Stress Related Vowel Deletion in Maltese

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1 Introduction

1.1 Systematic syncope of verb stem vowels

As a Semitic language, Maltese uses a very structured verb morphology to denote inflection on top of items from its stem lexicon.

This allows us to inspect the phenomenon of vowels being deleted from the stem in particular positions, and the interaction of such process with the Maltese stress system.

Namely, we would notice how adding different suffixes to a verb can change the production of the stem segments and the resulting stress of the final product word.

1.2 Language

Maltese is the national language of Malta. It is a Semitic language spoken by almost 400,000 people (Borg and Azzopardi-Alexander 1997).

Maltese is a descendant of the *Siculo-Arabic* dialect developed in Sicily and Malta, later to be heavily influenced by Italian, Sicilian and English vocabularies.

1.2.1 Phonetic inventory

1.2.1.1 Consonants :

	Labial		Dental		(Post-) Alveolar		Velar		Palatal	Laryngeal
Nasals		m				n				
Stops	p	b	t	d			k	g		ʔ
Affricates			t͡s	d͡z	t͡ʃ	d͡ʒ				
Fricatives	f	v	s	z	ʃ					h
Trills				r						
Approximants		l							j	

Additionally, the voiced labial-velar approximant /w/.

1.2.1.2 Vowels

1.2.1.2.1 Monophtongs :

	Front		Central		Back	
High	ɪ	iː ̞ iː			ʊ	ʊː
Mid	ɛ	ɛː			ɔ	ɔː
Low			ɐ	ɐː		

1.2.1.2.2 Diphthongs: Seven diphthongs exist in Maltese: /ɐʊ/, /ɐɪ/, /ɛʊ/, /ɛɪ/, /ɪʊ/, /ɔɪ/ and /ɔʊ/.

1.2.2 Syllable inventory

	Word Initial		Word Medial		Word final	
V	<u>ʊ</u>.nʊːr	'honour'	—		—	
CV	<u>kɪ</u>.tɛp	'he wrote'	mɐh.<u>mʊ</u>.d͡ʒiːn	'dirty (pl.)'	ip.<u>kɪ</u>	'cry (Imp.)'
CCV	<u>dgɛ</u>.tsʊ	'to hoard (2pl.)'	bɪ-ʔ<u>zɪ</u>ː.ʔɛs	'with pigs'	dgɛ.<u>tsʊ</u>	'to hoard (2pl.)'
CCCV	<u>ptrɐ</u>ː.vʊ	'with a beam'	dɪs.tɪn.<u>tsjɔ</u>ː.nɪ	'distinction'	dgɛ.tsɪ.<u>tsnɐ</u>	'to hoard (1pl.)'
VC	<u>ip</u>.kɪ	'cry (Imp.)'	—		—	
CVC	<u>pɛt</u>.nɛ	'comb'	ɔ.<u>rɐn</u>.d͡ʒɔ	'orange'	ɪː.<u>bɛs</u>	'hard'
CCVC	<u>tlɪf</u>.tɐ	'I lost it (f.)'	lɪs.<u>trɐm</u>.bɛ.riː.ja	'the oddity'	ʔɔ.rɔ.<u>blɔk</u>	'it (m.) has drawn nearer in time'
CCCVC	<u>sfrɔn</u>.dɐ	'to collapse' (Mifsud 1997)	—		—	
VCC			<u>ɛːnt</u>	'I helped'		
CVCC		—	<u>ɪ.t͡ʃɛjn</u>.stɔr	'the chain-store'	<u>wed͡ʒ.d͡ʒɐjt</u>	'I hurt (Inf-pl.)'
CCVCC			<u>tlɐpt</u>	'I prayed'		
CCCVCC			<u>strɐht</u>	'I rested'		

1.2.3 Generalizations

- Onset-less syllables are only allowed on word initial positions. $- {}^*V]_\sigma\sigma$

- Only permitted word-final clusters are CC. $- {}^*CCC]_w$

1.3 Theoretical Background

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2   The issue at hand

Let's consider the Maltese suffixes for the 2nd person singular subjects; the empty suffix +Ø for 'he' and the suffix +ɛt for 'she' (Brame 1974).

