

Pseudo-Allomorphy of Articles and Articulated Prepositions in Llanito

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); Lively (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).

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: -ım, -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)¹ 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 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’

¹ 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).

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. fat + 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.

(3) PCA

- la / C_
- a / V_

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)

- {-a_a, -la_b}

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. Empty	d. Unfixed
	C V		C V	C V
	α β	α		α β

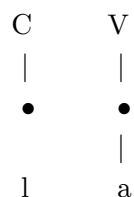
Having more configurational possibilities, and being outside of OT, reduces the difficulty in obtaining non-optimising patterns phonologically. For instance, in Haitian all that is required is to have attribute a floating consonant (shown in angle brackets) to the lateral of the definite article $\langle l \rangle a$ / (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: $\langle l \rangle$ has no association line to the C-slot², and as such, $\langle l \rangle$ will only be parsed if it

² 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.

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 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)



<p>c. C-final</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">V</td> <td style="text-align: center;">C</td> <td style="text-align: center;">V</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="text-align: center;">t</td> <td style="text-align: center;">a</td> <td style="text-align: center;">t</td> <td></td> </tr> </table>	C	V	C	V					t	a	t		<p>b. C-cluster</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">V</td> <td style="text-align: center;">C</td> <td style="text-align: center;">V</td> <td style="text-align: center;">C</td> <td style="text-align: center;">V</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td></td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">t</td> <td style="text-align: center;">a</td> <td style="text-align: center;">n</td> <td></td> <td style="text-align: center;">t</td> <td style="text-align: center;">o</td> </tr> </table>	C	V	C	V	C	V							t	a	n		t	o
C	V	C	V																												
t	a	t																													
C	V	C	V	C	V																										
t	a	n		t	o																										

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)

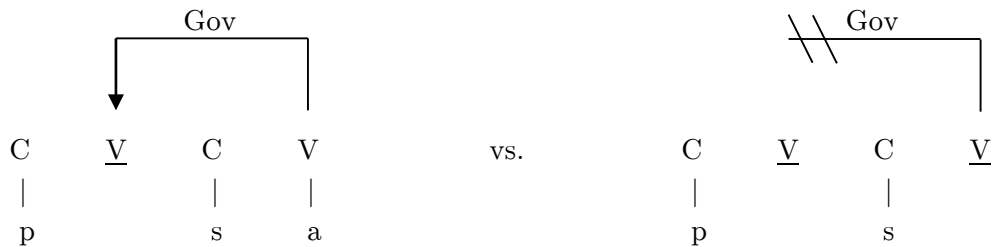
a. Domain-Final Parameter (DFP) (based on Kaye 1990)

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

C	V	C	V
p	a	s	

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, ʎ(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, ɲ, j, ʎ...) we get /lo/.

(10) Standard Italian

		SG	PL	
a.	C(C)-initial	[il + 'trɛ:mo]	[i + 'trɛ:ni]	'train'
b.	V-initial	[l + 'albero]	[ʎ + 'alberi]	'tree'
c.	s+C-initial	[lo + skwa:lo]	[ʎi + skwa:li]	'shark'
d.	Initial geminates	[lo + t's:ijo]	[ʎi + t't's:i]	'uncle'
		[lo + ɲ:ɔ:mo]	[ʎi + ɲ:ɔ:mi]	'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)

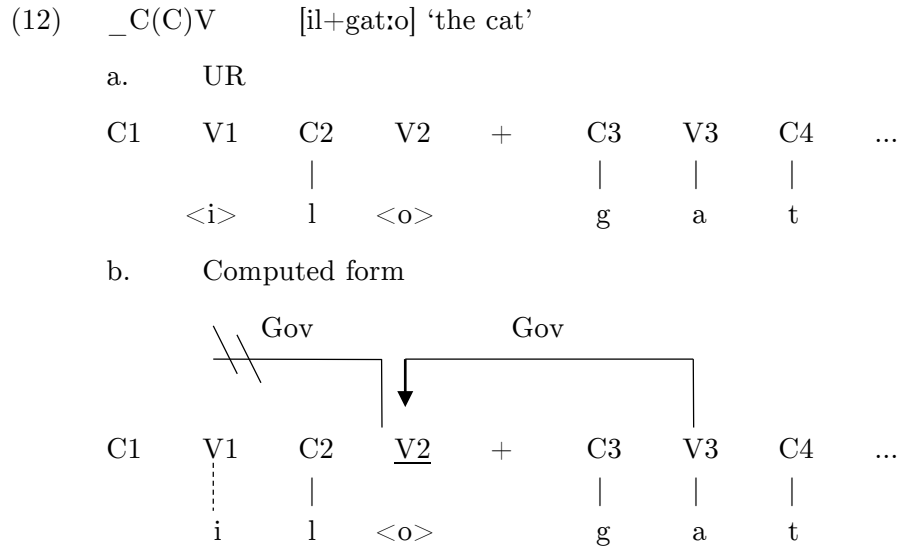
C	V	C	V
	<i>	l	<o>

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).

