

Vowel Harmony in Sardinian -os/-us Plurals in Santa Maria Navarrese and Baunei

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Abstract This descriptive contribution presents some data about a type of vowel harmony occurring in the Sardinian variety of Santa Maria Navarrese and Baunei. These two centres are located in the province of Ogliastra/Ogiastra, in the central-eastern part of the island, on the border between Campidanese Sardinian and Logudorese-Nuorese Sardinian. In addition to the largely attested Sardinian right-to-left metaphony, whereby the word-final vowel may affect the realization of preceding vowels, the variety of Santa Maria Navarrese and Baunei also displays a left-to-right vowel harmony that governs the choice of -os or -us as a plural ending. This phenomenon, which was directly observed in Santa Maria and which is attested in writing in Baunei, affects the formation of certain plural nouns and adjectives, as well as the behaviour of the masculine plural accusative clitic. A description of this phenomenon, with some personal considerations, will be provided with the intent that it might be of interest for further research.

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Keywords Vowel harmony. Sardinian. Santa Maria Navarrese. Baunei. Plural.

1 Language and Methodology

1.1 The Sardinian Variety of Baunei and Santa Maria Navarrese

The settlers of Santa Maria Navarrese came – and the majority of the inhabitants still is – from Baunei, therefore the same Sardinian variety is spoken in these two centres. Santa Maria Navarrese is located on the eastern coast and Baunei is nine kilometers inland, both lying along an imaginary line where the southern Sardinian (Campidanese) and the northern Sardinian (Nuorese-Logudorese) varieties meet. Immediately south of Santa Maria Navarrese, the town of Lotzorai clearly displays some features

generally associated with Campidanese Sardinian.¹ North of Baunei, in Dorgali, typical Logudorese-Nuorese features occur.²

The Sardinian variety of Baunei and Santa Maria Navarrese shares a number of features with other varieties: lenition, assimilation, aphaeresis, epenthetic vowels and s-rhotacism. For a description of Sardinian in general and of its main varieties, I refer the reader to Jones (1993) and Lepori (2001). For specific features of Baunese and Santa Maria Navarrese Sardinian,³ I refer the reader to Secci (2006a, 2006b). More detailed data about Baunei are reported in Calia (2010), although Santa Maria Navarrese was virtually non-existent at his times.⁴

1.2 Methodology

Most data in this article come from observations that I have carried out over the years in Santa Maria Navarrese and from my informants' judgments. Written data are also taken from Calia's (2010) grammar of Baunese Sardinian. Given that both centres employ the same Sardinian variety, my examples about Santa Maria Navarrese are also valid for Baunei. Conversely, Calia's observations about Baunei must be held as valid also for Santa Maria Navarrese. Here, I focus only on the vowels and the behaviour of *-os/-us*. I will not represent graphically all the phonetic mutations, rather I will write according to the usual local convention and to Calia's written data and assign one and the same written form to each word. Word stress falls on the penultimate vowel, unless it is graphically represented (e.g. *ó, ò, é, è, à, ì, ù*). Only in the preliminary section 2.1, will I provide a phonetic transcription of words.

1 For instance, in Lotzorai the plural def. article has one form *is* both in the masculine and the feminine, while nouns show the plural ending *-us* (in place of *-os*) and *-is* (in place of *-es*): thus, Santa Maria Navarrese and Baunese *us culurgiones* (a typical local food) are called *is culurgionis* in Lotzorai.

2 For instance, according to Calia 2010, 14 velar consonants /k/ and /g/ occur before *e, i* in Dorgali and Urzulei as in Logudoro, whereas their palatal counterparts occur in Baunei. These occur in Santa Maria Navarrese, as well.

3 Peculiar features of Santa Maria Navarrese and Baunei include, for example: *pisce* 'fish' in contrast to northern *piske/pische* (Jones 1993, 68) and southern *pisci* (33); *kine* 'who' in contrast to *kie* (Lepori 2001, 33) and *kini* (65); *figgiu* 'son' in contrast to *fidzu* (Jones 1993, 33) and *fillu* (Lepori 2001, 3); *plus* 'more' and *dulce* 'sweet' in contrast to *prus* (Jones 1993, 23, 173; Lepori 2001, 14) and *durke/durci* (2001, 19).

