

AUXILIARY VOWELS IN WORD-MEDIAL CONSONANT CLUSTERS IN THE HISTORY OF MALTESE

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Abstract: Borg (1978) notes that 15th and 16th-century transcriptions of Maltese place names display the auxiliary vowels [a] or [i] inserted into word-medial consonant clusters. According to Borg (1978) the quality of the auxiliary vowel is phonologically conditioned: it is [a] in a back environment, but [i] elsewhere. On this analysis the auxiliary vowels [a] and [i] exhibit complementary distribution. The examination of records of Maltese, however, yields a more complex picture. Auxiliary vowels continue to occur relatively frequently in the 17th-century, as evidenced by archival records of the Roman Inquisition (Cassar 2005), Thezan's (by 1647) dictionary, the place names in Abela (1647), and Skippon's (1732) word list collected in 1664. On the strength of the evidence provided by 17th-century records, it is shown that: (i) Maltese resorted to three auxiliary vowels – [a], [i] and [o]; (ii) phonological conditioning is less strict than hitherto assumed, with [i] occasionally occurring in a back environment as well; (iii) left-to-right vowel copying also plays a role in determining the quality of the auxiliary vowel, whereby an /o/ preceding a back consonant determines the selection of [o]. Also, it is shown that the findings are compatible with the hypothesis of a direct link between Sicilian Arabic and Maltese.

Keywords: Maltese, auxiliary vowels, back environment, vowel copying

1. Introduction

Modern Maltese exhibits three types of auxiliary vowels¹: prothetic, as in *irġiel* 'men', cf. Arabic *riġāl*; epenthetic, as in *naharbu* '[we] run', cf. **nahrbu* < Arabic *nahrubu*; segolate², as in *ħabel* 'rope', cf. Arabic *ħabl*.

The history of the Maltese auxiliary vowels was discussed in great detail by Borg (1978). In this study, Borg illustrates among others the occurrence in 15th- and 16th-century Maltese of auxiliary vowels epenthesized into word-medial consonant clusters, which include reflexes of the Arabic patterns *aCCaC*, *maCCaC*, *maCCūC* and *CVCCa*. With respect to the quality of the auxiliary vowel, Borg (1978: 223-24) argues that it is phonologically conditioned: [a] in a back environment and [i] elsewhere. On this analysis, then, the auxiliary vowels are in complementary distribution.

The present paper revisits the diachrony of auxiliary vowels in word-medial consonant clusters in Maltese. It also looks at the quality of the auxiliary vowels inserted into word-medial consonant clusters. The findings are also discussed with reference to the hypothesis according to which Maltese might be an offshoot of Sicilian-Arabic.

The corpus of earlier Maltese examined covers a period ranging from early 15th century up to the second half of the 17th century. It consists of: (i) wordlists (Megiser 1606, Skippon 1732) and Thezan's (by 1647) dictionary edited by Cassola (1992);

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¹ Other terms used in the literature on Semitic languages are "secondary vowels" (Speiser 1926), "helping vowels" (Borg 1978).

² Defined as "anaptyctic vowels with two final consonants" (Speiser 1926: 149).

(ii) archival records of the Roman Inquisition in Malta (Cassar 2005); (iii) place names and personal names recorded in notarial documents (Wettinger 1968, 1971, 1972, 1980, 1983) and in Abela (1647).

All examples are reproduced in the transcription used in the sources. When known, the date of the attestation is mentioned. For all the early Maltese forms quoted the Arabic etymon or the Modern Maltese form is provided.

The paper is structured as follows. Section 2 focuses on 15th- and 16th-attestations of forms displaying auxiliary vowels inserted into word-medial consonant clusters. Section 3 is concerned with the survival of auxiliary vowels in word-medial consonant clusters into much of the 17th century. Section 4 discusses the accuracy of transcriptions as well as the occurrence of auxiliary vowels in word-medial consonant clusters in Sicilian Arabic and in Sicilian loanwords from Arabic. Section 5 summarizes the findings.

