A CROSS-DIALECTAL STUDY OF VOWEL HARMONY IN MALTESE

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1.0 Abstract Maltese includes a number of different dialects which
cross-classify with respect to different processes. As for Vowel
Harmony in roundness they fall into two groups. In the first,
harmonization is conditioned by the phonetic quality of the harmonizing
vowel and it propagates to adjacent vowels; in the second, harmoni-
ization is determined by the phonological quality of radical vowels
only and it applies to both adjacent and non-adjacent vowels. The
relevant rules must include variables to accommodate all facts.
The constraint proposed in Jensen (1976) on variables in phonology is
shown to be inconsistent with Maltese. Another line of investiga-
tion is suggested instead.

1.1 Maltese is spoken by some 275,000 people on Malta (95 sq. mi.)
and 24,000 on Gozo (26 sq. mi.); Standard Maltese (SM), based on the
vernacular dialect of the urban area around Valletta and Sliema on
Malta, is spoken by all but a few Maltese. There are also a number
of different dialects, each one with specific features. A village
dialect is spoken mostly at home or with fellow villagers. Due to
the structure of the settlement, no speech community is really homo-
genous: data quoted here are representative of the area they are
drawn from but a number of speakers may use less characteristic
variants under the influence of SM or neighboring dialects. The data
presented here have been collected from informants whose dialectal
background was reliable and have been carefully cross-checked.

1.2 Maltese appears to be "a separate language resulting from the
interaction and fusion of North-African Arabic, but with its own
dialect features outside the North-African group, and Siculo-Italian,
covering two different cultural strata" (Aquilina, 1959). The core
of the vocabulary is still Semitic but since the 12th century new
lexical items have been massively borrowed from Sicilian, Italian
dialects, and (more recently) English. Loan verbs undergo typical
changes such as gemination of an initial consonant; they are always
conjugated after the model of Semitic verbs with a so-called weak
third radical. Nominal forms often undergo various phonologi-
ical changes such as vowel syncope, consonant assimilation, stress
shift, etc. From a synchronic point of view the lexicon may be
divided into sets defined on morphophonological grounds without ref-
rence to any diacritic feature such as (2 semitic). For convenience
I will refer to one set as S (Semitic) and to the other as R (Ro-
man and English).

1.3 In SM and its dialects surrounding the urban area, Vowel Harmony
(VH) only concerns the agreement in roundness of short non-low
vowels. In other dialects of Malta and Gozo VH is more extensive
and accounts for alternations between [a]/[ä], [e]/[ë], [ä]/[ä]
as well. Due to the interference of other processes, rules for each
pair include specific provisions and have to be kept distinct. This paper is restricted to that rounding harmonization which accounts for alternations between [i/u] and [e/o]. Since the lowering of [i] to [e] or [u] to [e] is irrelevant to this study, I will use I as a cover symbol for [i/e] and for [u/o].

1.0.1 Within the S set of the vocabulary radical short vowels always agree in roundness. Thus we have

(1) kîtêb 'he wrote' vs. (2) ñorôb 'he drank'

The value in roundness of a stem vowel sequence may vary from dialect to dialect. Compare:

(3) ñëb ñolôn 'he dreamed' vs. Sîbêlibi ñolôn
(4) sîb ñêtal 'he killed' vs. Sîbêlibi ñêtol

When either stem vowel is long, the two vowels may or may not agree:

(5) Sîbêlibi ñëb ñolôn 'he looked at'
(6) ñêm bêm ros
(7) sîb ñêtal 'I am eating'
(8) ñêm bêm rs

In Sîbêlibi the only harmonizing vowel is [u], whereas in ñêm a nonround vowel will condition harmonization of subsequent [i]; this explains why (5) is permitted in Sîbêlibi but is ruled out in ñêm. In ñêm, stem vowels always agree in roundness whether they are short or long; that this is not also the case in (5) is shown by (7).

1.0.2 Within the S set of the vocabulary there has been no tendency to make vowels of the stem agree. In quite a few nominal and verbal forms both [i] or [e] and [u] or [o] occur:

(9) offênda
(10) espôt
(11) jënerozât
(12) mëbôdu

Once a stem is suffixed, however, the same conditions apply for the harmonization of affinal vowels, whether the stem belongs to S or to R. We thus need a morphophonemic constraint on the structure of S stems which will not apply to R stems.