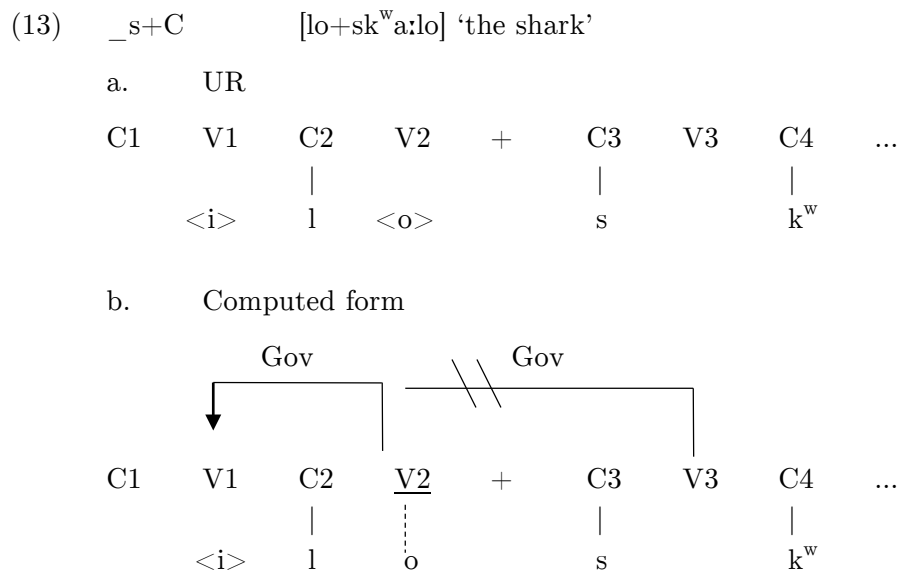
Given these conditions on linking floating segments, and the conditions on Gov presented in the previous section, the underlying form that Larsen proposes generates a vocalic alternation in response to the shape of the rightwards stem. This correctly generates the singular forms of the article. Faust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



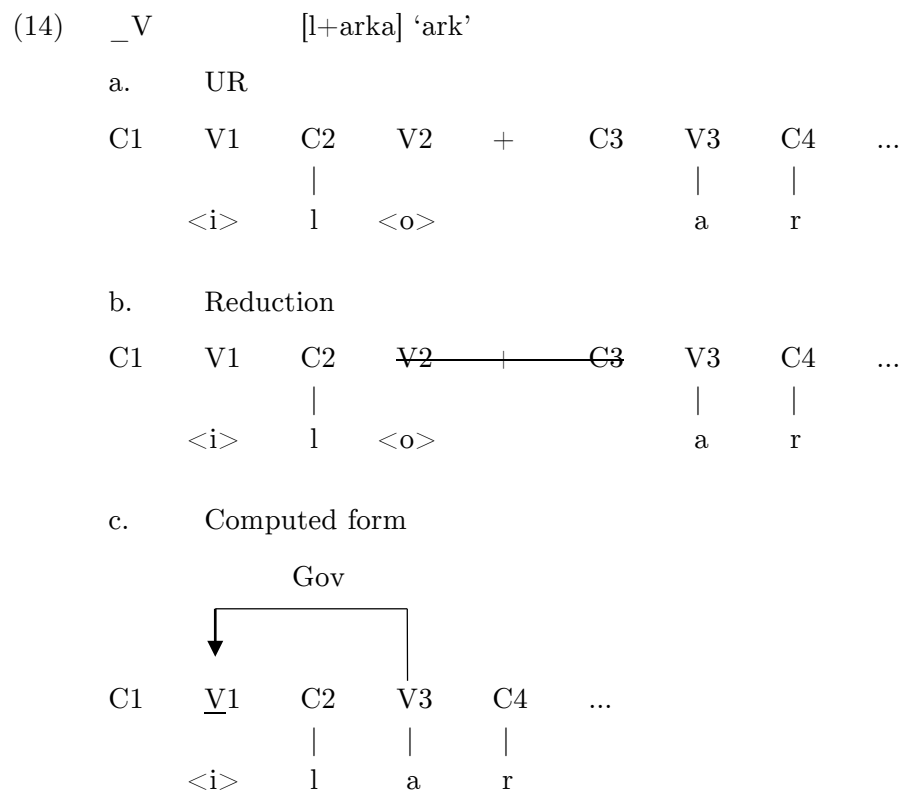
Meanwhile, in any stem where V3 is empty and silenced, as shown beneath for an s+C stem, V2 will not be silenced by Gov because V3 is empty and silenced. As such <o> will have to dock to V2. Then, since V2 is filled it will Gov V1, silencing it. This hinders the linking of <i>, which remains afloat and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



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).



