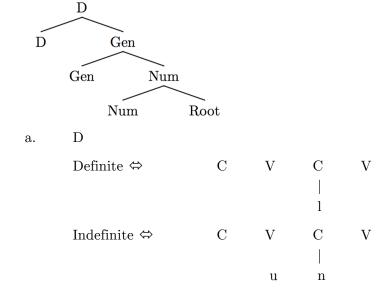
		M					I	न	
		$\mathbf{SG}$		I	$^{ m PL}$	SG		PL	
	_C	_v	_w	_C	_v	_C	_v	_C	_v
a. to	ar	al	alo	alo <sup>h</sup>	alo <sup>h</sup> s	ala	al	ala <sup>h</sup>	ala <sup>h</sup> s
b. with	kon er	kol	kolo	kolo <sup>h</sup>	kolo <sup>h</sup> s	kola	kol	kola <sup>h</sup>	kola <sup>h</sup> s
c. of	der	del	delo	delo <sup>h</sup>	delo <sup>h</sup> s	dela	del	dela <sup>h</sup>	dela <sup>h</sup> s
d. in	ner	nl	nlo	nlo <sup>h</sup>	nlo <sup>h</sup> s	nla	nl	nla <sup>h</sup>	nla <sup>h</sup> s
e. for/by	por er	porl/pol	polo	polo <sup>h</sup>	polo <sup>h</sup> s	pola	pol	pola <sup>h</sup>	pola <sup>h</sup> s
f. for	par	pal	palo	palo <sup>h</sup>	palo <sup>h</sup> s	pala	pal	pala <sup>h</sup>	pala <sup>h</sup> s

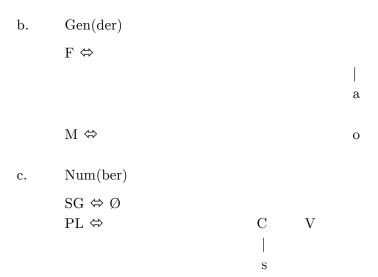
# 3.3 Derivations

#### 3.3.1 The UR

According to my analysis, the UR for the definite and indefinite articles of Llanito are as follows.

## (24) Llanito DP and Spell out exponents





As we see for the exponents of Gender (24b), the masculine exponent is underlyingly marked as floating, while the feminine, while being underlingly just an /a/ is marked as fixed. This marking is non-trivial since it suggests there has to be a way to mark individual items as floating or fixed underlyingly. It follows from our framework that this could be possible, since the whole premise is that association lines are not 'automatic'. There are also precedents in the theory where this tool has been used to good effect, referred to previously as 'association under control' in Ben Si Saïd 2010, 2014) and found also in Scheer (2010:155), Scheer & Ziková (2010:481-482) and Ziková & Faltýnková (2021).

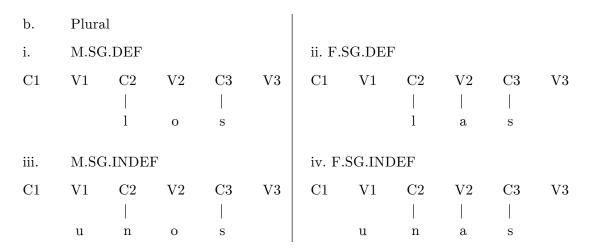
I have to assume that these exponents which are fully decomposition and regular in the language, are fused together during vocabulary insertion. It is not exactly clear how linearization works in this case, or if the pieces require assembly in sort of 'work space'. Suffice it to say that these exponents concatenated together, form the UR of the articles. In (25) below are the UR shapes of the article. As shown in (25av), in the Masculine, CV1 will only be phonetically interpreted if V2 is silenced. In this case, [e] the general epenthetic vowel of the language will surface. The epenthetic vowel is shown in square brackets beneath the CV that it interprets.

#### (25) Some selected article URs

a.	Singu	ılar						
i.	M.SC	G.DEF		j	ii. F.S	G.DEF	1	
C1	V1	C2   1	V2 o	•	C1	V1	C2   1	V2   a
iii.	M.SC	G.INDE	F	i	iv. F.	SG.IND	EF	
C1	V1	C2 	V2	•	C1	V1	C2	V2 
	u	n	O			u	n	$\mathbf{a}$

v. With epenthesis

C1 V1 C2 
$$\underline{V}2$$
 |  $[e]$  1 o



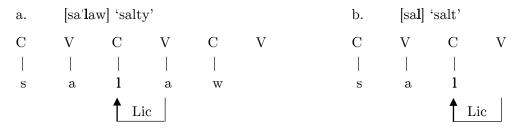
Given the conditions on Government and floatingness that were discussed in section (2.1), in the plural the floating  $\langle o \rangle$  of the masculine will always become linked the V-slot (V2) since here V2 cannot be Governed by the empty V3 of the plural. Another immediate implication of these structures is that the CV1 of the feminine will never be realized because its V1 slot will always be Gov'd by the linked vowel of the feminine  $\langle a \rangle$  which is linked to V2.

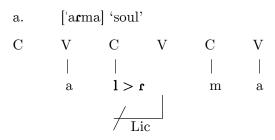
## 3.3.2 r-l alternation

The alternation between [er] and [el] is clearly purely phonological. For more on the phonology of Andalusian varieties see (Hualde 2005; Lloret 2018; De Haro & Hajek 2020 and references therein).