4 Santa Maria Navarrese had 1652 inhabitants in 2012 (Vigna 2013, 166) and is contiguous to Tancau sul Mare, which is part of Lotzorai and had a population of 223 in 2001 (Istat 2001). Though belonging to the municipality of Baunei, Santa Maria Navarrese has its own postal office, its elementary school, and two churches. The *carabinieri* police station of Santa Maria Navarrese serves also the nearby municipality of Lotzorai. However, according to an informant, only 54 people lived in Santa Maria Navarrese in 1964. The population burst took place between 1970 and 1985, while Calia collected his data before 1979.

2 The Data

2.1 Preliminary Observations on the Pronunciation of Vowels

In Baunei and Santa Maria Navarrese, word-final vowels are *-a*, *-i*, *-e*, *-o*, *-u*. Words may also end in *-s*, *-t*, *-nt* (with their actually various phonetic realisations), which mark features as number, gender and person. In (1) some words are shown, which end in a vowel. Final *e* and *o* are pronounced as /ɛ/ and /ɔ/ respectively. Word-internal *e* and *o* have two realisations, as in other Sardinian varieties:⁵ they are pronounced /e/ and /o/ when followed by close vowels *i*, *u*, but are pronounced /ɛ/ and /ɔ/ otherwise.

(1)

Limba /'limba/ 'language'	Flore /'flɔɛ/ 'flower'	Drommi /'drom:i/ 'sleep!'	Botto /'bɔt:ɔ/ 'can, tin'	Dommu /'dom:u/ 'house, home'
Canta /'kaŋta/ 'sing!'	Mere /'mɛɛɛ/ 'lord'	Papperi /'pa'p:eri/ 'paper'	Canto /'kaŋtɔ/ '(I) sing'	Cantu /'kaŋtu/ 'song/chant'
Conta /'kɔŋta/ 'tell!, count!'	Mantene /'maŋ'tɛnɛ/ 'keep!'	Beni /'beni/ 'come!'	Conto /'kɔŋtɔ/ '(I) tell, count'	Contu /'kɔŋtu/ 'tale, count'

This phenomenon occurs also when the last vowel is followed by a consonant. For instance, (2) shows that the word-internal *e* is regularly realised as /ɛ/ when followed by *o* or *e* and as /e/ when followed by *i* or *u*, regardless of the presence of the final consonants (with possible lenition, voicing and epenthesis):

(2)

Tempus /'tempuzu/ 'time'	Tempos /'tɛmpɔzɔ/ 'times' ¹
Benit /'beniði/ '(he/she) comes'	Mantenet /'maŋ'tɛnɛðɛ/ '(he/she) keeps'

1 Though not very frequent, the plural *tempos* may be used in some sentences as *in attros tempos, andànt a amarrare a Golgo* (lit. in other times/in old times, they went to hoe the fields in Golgo).

⁵ Cf. Bolognesi 1998, 19-21 for a comparison of Campidanese and Logudorese-Nuorese regarding this phenomenon.

These pronunciation rules also apply to most nouns and adjectives, both in the singular and in the plural, as they usually build their plural by simply adding an *-s* after their final *a*, *o*, *e*, *i* ending. In (3), some nouns are exemplified:

(3)

Limba 'language'	Botto 'can'	Flore 'flower'	Mere 'lord'	Papperi 'paper'
Limbas 'languages'	Bottos 'cans'	Flores 'flowers'	Meres 'lords'	Papperis 'papers'

The plural of *-u* nouns and adjectives, which is the focus of this article, ends either in *-us* or in *-os* thus affecting the realisations of internal *e/o* vowels, as will be described in the next sections.

2.2 The *-os/-us* Plural of *-u* Nouns

In the Sardinian variety of Santa Maria Navarrese and Baunei, singular nouns in *-u* can form their plural either with *-us* or with *-os*. The two endings are not freely interchanged. While only *-os* is used for these nouns in Logudorese-Nuorese Sardinian and only *-us* is employed in Campidanese Sardinian, the variety of Baunei and Santa Maria Navarrese employs both plural endings, associating each one to a specific condition: if the penultimate vowel is *a*, *i*, *u* the ending is *-us*, as shown in (4a); if the penultimate vowel is *e* or *o* then the ending is *-os* as shown in (4b). This phenomenon, explicitly reported in Calia (2010, 18, 38), occurs also in Santa Maria Navarrese, as I have been able to observe. It appears that most *-u* nouns are masculine, but the few feminine *-u* nouns existing (e.g. *manu* vs *dommu*)⁶ also obey this rule. According to it, also the few nouns that have *-us* in the singular (e.g. *tempus*, in 4b) switch to *-os* in the plural under the appropriate conditions.