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

- (15) a. Medieval Tuscan (source: Corpus TLIO)
- | | | | |
|--------------|--------|-------------------|--|
| [el:] amore | ‘love’ | Medieval Senese | |
| [el:] occhio | ‘eye’ | Medieval Lucchese | |
- b. Modern Tuscan (source: NavigAIS)
- | | | | |
|-----------|----------|----------------------------|------------------|
| [il:ɔ:kɑ] | ‘goose’ | Pitigliano (pt. 582) | Maremma/Grosseto |
| [il:a:ko] | ‘needle’ | | |
| [el:eska] | ‘bait’ | Vinci (pt. 522) | Florence |
| [il:u:va] | ‘grapes’ | Elba/Pomonte (pt. 570) | Livorno |
| [il:ɔ:sɛ] | ‘bones’ | Elba/Capolivieri (pt. 568) | |

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 [il:urva] ‘grapes’ Elba/Pomonte

a. UR

C1	V1	C2	V2	+	C3	V3	C4	V4	C5	V5
	<i>	l	<o>			u			v	a

b. Computed form

		Gov			Gov					
		//	↓		↓					
C1	V1	C2	<u>V2</u>	+	C3	V3	C4	V4	C5	V5
	⋮									
	i	l	<o>			u			v	a

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 be 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-slot + Empty V-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				
SG			PL	
#_C	#_V	#_w	#_C	#_V
(e)r pa ^h t ^h iso mess	(e)l 'aŋko 'uncle'	lo 'weno 'good'	lo ^h san ^h flauwa ^h 'sunflowers'	lo ^h s ani ^h ma ^h 'animals'
(u)n	(u)n	(u)no	(u)no ^h	(u)no ^h s

b. F

F			
SG		PL	
#_C	#_V	#_C	#_V
la ya'zina 'chicken'	l a'miya 'friend'	la ^h 'βifa ^h 'snake'	la ^h s a'wela ^h 'grandmothers'
(u)na	(u)n	(u)na ^h	(u)na ^h 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-a'migo] 'it was the friend' (cf. [el-'aŋko] 'the uncle')
/era el amigo/
- b. [era-r-tele'βiʃon] 'it was the TV'
/era el telefɔn/

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

(20) r/l alternation

- | | | |
|----|--------------------------|----------------------|
| a. | [era- r -'dɔlfin] | 'it was the dolphin' |
| | /era el dɔlfin/ | |
| 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 -'paβana] | 'it was a seagull' |
| | era una pabana | |
| b. | [era- n-la -'paβana] | '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

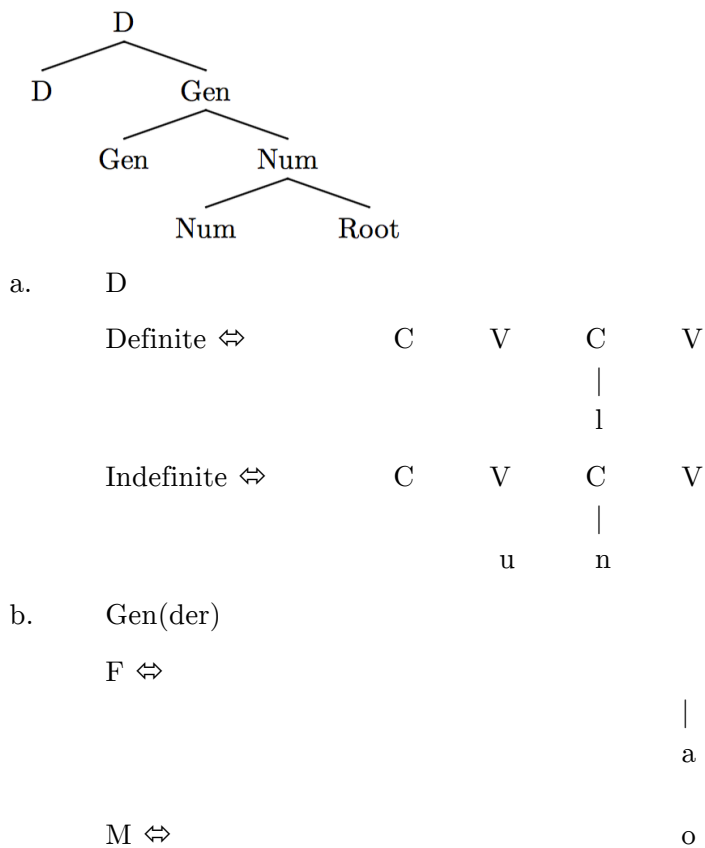
	M					F			
	SG			PL		SG		PL	
	<u>C</u>	<u>V</u>	<u>w</u>	<u>C</u>	<u>V</u>	<u>C</u>	<u>V</u>	<u>C</u>	<u>V</u>
a. to	ar	al	alo	alo ^h	alo ^h s	ala	al	ala ^h	ala ^h s
b. with	kon er	kol	kolo	kolo ^h	kolo ^h s	kola	kol	kola ^h	kola ^h s
c. of	der	del	delo	delo ^h	delo ^h s	dela	del	dela ^h	dela ^h s
d. in	ner	nl	nlo	nlo ^h	nlo ^h s	nla	nl	nla ^h	nla ^h s
e. for/by	por er	porl/pol	polo	polo ^h	polo ^h s	pola	pol	pola ^h	pola ^h s
f. for	par	pal	palo	palo ^h	palo ^h s	pala	pal	pala ^h	pala ^h 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