Liquids in Llanito are in complementary distribution. In Strict CV terms, [l] is the surface form of the liquid in prevocalic positions, where it can be [+Lic] (see Ségéral & Scheer 2001): [salaw] 'salty'. Whereas, in non-licensed position (internal codas), this liquid surfaces as a [r]: [arma] 'soul'. Parametrically, final empty V-slots can License their C-slot position, thereby allowing [l] in final position: [sal] 'salt'.

(26) Distribution of [l] and [f]

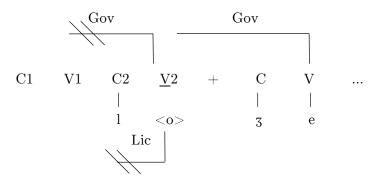




When it comes to articles, the effect this has is that the /l/ sitting in C2 will be realized as [f] whenever V2 is silenced, since only a filled V2 could license a consonant in C3. The epenthetic vowel (shown in square brackets under V1) surfaces because V1 cannot be silenced by V2 to its right because it is itself silenced.

# (27) [er] derivation

b. Gov and licensing



c. Computed form [er 'zelifi] 'the jellyfish'

## 3.3.3 Leftward conditioned vowel deletion

Vowel deletion in hiatus situations is common in Llanito, however, it cannot be generalized to deleting either V1 or V2. It depends on the combination of items:

```
/se usa/ [s-'usa] 'it is used'
/la ita'ljana/ [l- ita'ljana] 'the Italian (woman)'
/era un/ [era-n] 'it was an...'
```

Across word boundaries some vowel-vowel sequences are tolerated, though the precise conditions on this are not clear.

With articles, it is always the vowel of the article that is elided if the element before it ends in a vowel. This is true with the definite (30a-c), and the indefinite (30d).

# (30) Vowel deletion

(21)

Histus deletion<sup>4</sup>

a.	[era- <b>r</b> -'dɔlfɪn] /era el dɔlfɪn/	'it was the dolphin'
b.	[partio- <b>r</b> -ti'pa] /partio el tipa/	'broke the teapot'
с.	[era-l-aˈmiyo] /era el amigo/	'it was the friend'
d.	[podi'o-ser-me- <b>na</b> -'tasa 'te] /podio ser me una tasa te/	'could make myself a cup of tea'

I suggest that in these cases, floating vowels are preferentially deleted over fixed vowels. However, the /a/ of the feminine of the article is fixed, yet it also deletes in prevocalic position. The full explanation of vowel-deletion in Llanito is beyond the scope of this paper, however, the following is tentatively suggested. As can be seen by (31c) and (31d) – some Fixed-Fixed combinations are deleted and some are retained, it is not clear what controls this pattern.

(31)	matus deletion	Thatus deletion							
	a. Fixed Floating	$V - \emptyset$	[era-n]	/era + un/					
	b. Floating Fixed	$\emptyset - V$	[s-'usa]	$/\mathrm{se} + \mathrm{usa}/$					
	c. Fixed Fixed	V - V	[l- itaˈljana]	/la + itaˈljana/					

d. Fixed Fixed V - V [di'sirte 'argo]

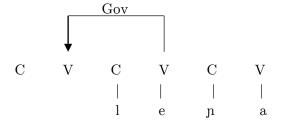
[mi-ajyre] / my + air/

<sup>&</sup>lt;sup>4</sup> In Strict CV Hiatus is defined by the skeleton, so an unsilenced CV slot (which would be epenthetically pronounced) is treated the same as a V-slot attached to a vowel (for these purposes).

The consequence of these VV sequences is Hiatus deletion depending whether the hiatus resolution is to the left or the right.

# (32) Left-Hiatus deletion

- a. UR /la + epa/
- b. Deletion
- c. Computed form: [l-'ena] 'the hernia'



# (33) Right-Hiatus deletion

- a. UR /era + un / era + un / er
- - b. Deletion: [era-n] C-initial stem (M)

In the course of a derivation, Hiatus deletion and Reduction can occur together. This can lead to an article being paired down into a single consonant, as is shown beneath.

#### 3.3.4 w-initial words

Allomorphs that are specific to melodic properties of the segment are supposedly universally excluded (Scheer 2016), true allomorphy is supposedly only sensitive to either sonority or anything on or above the skeleton (ibid; Scheer to appear).

Since Llanito has an allomorph that is segment specific, this would seem to be a counterexample, however, it is possible in this case to reanalyze the segment-specificity as a syllable structure condition. The clue is in the origin of the cluster. W-initial forms originate from a branching onset (Cw sequence): bweno > [weno] or gwante > [wante] 'glove'.

This means that w-initial roots, historically have two initial C-slots, historically arranged in a branching onset structure. In Strict CV branching onsets have been analysed as having an 'buried' empty V-slot that is not visible to Gov (Scheer 1996; Lowenstamm 1999) (shown in (35) below).

The diachronic explanation for its unique behaviour probably comes from the fact that when the first part of the branching onset was lost, the cluster went from having a buried V-slot (invisible to Gov) to one which is visible to Gov (see 35). This results in initial /w/ being a virtual geminate, it is lexically attached to two C positions.