1.0.3 Such a constraint applies only within S stems and should not be permitted to cross a boundary, as will be exemplified in §3.1, ex. (41). Conversely, the phonological rules which account for VI among affinal vowels should only apply across an internal boundary: without such a constraint, the rules would improperly change the quality of vowels in R stems.

1.1 The vowels affected by VI are affinal or epenthetic. The following affixes are involved:

Verbal prefixes

Subject suffix:

Person suffixes:

Person markers appear as possessive pronouns or as demonstrative pronouns:

(11) om-ot 'he'
(12) missi 'rich'

An epenthetic vowel [i] is inserted to break up a CRN clus or a CRN cluster:

(13) kît+bît+hû

1.2 The morphophonemic forms like [jì+kîkôk] whose derivations are

(16) Vit Vowel Relation

It is clear from (16) that the vowel [i] must be present on the suffixes Vit.

It would be impossible once for all for perfect stem and the i [ti+1]'he ate' and i respectively. Even within the s set may change; this condition fixes as well:

(20) Sîbêlibi su:

2. The preceding section dialects. We shall not always fall into place only a vowel which is i (b) dialects in which is on the [back] quality c. Within the first Sîbêlibi and ñêm; the other dialects, Sîbêlibi...
to be kept distinct. This
monophonic which accounts
since the lowering of [i]
study, I will use [i] as a
radical short vowels always

'he drank'
quence may vary from
]

lewi 🇯🇲-
lewi 🇯🇲-

mals may or may not agree:

[u], whereas in Qarni any
of subsequent [i]; this
but is ruled out in Qarni;
dness whether they are
use in Si is shown by (7).
there has been no tendency
e a few nominal and verbal

be exemplified in §3.0.1,
les which account for Vh
as an internal boundary;
properly change the
or epenthetic. The

Verbal prefixes in the imperfect: ni or nu (1st person)
l or lu (2nd person)
j or ju (3rd person)

Subject suffix in the perfect: it or ut (2nd person)
Person suffixes: ik or uk (2nd person)
hum or hul (2nd person)
im or um (3rd person)

Person markers appear as object pronouns attached to any verbal stem
or as possessive pronouns attached to some nominal stems, as in:

(13) coum-tek 'your mother'
(14) missi-tek 'your father'

An epenthetic vowel [i] or [u] is inserted, with some restrictions,
to break up a CRG cluster, where C stands for any consonant and R
for a nasal or a liquid:

(15) kith+it+14kom = kith+it+14kom

1.2 The morphophonemic status of Vh in Maltese is clearly proved by
forms like [ji-klo] 'he eats you-sg.' or [jithbok] 'he cooks you-sg.'
whose derivations are as fellows:

(16) ji+kol-tek (17) ji+toh-lek
Vh ji+kol-tek ji+toh-lek
Vowel Deletion ji+kol-tek ji+toh-lek

It is clear from (16) and (17) that the context conditioning Vh may
be absent on the surface, making the output opaque with respect to
Vh.

It would be incorrect, however, to conclude that Vh is deter-
nined once for all for each root. It is often the case that the
perfect stem and the imperfect have different vowels: compare (18)
[k*t] 'he ate' and (19) [tbtb] 'he cooked' with (16) and (17),
respectively.

Even within the same paradigm the quality of the stem vowels
may change; this conditions a change in the harmonization of suf-
fices as well:

(20) Siggiewi smajt+om 'I heard them'
Sliema tem 'she heard them'

2. The preceding section was devoted to properties common to all
dialects. We shall now proceed to analyze differences among them.
Dialects fall into groups with respect to Vh: (a) dialects in which
only a vowel which is adjacent to a round vowel may be harmonized;
(b) dialects in which harmonization of affixal vowels depends solely
on the [าะ] quality of stem vowels.