- c. Num(ber)
 SG ⇔ ∅
 PL ⇔
- | | |
|---|---|
| C | V |
| | |
| s | |

As we see for the exponents of Gender (24b), the masculine exponent is underlyingly marked as floating, while the feminine, while being underlyingly 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. Singular

i. M.SG.DEF

C1	V1	C2	V2
		l	o

ii. F.SG.DEF

C1	V1	C2	V2
		l	a

iii. M.SG.INDEF

C1	V1	C2	V2
	u	n	o

iv. F.SG.INDEF

C1	V1	C2	V2
	u	n	a

v. With epenthesis

C1	V1	C2	<u>V2</u>
	[e]	l	o

b. Plural											
i. M.SG.DEF						ii. F.SG.DEF					
C1	V1	C2	V2	C3	V3	C1	V1	C2	V2	C3	V3
		l	o	s				l	a	s	
iii. M.SG.INDEF											
iii. M.SG.INDEF						iv. F.SG.INDEF					
C1	V1	C2	V2	C3	V3	C1	V1	C2	V2	C3	V3
	u	n	o	s			u	n	a	s	

Given the conditions on Government and floatingness that were discussed in section (2.1), in the plural the floating <o> 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 /a/ 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]: [ar̥ma] '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 [r]

a. [sa'law] 'salty'						b. [sal] 'salt'				
C	V	C	V	C	V	C	V	C	V	
s	a	l	a	w		s	a	l		
		↑						↑		
		Lic						Lic		
a. [ar̥ma] 'soul'										
C	V	C	V	C	V					
	a	l > r		m	a					
		↙								
		Lic								

When it comes to articles, the effect this has is that the /l/ sitting in C2 will be realized as [r] 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

a. UR

C1	V1	C2	V2	+	C	V	...
		1	<o>		3	e	

b. Gov and licensing

		Gov			Gov		
C1	V1	C2	<u>V2</u>	+	C	V	...
		1	<o>		3	e	
		Lic					

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

C1	V1	C2	<u>V2</u>	+	C	V	...
	[e]	1 > r	<o>		3	e	

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:

(28) Vowel deletion

/me ben/	[me βen]	'they see me'
/me an 'diʃo /	[m-an 'diʃo]	'they said to me'
/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.

- (29) [s-'usa **a**r fi'na] 'it is used at the end'
 /se usa **a** el fina/
 [di'si**r**-te 'a**r**go] 'say something to you'
 /disi**r**-te algo/

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

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

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) Hiatus deletion³

- | | | | | |
|----|----------------|-------|---------------------------|------------------|
| a. | Fixed Floating | V – Ø | [era-n] | /era + un/ |
| b. | Floating Fixed | Ø – V | [s-'usa] | /se + usa/ |
| c. | Fixed Fixed | Ø – V | [l- ita'ljana] | /la + ita'ljana/ |
| d. | Fixed Fixed | V – V | [di'sirte 'a r go] | |
| | | | [mi-'ajyre] | / my + air/ |

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

³ 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).

(32) Left-Hiatus deletion

a. UR /la + epa/

C	V	C	V	+	C	V	C	V
		l	a			e	ɲ	a

b. Deletion

C	V	C	V ———— ———— C	V	C	V	
		l		a	e	ɲ	a

c. Computed form: [l-'epa] 'the hernia'

		Gov					
	↓				↓		
C	V	C	V	C	V		
		l	e	ɲ	a		

(33) Right-Hiatus deletion

a. UR /era + un/

C	V	C	V	+	C	V	C	V
	e	r	a			u	n	<o>

b. Deletion: [era-n] C-initial stem (M)

C	V	C	V	+	C ———— ———— V	C	V	
	e	r	a			ɲ	n	<o>

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.