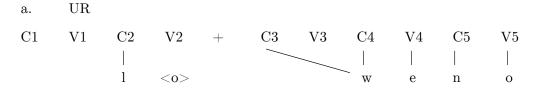
(35) bweno (with a buried V-slot) > [weno] 'good'

Though w-initial words are synchronically phonetic singletons but phonologically we see evidence of the two historical C-slots. The Llanito VC - CV (er/lo) pattern, phonologically still behaves like Italian with heterosyllabic #CC initial clusters (shown earlier in (10d) and (13): /il + kane/ 'the dog', /il + brat $\mathfrak{f}$ :o/ 'the arm' vs. /lo +  $\mathfrak{p}$ :omo/ 'the gnome', /lo + studente/ 'the student').

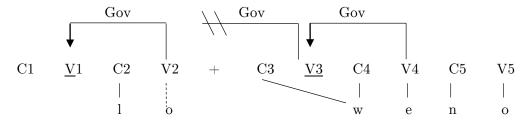
W-initial roots therefore begin with a geminate structure and the V1 slot in their stems is always empty and unburied.

As we see in (36), since V3 is empty, V2 cannot be silenced, this leads to the linking of the floating <0> of the masculine, which in turn silences the V1 slot.

# (36) Derivation



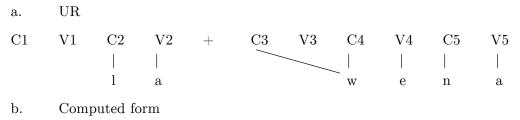
# b. Computed form

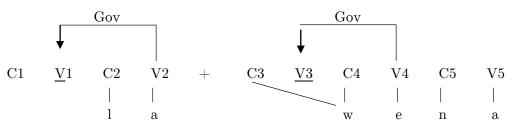


This accounts for the special form of the masculine before w-initial stems.

According to our exponent assumptions, since the feminine has fixed /a/ (underlyingly linked to V2), its linking to the skeleton (and phonetic interpretation) is not contingent on government. As such, the feminine is correctly predicted not to have special allomorphy before /w/.

# (37) No alternation in the feminine





# 3.3.5 Partial aspiration

Llanito is one of the many varieties of Ibero-Romance with s-debuccalisation (for treatments of the phenomenon see Harris & Kaisse (1999); Broś (2018) and references within.

In Llanito /s/ has a very complicated distribution, however, some observations can be made here and we defer to future studies for a more precise understanding of Llanito /s/.

In general, it appears that medial coda /s/ is always subject to s-debuccalisation, whereas word-final consonants are extrametrical, in the sense that /s/ survives in these contexts.

Theoretically stated, it seems that /s/ require licensing to surface as [s] the same way as we demonstrated for /l/ (the l-r alternation 3.3.2).

Prevocalic and word-final positions allow the unlenited [s]: [sal] 'salt', [gas] 'gas', klas 'class', [nes] 'nurse'; ['junives] 'universe'. However, said that, word-final /s/ and vowel aspiration seem to be contrastive in Llanito. Words with final /s/ from Andalusian, though, appear with debuccalised final /s/: [inˈgleʰ] 'English' (cf. [inˈglesa] 'English.F'), along with I believe all productive plural /-s/. Word-final s+C clusters maintain full s: [frost] 'frost', [risk] 'risk'.

Word-medially, however, there are very few 'coda' /s/ tokens, no matter the language of origin: ['mihtha] 'mister' and [ma'rihkho] 'seafood' (the status of aspirate consonants is itself not clear to me at the present moment). The only things that look like regular exceptions appear to be compounds: [bas'stop] 'bus stop', and some s+voiceless stop and voiceless stop+s sequences: [an'tswelo] 'style', [towsta] 'toaster'.

I take these facts to be consistent with the claim that FEN are capable of Licensing /s/, whereas medial empty nuclei are weaker. Lenited /s/ manifests as a devoicing of the preceding vowel, this has been marked as a superscript h: ['si<sup>h</sup>t<sup>h</sup>a] 'sister (nurse)'.

Interestingly, any debuccalised /s/ in an s+C is marked also by aspiration of the voiceless stop:  $[ra^h'k^ha]$  'scratch',  $['ro^ht^ho]$  'Gibraltese pasta dish'. In the case of debuccalised word-initial s+C clusters, this is the only remnant of /s/:  $[k^hwela]$ , it is also visible in compounds:  $[tife'k^hwela]$  'school teacher'. However, some initial s+C are maintained: [stanp] 'stamp'.

Whatever the case of /s/ elsewhere in Llanito, the /s/ of the plural in articles requires licensing in the same way as /l/ does. Where the /s/ of the plural can spread into a licensed position it does so, for instance when it occurs before a V-initial stem. This produces a bipositional structure (a geminate). This bipositional structure is phonetically interpreted as aspiration on the first half of the geminate (cf. Icelandic (Keer 1999; Árnason 2011)). $^5$ 

However, before we show the full derivation in (39), one additional necessary complication must be introduced. There is no space to fully justify this hypothesis here (and there may be alternative explanations for these effects, which again cannot be entered into here).