Within the first group we will look into three cases: SN,
Sellicka and Qarni; the second group will be exemplified by two
other dialects, Siggiewi and Gozo.
3.0 In SM all short [u]'s have been lowered to [o], except in a few stems from set R. When preceded by [o], a final I in a closed syllable goes to [o]; elsewhere, it remains I:

3rd pers. masc.
(12) kiten - he wrote
(13) faln - he is strong
(14) habat - he beat
(25) hadan - he worked
(26) jale - he set free

3rd pers. fem.
kitch-
fall-
hab-
bad-
je-

Compare with:
(27) yolom - he dreamed
(28) sorob - he drank

Examples (22)-(26) show that the unmarked form for the pronoun is -JI³ and that -ot is derived by harmonization; the same conclusions obtain for the 2nd person pronoun -I. Plural personal pronouns are invariably -kom and -om:

(29) kitrib-thon - he wrote them
(30) sorob-thon - he drank them

Suffixed [o] may trigger vocalic harmonization of a subsequent I:

(31) kitrib-tok - he wrote then to you
(32) kitrib-ak - he wrote to you

Long [u], whether it is radical (as in 33) or suffixed (as in 34), does not affect a subsequent I:

(33) nbus-tok - I kiss you
(34) kitrib-tok - he wrote to you

A short [u] derived from long [u] after the shift of the stress also has no effect:

(35) na nbus-u-tok - I do not kiss you
(36) ma kitrib-u-tok - I do not write to you

As far as I know there is no relevant case where we could start from an underlying short [u] to test the harmonization of subsequent vowels. In (37) long [o] apparently triggers VI but in fact derived from two short underlying o's:

(37) sorot - she coughed ¹⁰

3.0.1 It is thus safe to conclude that in SM only [o] may trigger VI. There is a further restriction, however: Vowel harmony only applies to a final vowel:

(38) sorob - he drank
(39) sorob-ot - she drank
(40) sorob-ak - he drank
(41) sorob-tok - he drank

In (41), final -ok is [i]; the suffix -it I contrast to (39), it is vowel in set S always a suffix, whereas a suffix This fact justifies keeping such vowels to stem vowels to their subsequent material. This brings us to:

(42) I - o / oJ

3.1.0 In Melia, as I have not been lowered to [o], place either. Short vowel forms:

(43) kit-nit - 'she wrote'
(44) naf-nit - 'she talked'
(45) naf-nit - 'she talked'
(46) naf-nit - 'she talked'

Forms (42)-(45) show that we also observe that there is a suffix -it.

As in SM, no long:

(47) I du-rim - 'he came'
(48) iy'dim - 'he saw'

In contrast to SM, however:

(49) naf-nit -I+I+

As long as there is a o:

(50) naf-nit -I+I+

As soon as the vowel is:

(51) naf-nit -I+I+

An epenthetic vowel propagates. We thus have
lowered to [o], except in a few cases. A final i in a closed syllable is reduced to [i].

### 3rd pers. fem.

- kitib+kom 'he wrote you-pl.'
- sorob+kom 'he drank you-pl.'

Harmonization of a subsequent vowel in the plural personal pronouns is

- 'as in (32) or suffixal (as in (41)) to you'
- 'as in (33) or suffixal (as in (41)) to you'
- No shift of the stress also.
- 'write it to you'

Case where we could start from harmonization of subsequent vowels but is in fact de-

It is SM only [o] may trigger VH. Vowel Harmony only.

Applies to a final vowel. Compare:

(38) sorob 'he drank'
(39) sorob+ot 'he drank'
(40) sorob+t+rok 'he drank from you'
(41) sorob+t+i+t+rok 'he drank from you'

In (40), final -rok is not harmonized since the preceding vowel is [i]; the suffix -it is not harmonized either since in (41), it is not in final position. Notice that stem vowels in set $C$ always agree in roundness independently of their position, whereas a suffixal vowel undergoes VH only in final position. This fact justifies keeping the morphophonemic constraint which applies to stem vowels distinct from the phonological rule applying to subsequent material. The correct VH rule in SM$^1$ turns out to be:

(42) I + o / oC + o#}

1.2.1. In Velleichi, as in other rural dialects in general, [u] has not occurred to [a]; no contextual shift of [i] to [u] has taken place either. Short vowels are [i, u, a, o]. We get the following forms:

(43) kitib+im 'he wrote them'
(44) rabut+im 'he tied them'
(45) s+x+i+t+im 'he stole them'
(46) surb+ut 'he drank them'

Forms (43)–(45) show that among short vowels only [u] triggers VH; we also observe that the plural person suffix is -in and behaves like the suffix -it.