(34) a. UR /era + un + in'fleita/

C1	V1	C2	V2	+	C3	V3	C4	V4	+	C5	V5
	e	r	a			u	n	<o>			i

b. Right-Hiatus Deletion (CV3) + Reduction (V4C5)

C1	V1	C2	V2	+	C3	V3	C4	V4	C5	V5...
						#				
	e	r	a				n	<o>		i

c. Fully Computed form: [era-n-in'fleita] 'it was an inflator'

C1	V1	C2	V2	C4	V5
	e	r	a	n	i

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'

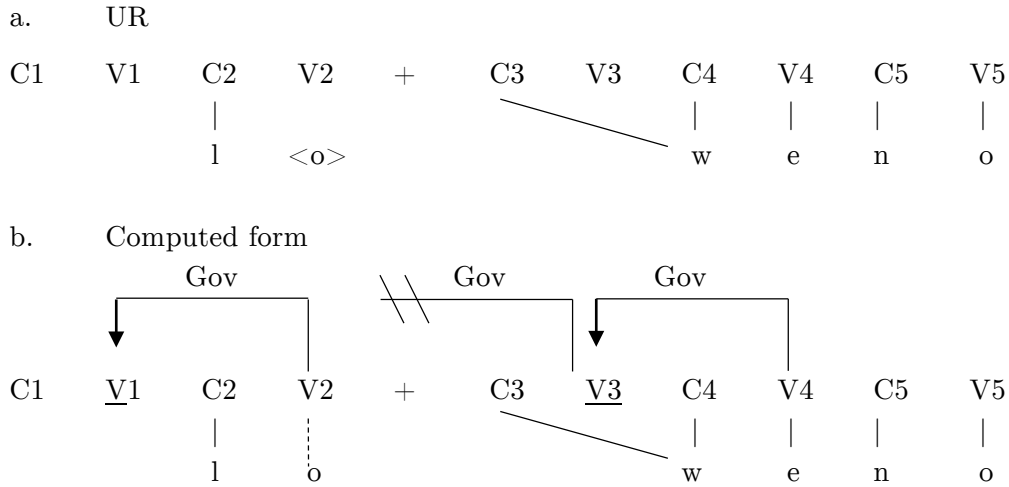
[C	<u>V</u>	C]	V	C	V	C	V	C	V
b		w	e	n	o	w	e	n	o

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 + bratfjo/ 'the arm' vs. /lo + ɲ:ɔmo/ '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 <o> of the masculine, which in turn silences the V1 slot.

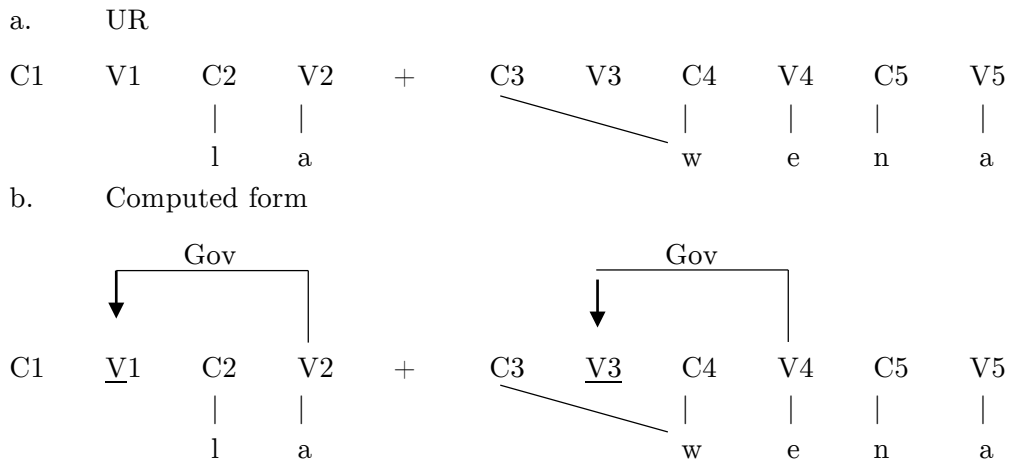
(36) Derivation



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’; [ˈjunives] ‘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/: [inˈgle^h] ‘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: [mi^ht^ha] ‘mister’ and [maˈri^hk^ho] ‘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: [basˈstop] ‘bus stop’, and some s+voiceless stop and voiceless stop+s sequences: [anˈtswelo] ‘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^ht^ha] ‘sister (nurse)’.