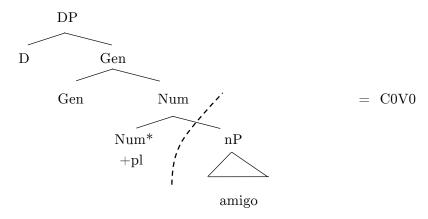
a fortis vs. lenis contrast. Lenis geminates surface as plain geminates:  $[k^h \text{op:i}]$  'young seal', but geminate fortis consonants are not phonetically interpeted as aspirates, but instead have pre-aspiration in C1 (and not in C2):  $[e^h \text{pli}]$  'apple'.

<sup>&</sup>lt;sup>5</sup> In Icelandic, only post-aspirated stops and plain singletons are permitted after a long stressed vowel: [aːpʰi] 'monkey' [taːlvr] 'valley'. Whereas, after a short stressed vowel, one cannot get post-aspirates or a plain singleton: \*[kɔpʰi, kʰɔpi]. Instead, after a short stressed vowel one can get plain geminates, pre-aspirated stops and coda-onset structures: [snøkː] 'sudden', [eʰpli] 'apple', [fiskyr] 'fish'. After a coda, only plain stops are attested: \*[hantta, hantʰa]. Geminate post-aspirate stops are entirely forbidden: \*[kɔpːʰi]. All this indicates that Icelandic has a geminate vs. singleton contrast &

In Llanito, as in other Ibero-Romance varieties, Num with a +PL feature is a cyclic head (shown starred Num\* in (38)). For more on phases in phonology see Newell (2008); Samuels (2010); Scheer (2008, 2011, 2012); D'Alessandro & Scheer (2015); Faust (2021).

Following Scheer (2011, 2012), the phasal head is marked in the phonology by an empty CV that is concatenated between the exponent for number and the exponent(s) of the stem. This marked with 0-subscript (C0V0) for the convenience of the reader.

# (38) Num +PL is phasal



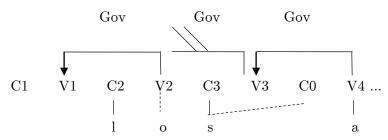
As we show in the full derivation in (39), the extra CV (C0V0) is concatenated with the other exponents. However, VC-Reduction, as it is currently defined, would apply in two sites: the juncture between V3 and C0 and the juncture between V0 and C4. This would actually fully delete the inserted empty CV, however, we know from the output that it must remain in the structure. It appears that either (a) the phasal boundary actually introduces two CV units: C0V0C0V0, or (b) there is a condition that VC-Reduction does not apply to the C of a phase-initial CV. There are reasons to like/dislike both of these explanations, however, in the absence of a better explanation, I will present the latter.

## (39) Partial aspiration of /s/

a. UR including the phase-boundary C0V0

b. Reduction (crucially V3 and C0 are not a reduction site)

c. Computed form [lo<sup>h</sup>s-ani'ma<sup>h</sup>]



## 3.3.6 P+D contraction

We now turn to what have been called 'articulated prepositions' in Romance descriptive grammars building on the analytical approach in Russo & Ulfsbjorninn (2021), Russo (2022). These come about via the fusing of preposition + determiner and would constitute another (rich) set of PCA. However, the representations and derivations that have been so far assumed can actually predict the attested shapes, again without need for any PCA.

#### (40) Articulated prepositions (reproduced from 23)

	M					F			
	$\mathbf{SG}$			PL		SG		PL	
	_C	_v	_w	_C	_v	_C	_v	_C	_v
a. to	ar	al	alo	alo <sup>h</sup>	alo <sup>h</sup> s	ala	al	ala <sup>h</sup>	ala <sup>h</sup> s
b. with	kon er	kol	kolo	kolo <sup>h</sup>	kolo <sup>h</sup> s	kola	kol	kola <sup>h</sup>	kola <sup>h</sup> s
c. of	der	del	delo	$delo^{\mathbf{h}}$	delo <sup>h</sup> s	dela	del	dela <sup>h</sup>	dela <sup>h</sup> s
d. in	ner	nl	nlo	$\mathrm{nlo}^{\mathbf{h}}$	nlo <sup>h</sup> s	nla	nl	nla <sup>h</sup>	nla <sup>h</sup> s
e. for/by	por er	porl/pol	polo	$\operatorname{polo}^{\mathbf{h}}$	polo <sup>h</sup> s	pola	pol	pola <sup>h</sup>	pola <sup>h</sup> s
f. for	par	pal	palo	palo <sup>h</sup>	palo <sup>h</sup> s	pala	pal	pala <sup>h</sup>	pala <sup>h</sup> s

The alternations of [r] & [l] and the [s] & aspiration follow transparently from what we have said so far, so I will not comment on these further. There is also the fusion of /n/ and /l/ in [kon er] > [kol] that requires a specific discussion of nasals and laterals and this would overly derail our discussion here, so this aspect is also not treated here.

I will analyse the variants of 'of' and 'in', since these appear to have highly irregular shapes that would usually be taken to be phonologically conditioned allomorphy: ner & nl & nlo vs. der & del & delo. Their underlying form has to be obtained by phonological analysis. Their full set of expressions is shown in (41).