⁶ In Calia 2010, 38, it is stated that all *-u* nouns with plural in *-os* are masculine and the word *dommu* 'house' is listed as masculine in Calia 2010, 111. However, according to my observations, *dommu* requires feminine articles (f.sg. *sa dommu*) and adjectives (f.sg. *dommu alta*, f.pl. *dommos altas*). I have never heard anybody employing masculine articles nor adjectives with this noun (i.e. neither **su dommu* nor *dommu *altu*).

(4a)

masculine					feminine
Cantu 'song'	Istiddu 'drop'	Ballu 'dance'	Libru 'book'	Muru 'wall'	Manu 'hand'
Cantus 'songs'	Istiddus 'drops'	Ballus 'dances'	Librus 'books'	Murus 'walls'	Manus 'hands'

(4b)

masculine					feminine
Contu 'tale, sum'	Isteddu 'star'	Oglu 'eye'	Beccu 'billygoat'	Tempus 'time'	Dommu 'house'
Contos 'tales, sums'	Isteddos 'stars'	Oglos 'eyes'	Beccos 'billygoats'	Tempos 'times'	Dommos 'houses'

In line with the metaphony of section 2.1, when alternating between singular and plural, the nouns in (4b) also change the pronunciation of their internal *-o-* or *-e-* vowel, depending on whether the last vowel is closed (sg. ending *-u*) or open (pl. ending *-os*). Two mechanisms are then at work: one determines the pronunciation of the internal *e*, *o* on the basis of the ending; the other one determines the choice of the *-os*, *-us* plural ending on the basis of the penultimate vowel.

2.3 The *-os/-us* Plural of *-u* Adjectives and Past Participles

As stated in section 2.1, adjectives behave in the same way as nouns. Thus, masculine adjectives ending in *-u*, as well as past participles, build their plural following the same rule of *-u* nouns described in section 2.2. Adjectives with plural in *-us* are exemplified in (5a), adjectives with plural in *-os* are shown in (5b). Adjectives are usually postnominal. Note that falling into the *-os* plural class or the *-us* plural class is a phonological phenomenon, as it is not a feature that spreads from nouns to adjectives, unlikely number and gender, for instance.

(5a)

beccu billygoat	mannu <i>big-M.SG.</i>	oglu eye	piccicu <i>small-M.SG.</i>	piccioccu boy	furbu <i>clever-M.SG.</i>
'big billygoat'		'small eye'		'clever boy'	
beccos <i>billygoats</i>	mannus <i>big-M. PL.</i>	oglos eyes	picciccus <i>small-M. PL.</i>	piccioccos boys	furbus <i>clever-M. PL.</i>
'big billigoats'		'small eyes'		'clever boys'	

(5b)

libru book	bellu <i>nice-M.SG.</i>	pippiu child	bonu <i>good-M.SG.</i>	dommu house	alta <i>tall-F.SG.</i>
'beautiful/nice book'		'good child'		'tall house'	
librus books	bellos <i>nice-M.PL.</i>	pippius children	bonos <i>good-M.PL.</i>	dommos houses	altas <i>tall-F.PL.</i>
'beautiful/nice books'		'good children'		'tall houses'	

Along the same lines, past participles are shown in (6a) and (6b). Regular and irregular forms containing *a*, *i* or *u* in penultimate position take *-us* in the plural, in (6a). However some irregular forms contain *e* or *o* and take *-os*, as in (6b).