Interestingly, any debuccalised /s/ in an s+C is marked also by aspiration of the voiceless stop: [ra^hk^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: [tifeˈk^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)).⁴

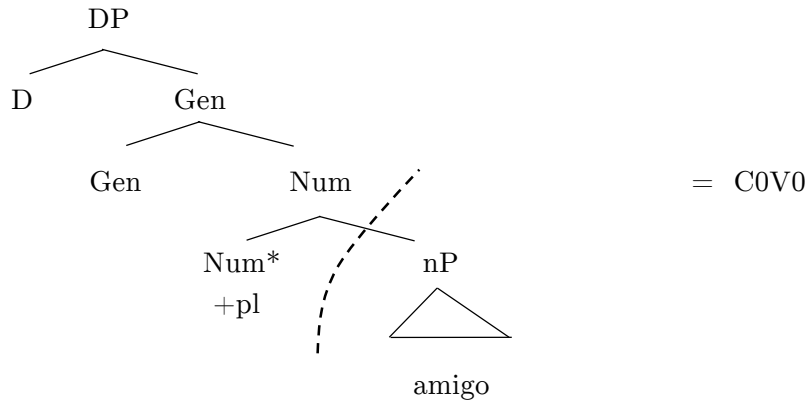
However, before we show the full derivation in (39), one additional necessary complication must be introduced. There is no space to fully justify this hypothesis here (and there may be alternative explanations for these effects, which again cannot be entered into here).

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.

⁴ In Icelandic, only post-aspirated stops and plain singletons are permitted after a long stressed vowel: [a:p^hi] ‘monkey’ [ta:lvr] ‘valley’. Whereas, after a short stressed vowel, one cannot get post-aspirates or a plain singleton: *[kɔp^hi, k^hɔpi]. Instead, after a short stressed vowel one can get plain geminates, pre-aspirated stops and coda-onset structures: [snøk:] ‘sudden’, [e^hpli] ‘apple’, [fiskvr] ‘fish’. After a coda, only plain stops are attested: *[hantta, hant^ha]. Geminate post-aspirate stops are entirely forbidden: *[kɔp^hi]. All this indicates that Icelandic has a geminate vs. singleton contrast & a fortis vs. lenis contrast. Lenis geminates surface as plain geminates: [k^hɔp:r:] ‘young seal’, but geminate fortis consonants are not phonetically interpreted as aspirates, but instead have pre-aspiration in C1 (and not in C2): [e^hpli] ‘apple’.

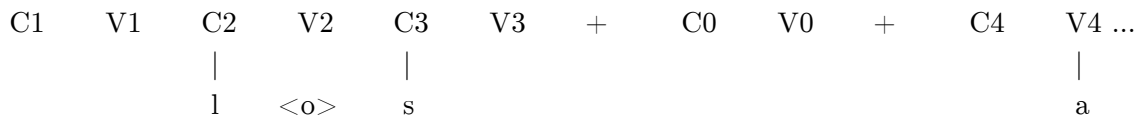
(38) Num +PL is phasal



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/

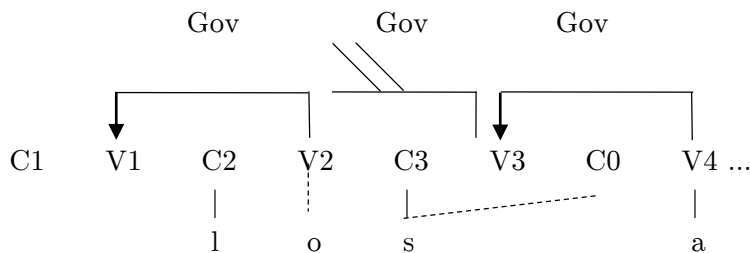
a. UR including the phase-boundary C0V0



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



c. Computed form [lo^hs-ani'ma^h]



3.3.6 P+D contraction

We now turn to what have been called ‘articulated prepositions’ in Romance descriptive grammars. 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			
	SG			PL		SG		PL	
	C	V	w	C	V	C	V	C	V
a. to	ar	al	alo	alo ^h	alo ^h s	ala	al	ala ^h	ala ^h s
b. with	kon er	kol	kolo	kolo ^h	kolo ^h s	kola	kol	kola ^h	kola ^h s
c. of	der	del	delo	delo ^h	delo ^h s	dela	del	dela ^h	dela ^h s
d. in	ner	nl	nlo	nlo ^h	nlo ^h s	nla	nl	nla ^h	nla ^h s
e. for/by	por er	porl/pol	polo	polo ^h	polo ^h s	pola	pol	pola ^h	pola ^h s
f. for	par	pal	palo	palo ^h	palo ^h s	pala	pal	pala ^h	pala ^h 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 ^h	delo ^h s	dela	del	dela ^h	dela ^h s
d. ‘in’	ner	nl	nlo	nlo ^h	nlo ^h s	nla	nl	nla ^h	nla ^h 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.