(41) 'of' and 'in' variants

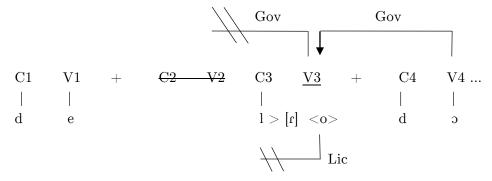
c. 'of'	der	del	delo	$delo^{\mathbf{h}}$	$delo^{\mathbf{h}}s$	dela	del	dela <sup>h</sup>	dela <sup>h</sup> s
d. 'in'	ner	nl	nlo	$\mathrm{nlo}^{\mathbf{h}}$	nlo <sup>h</sup> s	nla	nl	nla <sup>h</sup>	nla <sup>h</sup> s

The behaviour of the preposition 'in' /nV/ strongly suggests that its e is epenthetic (or floating) since this vowel alternates with zero, in a way that it does not in 'of': /de/. Assuming this UR beneath we show P+D contraction with a fixed vowel /de/ in contrast with a P+D contraction with an empty V (epenthetic e): /nV/. The two underlying forms are shown next to the UR of the M.SG.DEF.

The two prepositions differ on the filledness/linkedness of /e/ in the V1 slot. This difference is sufficient to explain the derivational differences between the two structures.

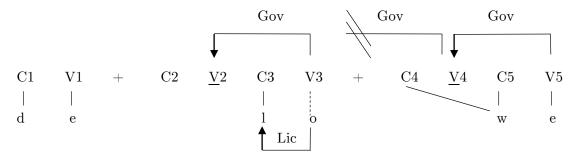
In (43) there is the combination of de + M.SG.DEF + C-initial stem. We see that in this case, the second V-slot of the article (V3) is Gov'd. Consequently, the first CV of the article (CV2) is ungovernable, so it cannot be silenced. Moreover, the empty CV2 cannot be realized either. Llanito does not allow vowel spreading, nor is there evidence of any consonant gemination apart from /s/ and /w/. Moreover, if CV2 was filled by epenthesis, it would be deleted by Right-Hiatus deletion (which may be what happens), but we cannot tell if this is what happens or if CV2 is merely deleted. Finally, the /l/ in C3 is unlicensed and it surfaces phonetically as [r].

## (43) Computed form: [der'dolfin] 'of the dolphin'



Conversely, the UR of 'de' and a w-initial stem gives rise to the following derivation, correctly predicting the shape of the variant. In this condition, V3 will not be governed, allowing the linking of <0>. This licenses the /l/ in C3, and governs the CV2 position thereby obviating the need for CV deletion.

(44) Computed form: [delo'weno] 'of the good (one)'

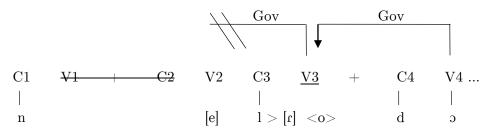


Meanwhile, as was shown in (45), the lack of a fixed vowel in the V1 slot of 'in' leads to a different outcome.

When /nV/ is concatenated with a C-initial M.SG.DEF article, it will create the conditions for Reduction. This removes V1C2 from the representation. V4 can silence V3, leaving the article's <o> unassociated, and this will lead to the unsilenced status of V2, which surfaces with an epenthetic vowel quality. Because the /l/ of the article is not licensed by V3 it has to surface as a rhotic. This all produces the correct surface form in this case: [ner].

# (45) Computation of /nV/ + C-initial M.SG.DEF

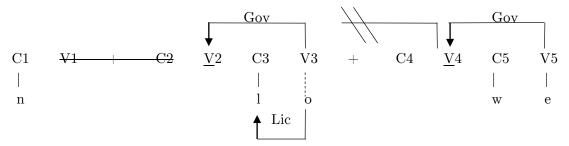
a. Computation up to Reduction



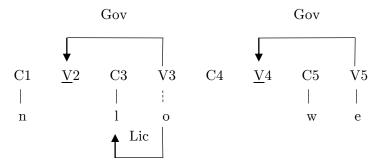
b. Fully computed form [ner-dolfin] 'in the dolphin'

However, before a w-initial stem, 'in' is correctly predicted not to surface with its epenthetic vowel. The derivation is again shown in two steps. As we see in (46), since the stem-initial nucleus is empty, it cannot silence the second V-slot of the article (V3). As such,  $\langle o \rangle$  in (V3) can silence V2. This leaves a reduction site between the P and D, because V1 is an empty V-slot and it is followed by an empty C-slot. Once reduction applies the output is shown in (46b), however, there is no unsilenced nucleus to epenthesise, as such this P+D variant has no vowel.

- (46) Computation of 'in the good (one)'
  - a. Computation up to Reduction



b. Fully computed form [nloweno] 'in the good (one)'



We will now conclude with the derivation of P + D contraction of 'in' with the masculine article before vowel initial roots. As was just shown for P+D contraction, Llanito has VC-Reduction set to  $\langle yes \rangle$ . This means that a M.SG.DEF before a V-initial stem receives a very similar treatment to that of prevocalic M.SG.DEF in Italian (shown back in example (14)).