(6a)

Dd' <i>him/it-M.SG.</i>	ante <i>have-3.PL.</i>	ciappau <i>caught-M.SG.</i>	Dd' <i>him/it-M.SG.</i>	ante <i>have-3.PL.</i>	istrintu <i>tightened-M.SG.</i>
'(they) have caught him/it'			'(they) have tightened it'		
Ddus <i>them-M.PL.</i>	ante <i>have-3.PL.</i>	ciappaus <i>caught-M.PL.</i>	Ddus <i>them-M.PL.</i>	ante <i>have-3.PL.</i>	istrintus <i>tightened-M.PL.</i>
'(they) have caught them'			'(they) have tightened them'		

(6b)

Dd' <i>him/it-M.SG.</i>	ante <i>have-3.PL.</i>	mortu <i>killed-M.SG.</i>	Dd' <i>him/it-M.SG.</i>	ante <i>have-3.PL.</i>	fertu <i>wounded-M.SG.</i>
'(they) have killed him/it'			'(they) have wounded him/it'		
Ddus <i>them-M.PL.</i>	ante <i>have-3.PL.</i>	mortos <i>killed-M.PL.</i>	Ddus <i>them-M.PL.</i>	ante <i>have-3.PL.</i>	fertos <i>wounded-M.PL.</i>
'(they) have killed them'			'(they) have wounded them'		

2.4 The Ending is Triggered by the Penultimate Vowel, not by the Tonic One

Calia (2010, 18, 38) states that the choice of *-us* or *-os* as a plural suffix depends on the penultimate vowel. However, in his examples and in many Sardinian words, the stress falls on the penultimate vowel. This might lead to think that the plural ending (*-os* or *-us*) is related to the tonic vowel. The following examples from Santa Maria Navarrese make it clear that the ending does not depend on the tonic vowel. In (7a) the penultimate vowel *-e-* triggers the plural ending *-os*, although the tonic vowels are *-ù-* and *-ì-*. In (7b) the penultimate vowel *-i-*, which is pronounced as

/j/, is sufficient to trigger the ending *-us*, in spite of the tonic vowel being *-é-* (which itself represents a mid-close sound due to the presence of the *-i-* at its right).

(7a)

Postu liberu <i>Seat free-M.SG.</i> 'free/available seat'	Unu cugùmeru One cucumber 'a/one cucumber'
Postos liberos <i>Seats free-M.PL.</i> 'free/available seats'	Tres cugùmeros Three cucumbers 'three cucumbers'

(7b)

Dd' <i>him/it-M.SG.</i>	appo <i>have-1.SG.</i>	enténdiu <i>heard-M.SG.</i>
'I (have) heard it'		
Ddus <i>them-M.PL.</i>	appo <i>have-1.SG.</i>	enténdius <i>heard-M.PL.</i>
'I (have) heard them'		

2.5 Apparent Exceptions

As far as I have been able to observe, there are some apparent exceptions to the rules described. One type of exception concerns only the written form of some words, and must be taken into account when considering local books and writings. Another exception concerns the word *attru* which has the plural *attros* both in written and spoken form.

Writing exceptions occur because usual local writing conventions follow some Italian orthographic rules, therefore the sign *i* is also used to indicate that the preceding *c* or *g* has a palatal sound. In such cases, there is actually no *i*-sound in the word. Consequently, the word can take a plural in *-os* even though the written form might contain an *i* as a penultimate vowel. In (8) *bécciu* behaves as *beccu*, for example. Because in these cases the stress falls before the (apparently) penultimate vowel, it might be overtly represented in some books: for instance, the forms *bécciu* and *bèccios* can be encountered. *Bécciu* is employed in Calia (2010).

(8)

Beccu 'billygoat'	Becciu (written <i>bécciu</i> in Calia 2010)
Beccos 'billygoats'	Beccios 'old men'

Concerning the word *attru* 'other', its masculine plural *attros* looks like an exception, in place of the regular, but unattested **attrus*.⁷ Given what said so far, the presence of *a* is not compatible with the ending *-os*. Calia (2010, 41), however, lists double forms: *attru*, *attros*, *attra*, *attras* along with *àtteru*, *àtteros*, *àttera*, *àtteras*. The optional presence of an *e* in penultimate position in *àtteru/àtteros* is perfectly in line with the mechanism described in sections 2.2. and 2.3. As far as I could observe, *attru* is by far the most frequent (if not the only) form used in Santa Maria Navarrese. However, the coexistence of the regular variant *atteru/atteros* can account for the fact that *-os* is used also with *attru/attros*. Either the speakers are aware of the underlying *e*, even when they actually pronounce *attros*, or the form *attros* has arisen as a reduction of *atteros* and is still in the process of becoming a fossilised form. In either case, the plural *-os* can be traced back to an underlying vowel *-e-*.