In contrast to SM, however, a vowel need not be final to be harmonized:

(47) i+du+t+im 'he turns around them'
(48) b+u+di+im 'he took them'

As in SM, no long vowel or diphthong may trigger VH:

(49) surb+ut+i+t+rok 'she drank it-fem from you-fem'

In long as there is a short [u] to condition it, VH keeps propagating:

(50), surb+ut+i+t+rok + surb+ut+i+t+rok 'he drank them from you'

As soon as the vowel is no longer short [u], VH is stopped:

(51) surb+ut+i+t+rok 'he drank it-m. from you'

An "apthetical" vowel gets harmonized as well and allows VH to propagate. We thus have:
(52) n\textsuperscript{3}ju\textsubscript{r}+l+kim 'I carry for you-pl.'

1-epenthesis

VI

n\textsuperscript{3}ju\textsubscript{r}+ul+kim

That the underlying quality of the epenthetic vowel is /i/ may be deduced from the fact that if the preceding vowel is not [u], the epenthetic vowel always shows up as [i]. It is particularly interesting to compare [n\textsubscript{3}jurrulkim] 'I do not carry for you-pl.' with [n\textsubscript{3}jurrulkim] 'I do not carry it for you-pl.' The derivations follow:

(53)

1-epenthesis

VI

n\textsuperscript{3}ju\textsubscript{r}+l+kim\textsuperscript{+3}

(54) n\textsuperscript{3}ju\textsubscript{r}+ul+kim\textsuperscript{+3}

Stress

V shortening

n\textsuperscript{3}ju\textsubscript{r}+ul+kim\textsuperscript{+3}

n\textsuperscript{3}ju\textsubscript{r}+ul+kim\textsuperscript{+3}

in (53), the epenthetic vowel both becomes harmonized and conditions the harmonization of the suffix. In (54), surface short [u] is derived from a long /u/ which does not trigger VI. Notice that in (53) and (54), [i] and [u] stand in paradigmatic contrast. This is good evidence for the morphophonemic status of VI in Maltese.

3.1.11 In Nellieja, then, as in SN, only /u/ (corresponding to SM /a/) triggers VI; however, the process extends to /u/ (as opposed to SN invariable -on/-kom). Moreover, it may apply to any vowel, final or internal, as long as the preceding vowel is short /u/. Iterative rules have been designed precisely for this kind of situation:

(55) $i + u / uC_\textsubscript{u}$ iterative from left to right

In (55) the direction of application is predictable from the fact that the determinant precedes the focus.

3.2.0 In Qorma all round vowels trigger VI. This includes /u/, /u', and /u\textsuperscript{+3}:

(56) /u/ 'your house'

(57) /u/ 'is eating'

(58) /u/ 'he drank from you'

(59) /u/ 'he kissed you'

(60) /u/ 'he wrote to you'

(61) n\textsubscript{3}ju\textsubscript{r}+ul+kum 'I carry it for you-pl.'

In (58) and (59) the harmonizing vowel is radical; in (60) and (61) it is suffixal; in either case a round vowel conditions the harmonization of a subsequent /u/. Conversely, non-round vowels do not trigger VI:

(62) /u/ 'I heard you'

(63) /u/ 'she tied'

(64) /u/ 'she played'

Several vowels na lar (60) with (51).

(65) /u/ 'brought it /brought it to'/

As in Nellieja, we can

(67) RVH i $\rightarrow$ u /

1.2.1 There is, however and Qorma. For we get:

(68) kit\textsubscript{b}+em 'the

(69) kit\textsubscript{b}+um+1+t

(70) kit\textsubscript{b}+um+1+tok

(71) kit\textsubscript{b}+um+1+kom

(72) ma kit\textsubscript{b}+en+1

(73) ma kit\textsubscript{b}+en+1

(74) surub\textsubscript{b}+em 'he

(75) surub\textsubscript{b}+um+1+kom

(76) surub\textsubscript{b}+um+1+tok

(77) surub\textsubscript{b}+um+1+t

(78) surub\textsubscript{b}+um+1+kom

(79) surub\textsubscript{b}+um+1+tok

(80) surub\textsubscript{b}+um+1+t

It is clear that th

(81) RVH u $\rightarrow$ i /

3.2.2 In principle RVH schema of rules (82) applies:

(82) RVH

\begin{align*}
\text{V} & \rightarrow \\
\text{low} & \rightarrow \\
\text{round} & \rightarrow \\
\text{if} & \text{a} -, \text{then}
\end{align*}
Several vowels may be harmonized in sequences; compare in particular (66) with (51).