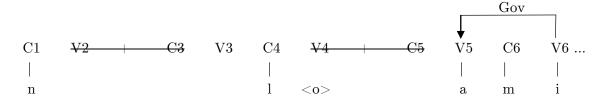
Reduction of V4 and C5 happen non-teleologically because their context is met, there are no counterfactual derivational steps in Strict CV (i.e. do not delete V4 because <0>0 to it and if it did it would not be empty). Lateral relations (Gov) are established before the linking of melody.

After Reduction has applied in those two sites, we see that V5 Gov's V3, silencing it. This leads to no phonetic vowel between the P+D before V-initial stems.

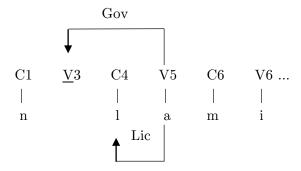
26

<sup>&</sup>lt;sup>6</sup> A reviewer points out that this seems to be in contradiction with how /s/ links forming a geminate before Reduction has a chance to apply. I leave this as an unresolved problem at this point. As the reviewer notes, there is actually no need to apply Reduction to (47), since the regular application of government produces the same outcome.

- (47) [nl-'amiyo] 'in the friend (M)'
  - a. Computed up to Reduction



b. Fully computed form



## 4 Conclusions

We have seen that the apparent allomorphy of definitely and indefinite articles in Llanito is actually a case of pseudo-allomorphy, since there is never a selection between competing underlying forms, instead all variants are produced through the unified concatenation of exponents. This includes also the many cases of P+D contraction, which are also generated by the phonology through the unified concatenation of the same exponents. This pattern is generated entirely in the phonological component and therefore does not constitute a real case of allomorphy at all. This undercuts any (hypothetical) Priority account because there is no competition for insertion from various underlying forms. This approach is also better than just listing PCA rules because in this model there is a deterministic connection between the form of an item and its phonological context. There are probably still areas where the analysis could be bettered, however, I think it is a good proof of concept, adding itself to the list of languages where allomorphy has been generated using the autosegmental tools of Strict CV: floating features/segments, empty skeletal structure and a universal (only slightly parametrized) computation.

# **Bibliography**

Archer, E. G. 2006. Gibraltar, Identity and Empire. London: Routledge.

Árnason, K. 2011. The Phonology of Icelandic and Faroese. Oxford: Oxford University Press.

Balogné Bérces, K. & S. Ulfsbjorninn. 2021. Olts, oltódj, oltass, oltakozz: A felszólító módú alakok palatalizációjának templatikus elemzése autoszegmentális elem és elrendezés típusú modellben. *Nyelvtudományi Közlemények*, 117:351-378.

Barillot, X., S. Bendjaballah & N. Lampitelli. 2017. Verbal classes in Somali: Allomorphy has no classificatory function. *Journal of Linguistics*, 54(1). 3–43.

Bendjaballah, S & M. Haiden. 2008. A typology of emptiness in templates. In J. M. Hartmann, V. Hegedüs & H. van Riemsdijk (eds.), Sounds of silence: Empty elements in syntax and phonology, 2–59. Oxford & Amsterdam: Elsevier.

Ben Si Saïd, S. 2011. Association sous Contrôle grammatical: Le cas du a du pluriel externe en Kabyle. *Acta Linguistica Hungarica*, 57(4): 432–443.

Ben Si Saïd, S. 2014. De la nature de la variation diatopique en kabyle : étude de la formation des singulier et pluriel nominaux. Ph.D dissertation, University Nice Sophia Antipolis.

Bonet, E. & D. Harbour. 2010. Contextual Allomorphy. In: Trommer, Jochen (ed.), *The Morphology and Phonology of Exponence*, 195-235. Oxford: Oxford University Press.

Bonet, E, M-L. Lloret & J. Mascaró. 2007. Allomorph selection and lexical preference: Two case studies. *Lingua*, 117(9): 903–927.

Broś, K. 2018. Contiguity in Prosodic Words: Evidence from Spanish. *Poznań Studies in Contemporary Linquistics*, 54(1):37–82.

Cadely, J-R. 2003. Les sons du Créole haïtien. Journal of Haitian Studies, 9(2): 4-41.

Caha, P. 2009. The nano-syntax of case. Tromsø: University of Tromsø PhD Dissertation.

Charette M. & A. Göksel. 1998. Licensing constraints and vowel harmony in Turkic languages. In: Cyran, E. (ed), *Structure and Interpretation: Studies in Phonology*, Lublin: Folium. Pp. 65-88.

Charette, M. 1991. Conditions on Phonological Government. Cambridge: CUP.

Chevasco, D. 2021. Notes on 'Contemporary Bilingualism, Llanito and Language Policy in Gibraltar: A study with a present-day view of linguistic challenges. Gibraltar Reports – Cuadernos de Gibraltar. 4(1):1-8.

Cho, S. 2016. The i Deletion Rule and Phonologically Conditioned Allomorphy in Korean Case Markers. *University of Pennsylvania Working Papers in Linguistics*: 22(1):10.

Collins, C. & R. Kayne. 2020. Towards a Theory of Morphology as Syntax. (ms.), NYU.