The only real exception that I have been able to observe is the quantifier *tottu* 'all', which has the plural form *tottus* (not **tottos*) and other irregularities, for instance it does not make any gender distinctions (*tottu* for both m.sg. and f.sg., *tottus* for both m.pl. and f.pl.).

2.6 The Plural Clitic *ddos/ddus* in Postverbal Position

The masculine accusative pronoun *ddu* can take two plural forms. When added to the end of a verb, i.e. in imperatives and gerunds, the plural is either *ddus* or *ddos*, depending on the preceding vowel as expected from the observations made in section 2.2. Compare, for instance, the imperatives *còmpora* and *mori* in (9a) with *allue* and *mi'* in (9b). Notice also that the gerund ending *-ndo* contains a vowel that always triggers *ddos* in (9a) and (9b).

(9a)

Comporaddu! <i>buy-it-M.SG.</i> ¹ 'buy it'	Moriddu! <i>kill-him/it-M.SG.</i> 'kill it!'
Comporaddus! <i>buy-them-M.PL.</i> 'buy them'	Moriddus! <i>kill-them-M.PL.</i> 'kill them'
Soe comporandoddu <i>am buying-it-M.SG.</i> 'I am buying it'	Soe morindoddu <i>am killing-him/it-M.SG.</i> 'I am killing it'

⁷ *Attrus* is Campidanese and is employed south of Baunei and Santa Maria Navarrese.

Soe comporandoddos <i>am buying-them-M.PL.</i> 'I am buying them'	Soe morindoddos <i>am killing-them-M.PL.</i> 'I am killing them'
1 There is no counterpart of the neuter 'it' in Sardinian. Pronouns are either feminine or masculine even for inanimate objects.	

(9b)

Allueddu! <i>ignite-him/it-M.SG.</i> 'turn it on / strike it (match)'	Miroddu! (defective vb. <i>mi</i>) <i>look-at-him/it-M.SG.</i> 'look at it/him'
Allueddos! <i>ignite-them-M.PL.</i> 'turn them on / strike them (matches)'	Miroddos! <i>look-at-them-M.PL.</i> 'look at them'
Soe alluendoddu <i>am igniting-it-M.SG.</i> 'I am turning it on / I am striking it'	
Soe alluendoddos <i>am igniting-them-M.PL.</i> 'I am turning them on / I am striking them'	

The fact that the postverbal *ddus* or *ddos* is determined by the immediately preceding vowel according to the same rules of plural endings described in sections 2.2, 2.3 and 2.4, confirms that this element cliticises to the verb and forms one word with it in much the same way as endings attach to word stems. In relation to this, it is worth noting that attaching the clitic to the end of the verb also determines a stress shift in this Sardinian variety, so that the stress always comes to fall on the penultimate vowel of the verb+clitic compound, just as it often does on other words. For example, imperative *còmpora* (on 1st vowel) becomes *comporaddu/comporaddus* (on *a*, penultimate) and gerund is *comporandoddu/comporandoddos* (on penultimate *o*).

2.7 Preverbal *ddus* vs Postverbal *ddos/ddus*

As shown in examples (10a,b), there is one masculine form *ddus* in preverbal position, in contrast to the two postverbal forms *ddus/ddos* determined by the preceding vowel. Notice again that the gerund suffix *-ndo* contains a vowel that always triggers the postverbal *ddos*. Thus, in (10a) two plural forms are possible, depending on different conditions.

(10a)

Comporaddus! <i>buy-them-M.PL.</i> 'buy them'	Allueddos! <i>ignite-them-M.PL.</i> 'turn them on / strike them (matches)'
Soe comporandoddos <i>am buying-them-M.PL.</i> 'I am buying them'	Soe alluendoddos <i>am igniting-them-M.PL.</i> 'I am turning them on / striking them'

In (10b) only one plural form is allowed preverbally: using **ddos* gives rise to ungrammaticality.

(10b)

Ist'	ora	de	ddus	comporare	Ist'	ora	de	ddus	allùere
is	time	of	<i>them-M.PL.</i>	<i>buy-INF.</i>	is	time	of	<i>them-M.PL.</i>	<i>ignite-INF.</i>
'it is time to buy them'					'it is time to turn them on / strike them'				
* Ist' ora de ddos comporare idem					* Ist' ora de ddos allùere idem				

In my opinion, the fact that only *ddus* occurs in preverbal position⁸ proves that this pronoun does not attach to preceding elements (e.g. the particle *de*) when it is preverbal, hence it remains a monosyllable and thus is not affected by the word suffix rules of sections 2.2. and 2.3.