2. The 15th- and 16th-centuries

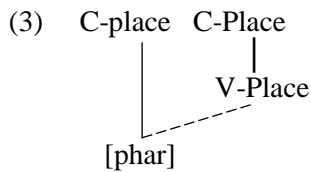
Borg (1978: 22) writes that “notarial documents from the 15th and 16th centuries containing transcriptions of Maltese place-names display the secondary vowels *a* or *i* in medial consonant clusters”. The set of examples under (1) illustrates the occurrence of the auxiliary vowel [a] in a back environment:

- (1) a. mahanuc ‘hoarse’ 1419 (Borg 1978: 22)
cf. Ar. *maḥnūq*
- b. mahaluju ‘ginned (cotton)’ 1473 (Borg 1978: 22)
cf. Ar. *maḥlūġ*
- c. zahara ‘blossom’ 1480s (Borg 1978: 22)
cf. Ar. *zahra*
- d. lachamar ‘the red one’ 1495 (Borg 1978: 22)
cf. Ar. *aḥmar*
- e. talmagalac ‘of the enclosure’ 1500 (Borg 1978: 22)
cf. Mod. M. *tal-maġhlaq*
- f. macahad ilme ‘the place where water collects’ 1504 (Borg 1978: 22)
cf. Ar. *maqṣad*
- g. tal macabar ‘of the cemetery’ 1517 (Borg 1978: 22)
cf. Ar. *maqbar*
- h. machalube ‘overturned’ 1547 (Borg 1978: 22)
cf. Ar. *maqlūba*

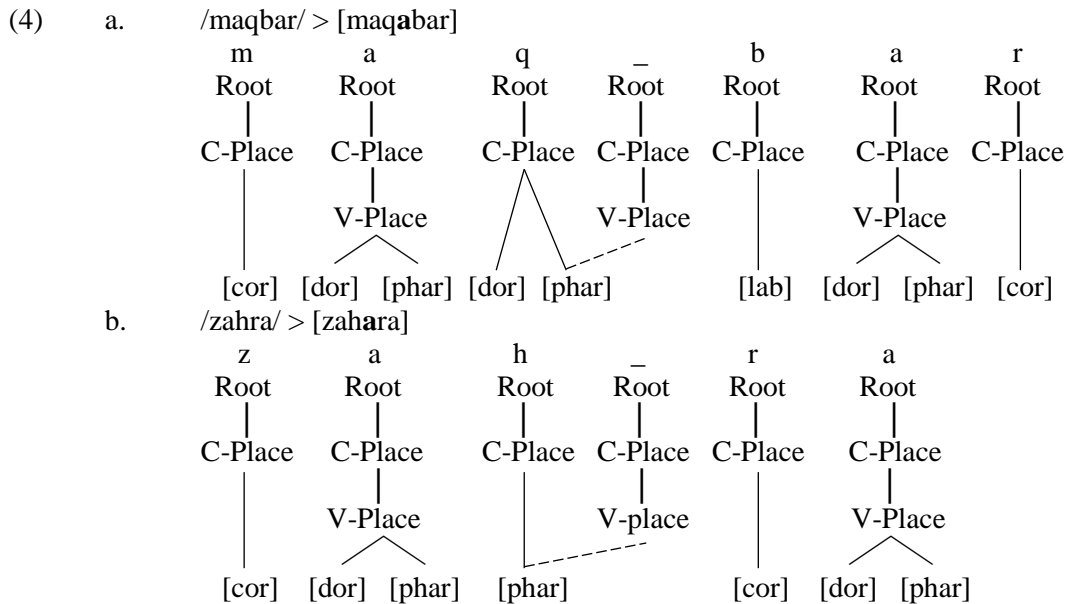
According to McCarthy (1994: 221), the Place node and its dependent features for the uvular stop /q/, the uvular gutturals /χ, ʁ/ and the low gutturals /h, ʔ, ħ, ʕ/ are represented as in (2a), (2b) and (2c), respectively:

- (2) a. uvular stop /q/
 Place
 [dor] [phar]
- b. uvular gutturals /χ, ʁ/
 Place
 [dor] [phar]
- c. low gutturals /h, ʔ, ħ, ʕ/
 Place
 [phar]

Assuming the feature-geometric representations above, the occurrence of auxiliary vowel is [a] can then be analyzed as the spreading of [pharyngeal] (McCarthy 1994, Rose 1996, Padgett 2011):



Below are the feature-geometric representations³ for two of Borg's (1978: 22) examples, where the back consonant is a uvular stop (4a) and a low guttural (4b), respectively