D'Alessandro, R. & T. Scheer. 2015. Modular PIC. Linguistic Inquiry, 46(4):593-624.

Dolatian, H. 2022. An apparent case of outwardly-sensitive allomorphy in the Armenian definite. Glossa: a journal of general linguistics, 7(1).

Embick, D. 2010. Localism versus Globalism in Morphology and Phonology. Cambridge: Cambridge University Press.

Faust, N. 2021. Size, allomorphy and guttural-final stems in Modern Hebrew. *The Linguistic Review*, 38(3):327-347.

Faust, N., N. Lampitelli, & S. Ulfsbjorninn. 2018. Articles of Italian Unite: Italian definite articles without allomorphy. *Canadian Journal of Linguistics*, 63(3): 1–27.

Fortuna, Marcin. 2022. A phonological solution to allomorphy in Georgian nominal inflection, Glossa: a journal of general linguistics, 7(1).

Guerssel, M. & J. Lowenstamm. 1996. Ablaut in Classical Arabic Measure I Active Verbal Forms." In *Studies in Afroasiatic Grammar, edited by* Jacqueline Lecarme, Jean Lowenstamm and Ur Shlonsky, 123–134. *The Hague: Holland Academic Graphics*.

Gussmann, E. & J. Kaye. 1993. Polish notes from a Dubrovnik Café I: The Yers. SOAS Working Papers in Linguistics and Phonetics, 3:427–462.

Halle, M. & A. Marantz. 1993. Distributed morphology and the pieces of inflection. In: Hale, K. & S-J Keyser (eds.), *The view from building 20. Cambridge: MIT Press.* Pp. 111–176.

Halle, M. & A. Marantz. 1994. Some key features of Distributed Morphology. In: Carnie, A. & H. Harley (eds.), Papers on phonology and morphology. *MIT Working Papers in Linguistics 21*. Cambridge, MA: MIT Press. pp. 275–288.

Harley, H. & R. Noyer. 1998. Licensing in the non-lexicalist lexicon: nominalizations, vocabulary items and the Encyclopaedia. In: Harley, H. (ed.) *MITWP 32: Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect*, Cambridge: MIT Press. Pp. 119-137.

Harris, J. & E. M. Kaisse. 1999. Palatal vowels, glides and obstruents in Argentinian Spanish. *Phonology*, 16:117–190.

De Haro, A., & Hajek, J. 2022. Eastern Andalusian Spanish. *Journal of the International Phonetic Association*, 52(1):135-156.

Hualde J. 2005. The Sounds of Spanish. Cambridge: Cambridge University Press.

Kabak, B. 2011. Turkish vowel harmony. In: van Oostendorp, M., Ewen, C., Hume, B. & K. Rice (Eds.), *The Blackwell companion to Phonology*. Oxford: Wiley-Blackwell. pp. 2831-2854.

Kaye, J. D. 1990. 'Coda'-licensing. *Phonology*, 7(2):301-330.

Kaye, J., Lowenstamm, J., & J-R., Vergnaud. 1985. The internal structure of phonological representations. Phonology Yearbook, 2:305-328.

Kaye, J., Lowenstamm, J. & J-R. Vergnaud. 1990. Constituent Structure and Government in Phonology. Phonology, 7:193-231.

Keer, Edward. W. 1999. Geminates, The OCP and The Nature of CON. Ph.D. Rutgers.

Lahrouchi, M. & S. Ulfsbjorninn. 2022. Nasal Assimilation Counterfeeding and Allomorphy in Haitian: Nothing is still something. *Linguistic Inquiry*.

Lampitelli, N. 2017. A morphophonological analysis of the velar insert in Italian verbs. Glossa: a journal of general linguistics, 2(1):47.

Larsen, B. U. 1998. Vowel length, Raddoppiamento Sintattico and the selection of the definite article in Italian. In: Sauzet, P. (ed.), *Langues et Grammaire II-III*, *Phonologie*. University of Vincennes- Saint- Denis. Paris. Pp. 87–102.

Levely, D. 2008. Language Change and Variation in Gibraltar. Amsterdam: John Benjamins Publishing Company.

Lipski, J. M. 1986. Sobre el bilingüismo anglo-hispánico en Gibraltar. *Neuphilologische Mitteilungen*, 3:414-427.

Lloret, M. R. 2018. Andalusian vowel harmony at the phonology-morphology interface. Keynote talk @ 15th Old-World Conference on Phonology. UCL - University of London.

Lowenstamm, J. 1996. CV as the only syllable type. In: Durand, J. & B. Laks (eds.), Current Trends in Phonology: Models and Methods, 419-441. Salford, Manchester: ESRI.

Lowenstamm, J. 1999. The beginning of the word. In: Rennison, J. and J. Kühnhammer (eds.), *Phonologica 1996*. The Hague: Holland Academic Graphics. Pp. 153-166.

Nevins, A. 2010. Locality in Vowel Harmony. Cambridge: MIT Press.

Newell, H. 2008. Aspects of the morphology and phonology of phases. Ph.D. Thesis. McGill University.

Newell, H. to appear. Tamil pronominal alternations are phonology not allomorphy. In: Laszakovits, S. & Z. Shen (eds.), *The size of things. Volume II*. Berlin: Language Sciences Press.