(42) a. UR ‘of’ + M.SG.DEF

C1	V1	+	C2	V2	C3	V3
d	e				l	<o>

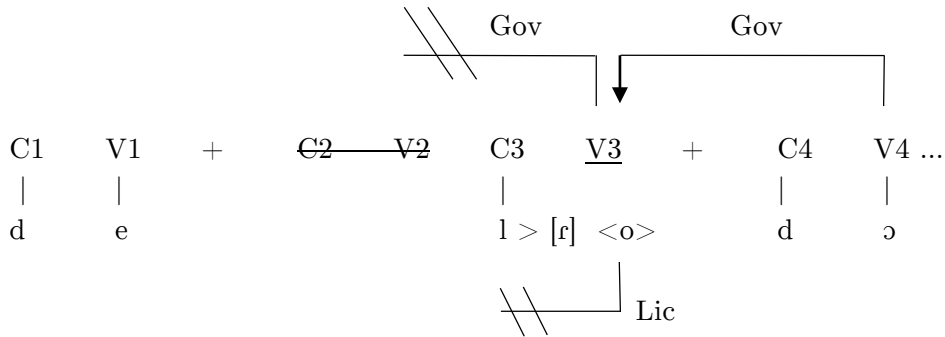
b. UR 'in' + M.SG.DEF

C1	V1	+	C2	V2	C3	V3
n					l	<o>

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.

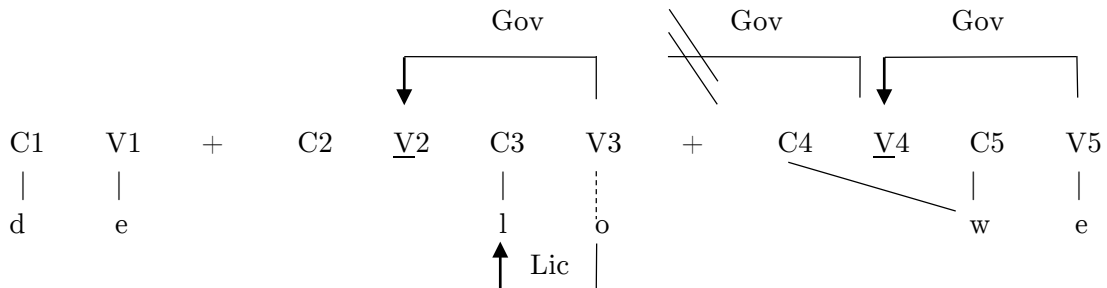
In (43) there is the combination of de + M.SG.DEF + C-initial stem. We see that in this case, the second V-slot of the article (V3) is Gov'd. Consequently, the first CV of the article (CV2) is ungovernable, so it cannot be silenced. Moreover, the empty CV2 cannot be realized either. Llanito does not 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'dɔlɸm] '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 <o>. This licenses the /l/ in C3, and governs the CV2 position thereby obviating the need for CV-reduction.

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

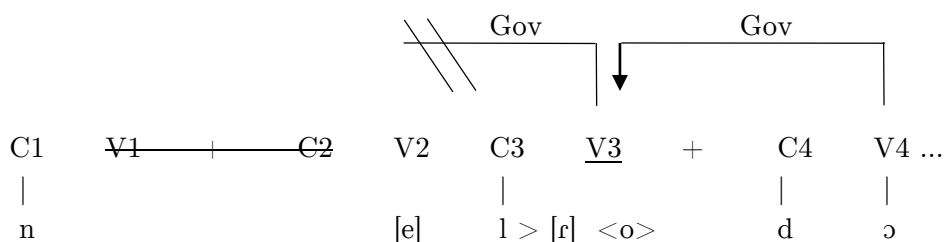


Meanwhile, as was shown in (45), the lack of a fixed vowel in the V1 slot of ‘in’ leads to a different outcome.