(65) \(\text{sr} + \text{it} + \text{te} + \text{k} \rightarrow \text{sr} + \text{ut} + \text{te} + \text{k}
(66) \text{sr} + \text{it} + \text{it} + \text{te} + \text{k} \rightarrow \text{sr} + \text{ut} + \text{ut} + \text{k} + \text{ok}

As in Nellieja, we can write an iterative rule:

(67) \(\nu \rightarrow \left[ \begin{array}{c} V \\ + \text{round} \end{array} \right] \text{C}_0\)

3.2.1 There is, however, an important difference between Nellieja and Qormi. For we get:

(68) kitibi\text{-}ten 'he wrote them'
(69) kitibi\text{-}um\text{-}ten \text{t} 'he wrote them to me'
(70) kitibi\text{-}um\text{-}ten \text{t} 'he wrote them to you'
(71) kitibi\text{-}um\text{-}ten 'he wrote them to them'
(72) na kitibi\text{-}em\text{-}ten 'he did not write them'
(73) na kitibi\text{-}um\text{-}em\text{-}ten \text{t} 'he did not write them to her'
(74) surib\text{-}um\text{-}ten 'he drank them'
(75) surib\text{-}um\text{-}ten \text{t} 'he drank them from them'
(76) surib\text{-}ut\text{-}um\text{-}ten \text{t} 'she drank it\text{-}ten from them'

(68)-(73) and (74)-(76) prove that in internal position the pronoun suffix is always \(\text{um}\); in final position it is \(\text{um} \text{t}\) or \(\text{um}\), depending on whether or not the preceding vowel is round. In contrast, position makes no difference for the suffix \(-\text{it}\):

(77) kitibi\text{-}it 'she wrote'
(78) kitibi\text{-}it\text{-}tek 'she registered you'
(79) surib\text{-}ot 'she drank'
(80) surib\text{-}ut\text{-}ok 'she drank you'

It is clear that the underlying form of the feminine marker is \(\text{-it}\) (which is harmonized only if a round vowel precedes it), while the 3rd person plural suffix is underlyingly \(\text{-um}\) (fronted only in final position and only if a non-round vowel precedes it). I shall assume that the 2nd person pl. marker is underlyingly \(\text{-um}\); as this suffix may never be in internal position, there is no possible test. To front \(-\text{um}\) and \(-\text{km}\) we need an additional rule:

(81) \(\nu \rightarrow \left[ \begin{array}{c} V \\ + \text{round} \end{array} \right] \text{C}_0 \text{C}_1 \theta\)

3.2.2 In principle RN (67) and FVM (81) are collapsible into the schema of rules (82), applied iteratively from left to right:

(82) \(\nu \rightarrow \left[ \begin{array}{c} \text{lo}\text{-}v \\ - \text{around} \end{array} \right] + \text{[round]} / \left[ \begin{array}{c} v \\ - \text{around} \end{array} \right] \text{X} \rightarrow \theta\)

If \(\text{X}\) is, then \(\text{Q}=\text{C}_1\) (X and 0 are abbreviative variables)
Schema (82) captures the fact that there is one basically similar process involved in both (67) and (81). However, there is some evidence that (67) and (81) should be kept apart. For some speakers the harmonization of the apthentic vocal is optional; we thus have:

(83) n+jurr+il+1um or (84) n+jurr+il+1um

Both (83) and (84) are derived from /n+jurr+il+1um/ as follows:

(83) n+jurr+1kum   (84) n+jurr+1kum
V=epenth. n+jurr+il+1um RVW
RVW n+jurr+il+1um V=epenth. n+jurr+il+1um
FVW n+jurr+il+1um FVW n+jurr+il+1um
lowering n+jurr+il+1um lowering n+jurr+il+1um

There is no way to account for (84) if RVW and FVW are collapsed. The fact that (84) is acceptable to speakers (although I do not think it is the most common form) seems to indicate that the fronting and the rounding should be kept distinct despite their being closely related.

4.0 Siggiewi (Malta) and Gozitan dialects are representative of the second group of dialects. In the vernacular of these villages, the determining factor for VI is the quality of stem vowels only. Stem vowels are functionally [-back] or [+back]. The functional sets are:

(85) i: u

Long a is realized back and sometimes rounded but functions as a front vowel with respect to VI. In general, former long [a:] has been raised to [a] and back [a:] to [u]; in a few cases [a:] has been retained when it was preceded by k and backed: e.g.,

(86) khaq hit 'it got blue'

The other source for [a:] is the coalescence of two short vowels after deletion of a weak intervocalic pharyngeal consonant. Where these vowels functioned historically as front vowels, the present-day reflex is a long a, whose back quality may be explained as for (86); where the vowels functioned as back vowels, the reflex is [a:].