2.8 The Forms *ddos/ddus* in Clitic Combinations

The asymmetrical behaviour of the masculine plural accusative pronoun *ddos/ddus* is observed also when certain clitics intervene. These are the locative (*in*)*n*ce and the locative/partitive (*in*)*n*de, two particles which may also give a totally new meaning to the original verb. For instance, in (11a) and (11b), *mòrrere* 'to kill' becomes (*in*)*n*de *mòrrere* 'to turn off' and *pesare* 'to weigh, to raise' becomes (*in*)*n*ce *pesare* 'to take away from'. To these two verbs the masculine plural accusative pronoun is then added. The forms (*in*)*n*ce and (*in*)*n*de contain a vowel *e* that triggers the plural *ddos* in postverbal position, yielding the postverbal combinations *-ndeddos* and *-nceddos* in (11a). However, the same elements give obligatorily *nde ddus*

⁸ This might be related to the fact that also the form with penultimate *i-* are allowed in preverbal position, e.g. *iddu*, *iddus*. However, according to my observations, *ddu*, *ddus* do occur preverbally – even sentence-initially – and are more frequent, e.g. *Ddus còmporo geo* 'I buy them / it is I who buys them'. Also Calia (2010, 45) reports forms with and without *i* even at the beginning of a clause (he marks this drop with an apostrophe: '*ddus*', '*dd*').

and *nce ddus* in preverbal position in (11b): employing *ddos* in preverbal position gives rise to ungrammaticality.

(11b)

Morindeddos <i>kill-NDE-them-M.PL.</i> 'turn them off!'	Pesaminceddos <i>raise-to-me-NCE-them-M.PL.</i> 'take them away from me!'
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(11a)

...po ...to	nde nde	ddus <i>them-M.</i> PL.	mòrrere <i>kill-INF.</i>	... po ... to	mi to-me	nce nce	ddus <i>them-M.</i> PL.	pesare raise
'...in order to turn them off'				'...in order to take them away from me'				
*...po nde ddos mòrrere idem				*...po mi nce ddos pesare idem				

The behaviour of *ddos/ddus* in (11a,b) confirms the observations made in section 2.7. In postverbal position, this pronoun attaches to preceding elements – even other clitics (as *nce* or *nde*) – thus forming one word that undergoes the *-os/-us* rule described in sections 2.1 and 2.2. In preverbal position, in contrast, it does not form one word with the preceding elements, therefore it is not affected by the *-os/-us* rule even though the preceding element (e.g. *nce* or *nde*) contains an open-mid vowel.

2.9 The Ending *us* as a Definite Article

In Santa Maria Navarrese and Baunei, the plural marker *-us* appears in its pure form, as an independent morpheme, in the masculine definite article. In fact, in this Sardinian variety, the singular definite articles *su* ('the' m.sg.) and *sa* ('the' f.sg.) become *us* and *as* respectively in the plural. Empirically, the plural definite article comes to have an intermediate form between the northern and the southern variety: though beginning with a vowel, like Campidanese *is*,⁹ it distinguishes the masculine and the

9 The origins are different, however. It is widely accepted that Campidanese common-gender plural *is* originates as a truncation of the last part of latin *ipsos*, *ipsas* > *is(sos)*, *is(sas)*. In contrast, in the other varieties, the plural definite article appears as a truncation of the first part. The 'full' form seems to occur after few particles, e.g. *che* 'like, as' in *che i su mare / che issu mare* 'like the sea' (Calia 2010, 37), but it actually contains an *i* that appears before also other elements, according to my observations, as in *che i cussu* 'like that'.

feminine, along the lines of Logudorese-Nuorese.¹⁰ This form is due to the fact that, for some unknown reason, the plural definite article of Baunei and Santa Maria Navarrese has lost the whole stem¹¹ of the latin demonstrative (*ips*)- and coincides fully with the last part, which represents the ending. Thus the plural article *us, as* contains the same elements *-us, -as* that appear on nouns and adjectives in sections 2.2 and 2.3, as well as demonstratives (e.g. *custus* 'these m.pl.' *custas* 'these f.pl.').