Using these, we can now assume the UR for the following forms of the verbs ħɐtɐf 'to grab' and bɛzɐʔ 'to spit':

	PR	UR	Gloss
(1a)	ħɐtɐf	ħɐtɐf+Ø	'he grabbed'
(1b)	ħɐtfɛt	ħɐtɐf+ɛt	'she grabbed'
(2a)	bɛzɐʔ	bɛzɐʔ+Ø	'he spit'
(2b)	bɛzʔɛt	bɛzaʔ+ɛt	'she spit'

It is immediately visible that the stem's original form is not preserved in forms (b) in the above examples. Specifically, the second vowel is deleted when a suffix is attached to the stem.

One would be tempted to suggest a straightforward explanation to the data, such as for example a constraint on syllabification that would favour CVC syllables over other syllable types.

This kind of analysis, however, is bound to be challenged; firstly, as we can clearly see above in section 1.2.2, the language allows many other syllable forms quite freely, so such preference for CVC would seem like an extremely low priority constraint.

Another challenge with such analysis arises when reviewing the data for the +t suffix for the 1st person singular subject:

	PR	UR	Gloss
(1a)	ħɐtɐf	ħɐtɐf+Ø	'he grabbed'
(1b)	ħɐtfɛt	ħɐtɐf+ɛt	'she grabbed'
(1c)	ħtɐft	ħɐtɐf+t	'I grabbed'
(2a)	bɛzɐʔ	bɛzɐʔ+Ø	'he spit'
(2b)	bɛzʔɛt	bɛzaʔ+ɛt	'she spit'
(2c)	bzaʔt	bɛzaʔ+t	'I spit'

In the (c) forms above, we again notice a deletion of a stem vowel; but this time, it is the first stem vowel that is removed, to create a $CCVCC$ syllable.

This new data set forces us to rethink our analysis. While it's possible to draw up a different rule or constraint to explain the deletion in (c), the two vowel deletion processes appear to have some common motivation, and so it would be ideal if we could formulate some unified constraint that would explain these, and perhaps other, alternations.

Just like before, we might lean to some analysis based on preferred syllable types, perhaps favouring symmetric forms $C_x V C_x$ over other types. But again such analysis would prove challenging, in particular when applying more than one suffix on a stem (Wolf 2012):

	PR	UR	Gloss
(1d)	'htɐf.na	hɐ.tɐf+na	'we grabbed'
(1e)	hɐ.'tɐf.na	hɐ.tɐf+Ø+na	'he grabbed us'

Examples (1d) and (1e) contradict any attempt to explain the vowel alternations by structural constraints alone. While the URs of both examples offer the same possible product [hɐ.tɐf.nɐ], it manages to be preserved in (1e), with a 1-sg subject suffix and a 1-pp object suffix. A subject suffix alone does not help (1d) to avoid the vowel deletion we witnessed in all previous examples.

Since the type and count of the suffixes are the only visible differences between the URs of (1d) and (1e), we must conclude that a fundamental difference between the two types of suffixes is what's behind the alternations in examples (b-d).

I will argue that this same difference plays an important part in the Maltese stress system, and show how this stress system's cyclicity can make the difference between executing a vowel deletion and skipping it.

2.1 To be continued...

TODO

References

Borg, A. and M. Azzopardi-Alexander (1997). *Maltese.* Descriptive Grammar Series. Taylor & Francis Group.

Brame, M. K. (1974). The cycle in phonology: Stress in palestinian, maltese, and spanish. *Linguistic Inquiry 5*(1), pp. 39–60.

Mifsud, M. (1997). *Loan verbs in Maltese: a descriptive and comparative study.* E.J. Brill.

Wolf, M. (2012). Cyclicity and non-cyclicity in maltese: Local ordering of phonology and morphology in ot-cc. *Harmonic Grammar and Harmonic Serialism.*