(87) laqat 'she tied' (compare with (89))
(88) natqat 'she chewed'

I will assume that the set I refer to as [+back] does not include this [a:].

4.1 With this proviso in mind, we may now say that in Siggiewi [+back] stem vowels condition the rounding of a subsequent I:

(89) rabt+ot 'she t
(90) surt+ot 'she d
(91) moxt+ot 'she c
(92) du+tor 'your
(93) n+bu+tor 'I k
(94) kib+et 'she w
(95) qam+er 'she c

Non-radical back vowels i

(96) kib+i+1rek'

Once triggered by a 1, no matter what material short 1 is derived from [t]

(97) sur+t+1rek
(98) salva+jt+1rek
(99) salva+i+1rek

Examples (97)-(99) show that monizing vowel to be harmonized of 1t/ty of stem vowels; these testification. Hence a rule applies. Principle is needed:

(100) RVW 1 = U /

The variable X stands for [h]. The application of

(101) rab+ti+t+i+1rek:

1:

\[ \begin{array}{c}
\text{Back} \\
\text{radical} \\
\downarrow \\
\text{r} \\
\end{array} \]

As in Qormi, the 3rd external position but either [-m] to [-m], however, de vowel and not on the quality

(102) kib+t+i+1rek 'h
(cf. Qormi (71))

In (102) the vowel is front stem vowel, but in (71) the round vowel. The fronting:
one basically similar pro-

\[ \text{for some speakers the harmo-} \]

\[ \text{we thus have:} \]

\[ \text{\textbf{Non-radical back vowels do not trigger VII. Compare, e.g., with (93):}} \]

\[ (96) \text{ki$t$+u}+1+ek \ 'he wrote it to me' \]

\[ \text{Once triggered by a back stem vowel, VII applies to any subsequent} \]

\[ \text{no matter what nasal may intervene; but, as (99) shows, when a} \]

\[ \text{short} \ i \ \text{is derived from} \ 1 [i'] \ \text{it is never harmonized.} \]

\[ (97) \text{\textit{bni}}+ut+\textit{i}+1+ek \ 'she drank it from you-ag' \]

\[ (98) \text{salvaj+n}+i+1+ek \ 'we saved for you-ag' \]

\[ (99) \text{salvaj+n}+i+1+ok \ 'we saved for you-you' \]

\[ \text{Examples (97)-(99) show that vowels need not be adjacent to the har-} \]

\[ \text{monizing vowel to be harmonized. In (97) the conditioning factor for} \]

\[ \text{the harmonization of} \ -/i/ \ \text{and} \ -/ek/ \ \text{into} \ -/ut/ \ \text{and} \ -/ok/ \ \text{is the qual-} \]

\[ \text{ity of stem vowels; these two pronouns are thus harmonized indepen-} \]

\[ \text{dently. Hence a rule applied under the Simultaneous Application} \]

\[ \text{Principle is needed:} \]

\[ (100) \text{EVM \ 1+U/[}^{+\text{back}} \ 
\]

\[ \text{The variable} \ X \ \text{stands for a schema of values;} \ O \ \text{is a connected} \]

\[ \text{variable. The application of rule (100) is demonstrated:} \]

\[ (101) \text{rabb}+\text{t+i}+1+ek \rightarrow \text{rabb}+\text{ut+i}+1+ok \ 'she tied it for you' \]

\[ (102) \text{ki$t$+um}+1+ek \ 'he drank them from them' \]

\[ \text{(cf. Qormi (71) ki$t$+um}+1+em) \]

\[ \text{In (102) the vowel is fronted because of the front quality of the} \]

\[ \text{stem vowel, but in (71) the vowel remains round since it follows a} \]

\[ \text{round vowel. The fronting rule in} \ \text{Si$g$i$w$li} \ \text{is:} \]
(103) V fm U → I / [back] C₁ {radical} X₀₁

RVU and FMV are collapsible into the following schema:

(104) V [low] + [around] / [back] X₀₁

if u =-, then C₁ = C₀.

This might be a spurious generalization: there is an asymmetry in the treatment of I and U. Whereas I is always subject to VII, U in internal position is not. Schema (104) obscures this asymmetry.