Two observations are in order here, on the basis of the contrast in (12). First, the masculine plural definite article never appears as **os* (unlike Logudorese-Nuorese *sos*), rather it must be always *us*. Second, this *us* article does not depend on any previous vowel because it can occur sentence-initially:

(12)

Us piccioccos funtis inongi 'The boys are here'	*Os piccioccos funtis inongi idem
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3 Some Considerations and Further Observations

3.1 Not a Vowel Change

As seen in sections 2.2 and 2.3, *-us* and *-os* behave as alternative endings with the same plural-marking function in both Baunei and Santa Maria Navarrese. In contrast, as suggested by example (1) in section 2.1, *-u* and *-o* are distinct endings that often have distinct functions: *-u* appears on nouns and adjectives, *-o* often appears on verbs. The data in (13) prove that the distribution of final *-os* and *-us* in Santa Maria Navarrese and Baunei is clearly different from that of *-o* and *-u*. In particular, the stems that take *-us* cannot take *-os*, and vice versa. The distribution of *-us* and *-os* is not related to that of *-u* and *-o*.

¹⁰ I have noticed that *is* does exist in Santa Maria Navarrese, but only occurs to indicate time, when the word 'hours' is implied. Cf. *de is duas a is tres* 'from two to three o'clock' (lit. 'from the two to the three') with *a as tres piccioccas* 'to the three girls' and *a us tres piccioccos* 'to the three boys'. This use is not mentioned in Calia 2010.

¹¹ In contrast, Logudorese-Nuorese has retained the *s-* of the stem, as the plural article is *sos* (m.pl.), *sas* (f.pl.)

(13)

(geo) Canto '(I) sing' (su) Cantu '(the) song/chant' (us) Cantus '(the) songs/chants' (us) *Cantos	(geo) Conto '(I) tell/count' (su) Contu 'tale/sum/count' (us) Contos '(the) tales/sums/ counts' (us) *Contus	(geo) Trabballo '(I) work' (su) Trabballu '(the) work/task' (us) Trabballus '(the) works/tasks' (us) *Trabballos	(geo) Freno '(I) brake' (su) Frenu '(the) brake' (us) Frenos '(the) brakes' (us) *Frenus
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In this light, the vowel variation in the endings *-os/-us* of Santa Maria Navarrese and Baunei seems to be morphologically constrained in the sense that this change concerns only the plural marking of certain categories of words. Unlike, for instance, the *o-to-u* reduction that transforms every final *os* into *us* as much as every final *o* into *u* in virtually all Campidanese Sardinian words¹² regardless of them being nouns or verbs (Lepori 2001, 13, 79, 99; Bolognesi 1998), the *-os/-us* variation of Santa Maria Navarrese and Baunei cannot be traced back to some more general *o/u* vowel change.

3.2 Mid with Mid

The data described in section 2.2 show that the choice of *-us* or *-os* as a plural ending of *-u* nouns is governed by a vowel harmony rule by virtue of which the ending vowel must share some features with the preceding vowel. Here I present some personal considerations. The presence of a high vowel in the plural ending *-us* co-occurring with a preceding low vowel *a* in the stem – e.g. *cantus*, *manus*, *mannus* – shows that the vowel harmony does not depend on the vowels being closed, nor open (i.e. neither high, nor low), unlike the right-to-left metaphony of section 2.1. If there were a rule as 'close vowels with close vowels' and 'open vowels with open vowels' we would expect, at best, plurals as **cantos*, **manos*, **mannos* contrary to fact. It is also not possible to call into force vowel backness/frontness, given that *u* and *i* trigger the same *-us* ending, while *u* and *o* (both back) trigger different endings. Finally, it seems to me that (un)roundedness cannot also be called upon, because both *u* (rounded) and *i* (unrounded) trigger the same ending *-us*.

In my opinion, the only factor able to group together *e* and *o* (as triggers of *-os*) while at the same time excluding *a*, *i*, *u* (which require *-us*) is a feature of vowel midness. In *-os* plurals, both the ending vowel and the preceding vowel are mid vowels (in fact, open-mid given the pronuncia-

12 Except few monosyllabic function words.

tion described in § 2.1), whereas, in *-us* plurals, neither the ending vowel nor the penultimate vowel are mid. In this light, penultimate *a*, *i*, *u* are not grouped together (as triggers of *-us*) for having some feature, rather they go together for lacking a certain feature. This could explain why these three vowels fall in the same category to the purpose of this vowel harmony, despite having different features. I leave this consideration for people willing to provide an in-depth analysis.