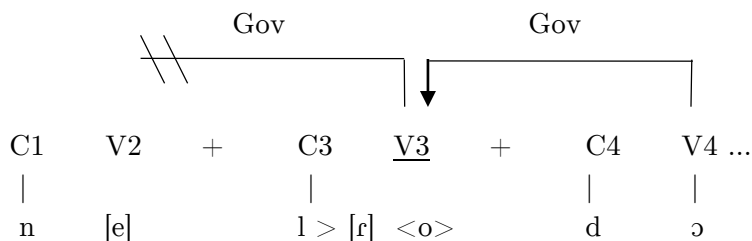
When /nV/ is concatenated with a C-initial M.SG.DEF article, it will create the conditions for Reduction. This removes V1C2 from the representation. V4 can silence V3, leaving the article’s <o> unassociated, and this will lead to the unsilenced status of V2, which surfaces with an epenthetic vowel quality. 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



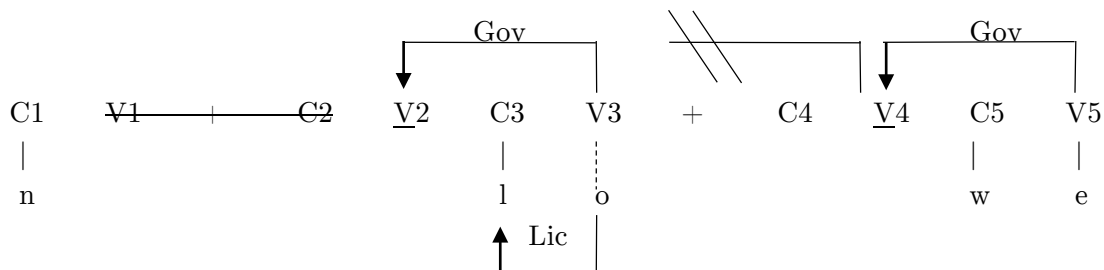
b. Fully computed form [ner-dɔlfin] ‘in the dolphin’



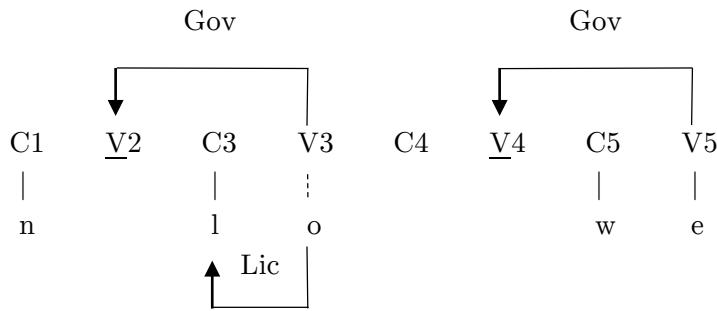
However, before a w-initial stem, ‘in’ is correctly predicted not to surface with its epenthetic vowel. The derivation is again shown in two steps. As we see in (46), since the stem-initial nucleus is empty, it cannot silence the second V-slot of the article (V3). As such, <o> in (V3) can silence V2. 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)’



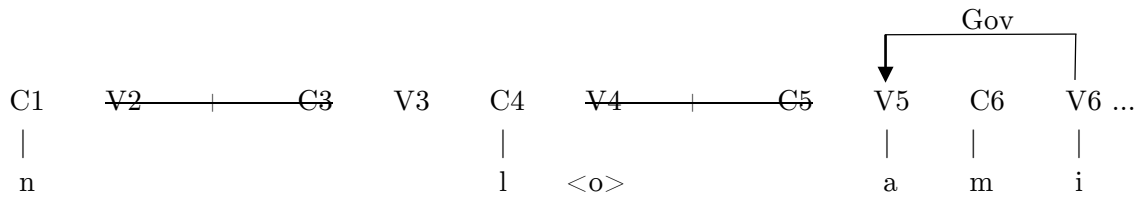
We will now conclude with the derivation of P + D contraction of ‘in’ with the masculine article before vowel initial roots. As was just shown for P+D contraction, Llanito has VC-Reduction set to <yes>. This means that a M.SG.DEF before a V-initial stem receives a very similar treatment to that of prevocalic 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 <o> *could* link <o> to it and *if it did* it *would* not be empty).⁵ Lateral relations (Gov) are established before the linking of melody.

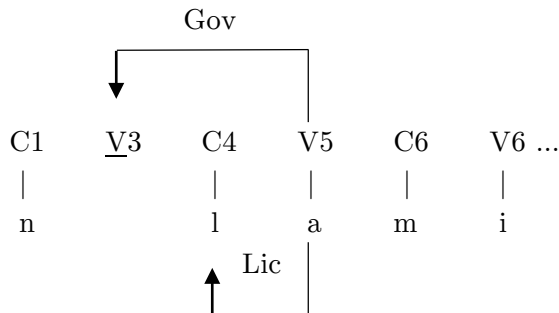
After Reduction has applied in those two sites, we see that V5 Gov’s V3, silencing it. This leads to no phonetic vowel between the P+D before V-initial stems.

(47) [nl-'amiyo] ‘in the friend (M)’

a. Computed up to Reduction



b. Fully computed form



⁵ 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.

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.

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