4.2 In Gozo, pronouns -ta and -tk behave as they do in Siġġierra. But we find the following forms:

   (105) kith-im 'he wrote them'
   (106) kith-im+t+im 'he tied them to them'
   (107) kith-tu+t+im 'he wrote it to them'
   (108) rabat+um 'he tied them'
   (109) rabat+um+t+um 'he tied them for them'
   (110) rabat+i+t+um 'he tied it for them'

Forms (105)–(110) show that the form of the plural pronoun, -ta or -tk, depends on the quality of the stem vowels. As facts stand so far, there is no reason to choose between /i/ and /u/ as the underlying vowel. We could as well postulate a vowel unspecified for the feature [back] and write a rule such as:

(111) V [high] + [back] / [back] X₀₁

4.3 There is, however, some evidence in Gozo that the underlying vowel is /i/. When the harmonizable vowel is separated from back stem vowels by two contiguous front vowels, it may fail to undergo VIII. When, on the contrary, it is separated from front stem vowels by contiguous back vowels, we always get [i] as expected:

   (112) rabat+i+t+i+im 'we tied it-fam for them'
   (113) rabat+i+t+i+um 'we tied it-fam for them'
   (114) kith+i+t+i+im 'they wrote it-masq to them'
   (115) kith+i+t+i+um 'they wrote it-masq to them'

If the underlying vowel were unspecified (or /u/) we would expect (114) to be as acceptable as (112).

5.0 VII may also apply regressively to prefixes ml-, ti- and li- (cf. ill.4). The prefixal vowel harmonizes to U when the adjacent stem vowel is U. In SM and a number of dialects, the prefixal vowel does not harmonize if it is contiguous to a coronal obstruent:

(116) jo-ti-froj 'it empties'

(117) jor-ploj 'he
(118) jor-klob 'he
(119) jor-tlob 'he
(120) jor-trob 'he
(121) jor-trof 'he
(122) jor-ti-loj 'he
(123) jor-te-roj 'he

If the coronal obstruent applies normally (but not prevent progressive)

(124) jor-ti-loj 'he
(125) jor-ti-floj 'he
(126) jor-te-roj 'he
(127) jor-te-foj 'he

This restriction on r:
It seems to be optional: the influence of SM,

(128) jor-ti-loj 'he
(129) jor-te-loj 'he

Some speakers, however, logy with SM jor-te-loj.

5.1 The restriction compared with the fal.

6.0 Maltese dialects
Although it may have VII is now a morpheme one, in all dialects.
adjacent vowels: com
whether they are adj.

6.1 Jensen (1974) cr.

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6.1 Jensen (1974) cr.

6.1 Jensen (1974) cr.

6.1 Jensen (1974) cr.

6.1 Jensen (1974) cr.

6.1 Jensen (1974) cr.

6.1 Jensen (1974) cr.
Here is an asymmetry in the subject to VH, as in inter-
this asymmetry.

If the coronal obstruent is not contiguous to the stem vowel, VH ap-
plies normally (but note that, as in (126), a coronal obstruent does
not prevent progressive VH in any dialect).

This restriction on regressive VH does not obtain for all dialects.
It seems to be optional in some villages, reintroduced perhaps under
the influence of SN. Thus in Zebbug (Malta), the forms are:

Some speakers, however, use [jišurbu] or [jiltulbu], possibly by ana-
logy with SN [jišorbu] and [jiltulbu].

5.1 The restriction on the propagation of regressive VH should be
compared with the failure of progressive VH to apply after two contig-
uous front vowels in Gozo (§4.3)

6.0 Maltese dialects provide abundant material for the study of VH.
Although it may have been introduced into Maltese for phonetic reasons,
VH is now a morphophonological process, and a fairly sophisticated
one, in all dialects. In some dialects, the process may affect only
adjacent vowels: consonants alone may intervene between the deter-
ninant and the focus. In other dialects, VH affects subsequent vowels
whether they are adjacent or not: consonants as well as vowels may
be skipped over.