3.3 *-us* is the Default Form, *-os* is Marked

The fact that only the plural *ddus* occurs obligatorily as a stand-alone form, as shown in sections 2.7 and 2.8, suggests that *ddus* is an unmarked form, employed by default when the vowel harmony rule cannot be triggered by any penultimate vowel. In contrast, *ddos* is a marked form triggered by (open-)mid vowels in penultimate position when the clitic forms one word with the preceding element. This is in line with the observation made in section 3.2 that the nominal and adjectival ending *-us* occurs by exclusion, when the penultimate vowel is not marked as (open-)mid, whereas *-os* occurs when the penultimate vowel is marked for midness. One further remark is in order here, albeit not as a cogent argument, but rather as a clue. As shown in section 2.9, the plural marker *us* appears as an independent morpheme in the masculine definite article, while *-os* does not. Because the definite article does not attach to the end of any preceding word¹³ in Sardinian, it cannot be affected by the vowel harmony phenomenon described in sections 2.2 and 3.2. This strengthens the hypothesis that *us* is the default plural marker employed when there is no penultimate mid vowel to trigger vowel harmony in *-u* words. However, I do not address the issue of whether vowel midness should be taken as a feature in itself or can be further split into other features.

3.4 Rule and Order: Suffix Choice

The considerations put forward in sections 3.1, 3.2 and 3.3 all point to the conclusion that the distribution of the plural endings *-os/-us* in this Sardinian variety is driven by the phonological features of vowels, but is not produced through any vowel change. The *-os/-us* alternation affects only the plural of a specific category of words. Under certain conditions, the plural is marked by *-os*, otherwise it reverts to the unmarked form *-us*.

¹³ As a matter of fact, the article *us* does not attach to any elements, e.g. prepositions, in sequences as *...de us...* ('...of the...') in much the same way as preverbal *ddus* does not attach to other elements in *nce ddus pesare*. Rather, it occurs also sentence-initially.

This suggests that the suffix alternation does not involve any vowel mutation, rather it is a choice between two different endings already available. The phenomenon appears to occur only where two endings are already available for the same function (likely because variety contact), i.e. in the plural of *-u* nouns, adjectives, pronouns and determiners, because these have the ending *-os* in northern Sardinian and *-us* in southern Sardinian. In contrast, the alternation does not occur with endings that have different functions, e.g. nominal *-u* vs verbal *-o* as described in (13). It is for this reason that the *-os/-us* alternation is morphologically restricted to certain categories of words.

The phenomenon thus probably arises as a specialisation of two otherwise redundant markers and left-to-right vowel harmony is the tool by which this is achieved. Vowel harmony is already at work in Sardinian as a right-to-left metaphony that determines the pronunciation of a vowel on the basis of the following one. The co-existence of two endings in the variety of Baunei and Santa Maria Navarrese creates the need to differentiate them, as one would be superfluous otherwise. At the same time, their phonological features (*-os* has an open-mid vowel, *-us* has not) give the opportunity to extend vowel harmony in left-to-right direction, in order to determine the appropriate condition for the choice of each ending through a sort of 'vowel feature agreement' process.

3.5 General Conclusion

In Baunei and Santa Maria Navarrese, both the northern Sardinian ending *-os* and the southern Sardinian ending *-us* are available to mark the plural of *-u* nouns, adjectives and function words. These suffixes have been specialised in order to serve different subset of *-u* elements. The distribution of the suffixes depends on the penultimate vowel of the word and is governed by a vowel harmony based on a vowel feature of midness. The ending *-os* is chosen when the triggering vowel is an open-mid vowel, whereas *-us* is the unmarked suffix, which speakers revert to by default. This rule also governs the choice of *ddos* or *ddus* as a postverbal clitic, both when it is directly attached to the verb and also when *nde* or *nce* intervenes. This shows that the postverbal clitic forms one plurisyllabic word with the preceding element(s). In contrast, only *ddus* occurs in preverbal position, showing that this preverbal form does not attach to the preceding elements and remains a monosyllabic particle.

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