Nikiema, E. 1999. De la variation du déterminant /la/ dans les créoles haïtien et st-lucien. Lingua 107: 69-93.

Pagliano, C. 2003. L'épenthèse consonantique en français. Ce que la syntaxe, la sémantique et la morphologie peuvent faire à la phonologie. Ph.D dissertation, Université de Nice.

Paster, M. 2014. *Allomorphy*. In: Lieber, R. and P. Štekauer (eds.), The Oxford handbook of derivational morphology. Oxford: Oxford University Press. pp. 219–234.

Russo, M. 2022. The grammar of uncountability in Southern Italo–Romance: nominal morphology and determiners. In: Nora Boneh, Daniel Harbour, Ora Matushansky et Isabelle Roy (eds.), in honor of Léa Nash. Building on Babel's rubble. Collection Sciences du Langage. Presses Universitaires de Vincennes, 94–129.

Russo, M. & S. Ulfsbjorninn. 2021. Accounting for the definite articles in Medieval Italian and Modern Dialects: No allomorphy, a common UR. In: Russo, M. (ed.), *The Emergence of Grammars: A Closer Look at Dialects between phonology and morphosyntax*. NY, USA: Nova Science Publishers. Ch. 4.

Samuels, B. D. 2010. Phonological derivation by phase: evidence from Basque. *Penn Working Papers in Linguistics*, 16(1):166-175.

Scheer, T. 1996. Une théorie de l'interaction directe entre consonnes. Contribution au modèle syllabique CVCV, alternances e-ø dans les préfixes tchèques, structure interne des consonnes et la théorie X-barre en phonologie. Ph.D dissertation. Université Paris 7.

Scheer, T. 2000. De la Localité, de la Morphologie et de la Phonologie en Phonologie. Habilitation thesis, Université de Nice.

Scheer, T. 2004. A lateral theory of phonology. Vol. 1: What is CVCV, and why should it be? Berlin: Mouton de Gruyter.

Scheer, T. 2008. Spell out your Sister! In: Abner, N. & J. Bishop (eds.), *Proceedings of the 27th West Coast Conference on Formal Linguistics*. Somerville: Cascadilla. Pp. 379-387.

Scheer, T. 2010. Review of Gussmann (2007) The Phonology of Polish. Studies in Polish Linquistics, 5: 111-160.

Scheer, T. 2011. A guide to morphosyntax-phonology interface theories: how extra-phonological information is treated in phonology since Trubetzkoy's Grenzsignale. Berlin: Mouton de Gruyter.

Scheer, T. 2012. Direct interface and one-channel translation. Vol. 2 of a lateral theory of phonology. Berlin: Mouton de Gruyter.

Scheer, T. 2016. Melody-free syntax and phonologically conditioned allomorphy. *Morphology*, 26: 341-378.

Scheer, T. 2019. On the difference between the lexicon and computation (regarding Slavic yers). Linguistic Inquiry, 50:197-218.

Scheer, T. to appear. 3xPhonology. Canadian Journal of Linguistics.

Scheer, T. & M. Ziková. 2010. The Havlík Pattern and Directional Lower. Formal Approaches to Slavic Linguistics. Zec, Draga & Wayles Browne (eds.) *The Second Cornell Meeting 2009*. 471-486. Ann Arbor: Michigan Slavic Publications.

Ségéral, P. & T. Scheer 2001. La Coda-Miroir. Bulletin de la Société de Linguistique de Paris, 96:107-152.

Starke, S. 2009. Nanosyntax: A short primer to a new approach to language. Nordlyd, 36(1):1-6.

Ulfsbjorninn, S. 2020. Segment–zero alternations in Galician definite article allomorphy floating consonants at the left-edge of morphemes *Acta Linguistica Academica*, 67(1):1–16.

Ulfsbjorninn, S. 2021. A Phonological Reanalysis of Morphological Segment Deletion and Deaffrication in Ik. *The Linguistic Review*, 38(3):483-516.

Vázquez Amador, M. 2018. Introducción al Yanito de Gibraltar. https://cvc.cervantes.es/lengua/eaesla/pdf/04/32.pdf. Universidad de Cadiz.

Ziková, M. & M. Faltýnková. 2021. How to derive allomorphy: A case study from Czech. *The Linquistic Review*, 38(3):517–536.

Zimmermann, E. 2017. Morphological length and prosodically defective morphemes. Oxford: Oxford University Press.

Zoll, C. 2003. Directionless Syllabification and Ghosts in Yawelmani. ROW-1, Rutgers University talk Transcript, 10/23/2003.

## Electronic Resources

AIS = Jaberg, Karl and Jud, Jacob, Sprach- und Sachatlas Italiens und der Sudschweiz, Zofingen, Ringier, 1928–1940. NavigAIS Online: http://www3.pd.istc.cnr.it/navigais-web/.

Llanito Grama & Dìkxoneri: http://www.llanitollanito.com/

 $\rm TLIO = \it Tesoro \it della \it Lingua \it Italiana \it delle \it Origini.$  Firenze: Istituto CNR Opera del Vocabolario Italiano (OVI) http://tlio.ovi.cnr.it/TLIO/.