6.1 Jensen (1974) claims that it is possible to predict what irrele-
vant material is allowed between the determinant and the focus of a
rule.17 He asserts that relevant segments are defined by the set of
features common to the input and to the focus; other segments may
be skipped over. But this "Relevancy Condition" makes incorrect pre-
dictions in Mallieha and Gozo: for Mallieha it predicts that vowels
are allowed to intervene (which they are not), and for Gozo that only
consonants are allowed (but both consonants and vowels may be skipped
over, as we have seen). As far as VH rules are concerned, I think
that Jensen's Relevancy Condition is misdirected. Surely it is not
possible to determine if a VH rule will apply to adjacent vowels only
or to any subsequent vowel just by looking at the phonological ma-
tices of the harmonizing vowel and the harmonizable vowel. Maltese
dialects suggest instead that we should look at the morphological relationships between the vowels in question. When there is no difference in morphological status between harmonizing and harmonizable vowels, only consonants may intervene. When there is a difference, however, vowels may also intervene. Interestingly, Finnish VII, as analyzed by Ikonen, supports this analysis. There may be cases of VII applying to non-adjacent vowels which can be described in phonological terms only. I feel, however, that we should examine these cases carefully to see what morphological relationships obtain between the segments under consideration.

Footnotes

1. This study is based on fieldwork accomplished in summers from 1973 to 1977. I wish to thank the French Embassy in Malta and the Maltese Government for granting me a research scholarship in 1974 and 1975. I am particularly grateful to my informants and to the students at the Royal University of Malta who helped me conduct the fieldwork. I am also indebted to Larry Hyman and Stephen Anderson for valuable suggestions and to Linnea Lagerqvist for helping to make the final version of this paper more correct. The data, the analysis and all remaining errors are mine alone.

2. Malta was taken by an army from Kairouan (Tunisia) in 870, and the Maltese were ruled for 220 years. Since then the archipelago has been ruled by different Christian neighboring states. Today it is an independent republic within the British Commonwealth.

3. As, e.g., in [atta'jel] 'he typed'.

4. "[u']" stands for a slightly downgliding [u] or a lax long [u].

5. Notice that the stem is Semitic in (13) and Romance in (14).

6. This is also true for other aspects of VII in Maltese with respect to [a/æ], [i/-i] and [e/-o] alternations.

7. There is also a contextual lowering of i to i: i-st Cº. In the<br>alternation between [i] and [e].

8. For a possible approach to this problem, see Brame (1974).

9. Brame (1974) may not account for forms like (41) since his rule is simply: i-o / eCº.

10. In rural dialects non-low long vowels are diphthongized; tense long i and u have split into i/ and i- respectively (at least in Gozitan dialects); lax downgliding i and u come from x; and æ by a raising process. Long vowels æt, æt and æt have been formed from the coalescence of short vowels in contact after deletion of a weak intervocalic pharyngeal glide.

11. Long æ and short æ are derived. The lowering rule is: i-e/ æCº. Compare with SN (footnote 7).

12. Notice that salva is a R stem.
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when there is no differ-
ing and harmonizable
there is a difference,
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Commonwealth.

| or a lax long [u] |
| or a lax long [u] |
| and Romance in (14). |
| in Maltese with res-

to Fial. 1-e-
ulate final position, |
| short in this position |
| 7 for the alternation |

see Brane (1974).
like (41) since his rule
are diphthongized; tense
respectively (at |
and " come from |
and " have |
ng rule is: 1-e-

15. See footnote 12.
16. Notice that 1 in -gi- is underlyingly it and is not a candidate 
for harmonization in (112) and (113).
18. See Campbell (to appear: 3.1.). Notice also that recent treatments 
for VII (like Vergnaud—to appear)—fail to account for restrictions 
in VII application. See §5.1.

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50.4:675-68.

(in progress)

APPENDIX

The map and the chart show how Maltese dialects cross-classify.

![Map of Maltese Dialects]

<table>
<thead>
<tr>
<th>Harmonizing Vowels</th>
<th>Group</th>
<th>UR 3rd pl. pronoun</th>
<th>Fronting rule</th>
<th>Restr. on regr. VH 'he killed'</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td></td>
<td>I</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Qormi</td>
<td>I</td>
<td>um</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Siġġiewi</td>
<td>II</td>
<td>um</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Zebbug</td>
<td>II</td>
<td>um</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Mallieha</td>
<td>I</td>
<td>im</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Gozo</td>
<td>II</td>
<td>im</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

This paper attempts repairs in two ways: preliminary classification schemes on the basis of criteria section (2) suggest different roles in discourse misunderstanding.

1. Most of the work established systems have the request (Schegloff 1975). The recipient initiates the request, and the exchange of misunderstandings in the literature seem to be a common issue be