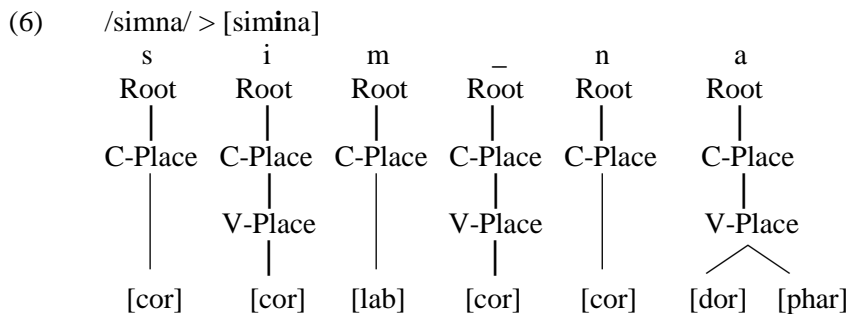


³ Irrelevant structure has been omitted; “_” stands for the epenthetic slot.

In non-back environments, the auxiliary vowel selected is [i]. Consider the following examples:

- (5) a. *simine* ‘fatness’ 1420s (Borg 1978: 22)
cf. Ar. *simna*
b. *misirach* ‘plain’ 1508 (Borg 1978: 22)
cf. Ar. *masraḥ*

Below is a feature geometric representation for one of the examples provided by Borg (1978: 22):



Two other examples given by Borg apparently contain the auxiliary vowel [i]. These are reproduced below:

- (7) a. *chagira* ‘stone’ 1467 (Borg 1978: 22)
cf. Ar. *ḥağra*
b. *mita bir il migilis* ‘of the well at the council chamber’ 1503 (Borg 1978: 22)
cf. Ar. *mitāḥ bīr il mağlis*

It is not clear whether <gi> represents [dʒi] or [dʒ]. In other words, it is not clear whether <chagira> is to be interpreted as [ḥadʒira] or [ḥadʒra] and <migilis> as [midʒilis] or [miğlis]. Given this ambiguity, the forms in (7) are not taken into account.

However, auxiliary vowels in word-medial consonant clusters are more widely attested than assumed by Borg (1978). These are also found in 15th- and 16th-century surnames and nicknames (Avram 2016a, 2016b). Consider the examples below:

- (8) a. *mahaduf* 1419 (Wettinger 1968: 41)
cf. Ar. *mahdūf*
b. *kiticuti* 1419 (Wettinger 1968: 35)
cf. Ar. *katkūt*
c. *gebisa* ‘plaster’ 1467 (Wettinger 1971: 43)
cf. Ar. *ğibsa*
d. *keticuti* 1480s (Wettinger 1968: 35)
cf. Ar. *katkūt*

- e. abidun 1483 (Wettinger 1980: 182)
cf. Ar. *ʕabdun*
- f. Abidilla 1495 (Avram 2016b: 171)
cf. Ar. *ʕabdullāh*
- g. mifisud 1534 (Wettinger 1972: 491)
cf. Mod. M. *Mifsud*
- h. habid nur 1539 (Wettinger 1972: 492)
cf. Mod. M. *Għabid Nur*

Three forms in Megiser's (1606) wordlist also exhibit auxiliary vowels in word-medial consonant clusters. As seen in (9) and (10), respectively, [a] occurs in a back environment, whereas [i] is found elsewhere:

- (9) Lachanat 'we' 1588 (Megiser 1606: 12)
cf. Mod. M. *aħna*
- (10) a. Assirin 'twenty' 1588 (Megiser 1606: 13)
cf. Mod. M. *għoxrin*
- b. Nissitop⁴ '[I] drink' 1588 (Megiser 1606: 11)
cf. Mod. M. *nixrob*

However, *contra* Borg (1978), [i] occasionally occurs in a back environment, as in the following forms:

- (11) a. diar machiluf 1487 (Wettinger 1972: 1487)
cf. Mod. M. *Djar Mahluf*
- b. il mahisel 'the washing place' 1495 (Wettinger 1983: 33)
cf. Ar. *maġsal/maġsil*

3. The 17th-century

The occurrence of auxiliary vowels in word-medial consonant clusters is not limited to 15th and 16th-century Maltese. Two early 17th-century examples of forms displaying auxiliary vowels are found in archival records of the Roman Inquisition:

- (12) a. chasara 'pity' 1601 (Cassar 2005: 75)
cf. Ar. *ħasra* 'grief, sorrow'
- b. machirugia 'brought out-F' 1602 (Cassar 2005: 77)
cf. Ar. *mahrūġa*

Note that the forms in (12) are two other exceptions to the phonological conditioning assumed by Borg (1978). In (12a) the auxiliary vowel [a] occurs in a non-back

⁴ Where <ɒ> should read <ɹ>; see also Cowan (1964: 220).

environment and (12b) illustrates the occurrence of the auxiliary vowel [i] in a back environment.

Ample evidence for the survival into the 17th century of auxiliary vowels in word-medial consonant clusters is provided by Thezan's (by 1647) dictionary⁵, edited by Cassola (1992). Before illustrating the occurrence of auxiliary vowels in medial consonant clusters in entries in Thezan's dictionary, however, a remark is in order with respect to the quality of the vowel spelled <e>. As observed by Hull (1994: 394), "the Arabic short vowel *i* (tonic and atonic) is regularly noted /e/". More recently, van Putten (2020: 62, n. 3) also notes that "in the 17th century dictionary of Thezan, modern Maltese *i* is often spelled with <e>", presumably because "to the ears of the French knight Maltese *i* [i] and e [ɛ] were not easily distinguishable (a contrast absent in French even today)".

Auxiliary vowels in word-medial consonant clusters are attested in a variety of forms⁶. These include nouns, cardinal numerals, adjectives, comparative forms of adjectives, past participles of the 1st form and imperatives.

Consider first some examples of nouns with an auxiliary vowel. As can be seen from the first two sets of examples under (13) and (14), respectively, the distribution of the auxiliary vowels [a] and [i] is in accordance with the phonological conditioning posited by Borg (1978):

- (13) a. naḥala 'bee' -1647 (Cassola 1992: 167r)
cf. Ar. *naḥla*
- b. zaḥara 'blossom'⁷ -1647 (Cassola 1992: 184v)
cf. Ar. *zahara*
- (14) a. ḥafena 'handful' -1647 (Cassola 1992: 144v)
cf. Ar. *ḥafna*
- b. kešera 'bark' -1647 (Cassola 1992: 153v)
cf. Ar. *qišra*
- c. mesera⁸ 'plain' -1647 (Cassola 1992: 163v)
cf. Ar. *masraḥ*
- d. ramela 'sand' -1647 (Cassola 1992: 171v)
cf. Mod M. *ramla* 'sandy beach'
- e. semena ['obesity']⁸ -1647 (Cassola 1992: 174v)
cf. Ar. *simna*

However, one form is an exception to the phonological conditioning. As seen below, the auxiliary vowel is [i] in a back environment:

- (15) mo⁹ere⁹ 'plough' -1647 (Cassola 1992: 165v)
cf. Ar. *miḥrāt*, Mod M. *mohriet*

⁵ See also Avram (2023).

⁶ The date of attestation -1647 reads 'by 1647'.

⁷ Translated as 'flower of the orange tree' by Thezan (Cassola 1992: 184v).

⁸ No translation is provided by Thezan, but see Cassola's (1992: 174v) comments on MS 2587 *semena*.

⁹ Where <⁹> is an error of transcription and should read <ḥ>.

The auxiliary vowel [i] in a non-back environment is attested in the cardinal numeral:

- (16) $\text{er} \text{in}$ ‘twenty’ -1647 (Cassola 1992: 5r)
cf. Mod. M. *ghoxrin*

A few adjectives attest to the selection of [i] as the auxiliary vowel in a non-back environment:

- (17) a. *bekeri* ‘first-born’ -1647 (Cassola 1992: 122v)
cf. Ar. *bikrī*
b. *neserani* ‘Christian’ -1647 (Cassola 1992: 168r)
cf. Ar. *naṣrānī*

In comparative forms of adjectives the distribution of the auxiliary vowels conforms to the one suggested by Borg (1978), i.e. [a] in a back environment, as in (18), and [i] elsewhere, as in (19):

- (18) a. *aḥara* ‘coarse’ -1647 (Cassola 1992: 116v)
cf. Ar. *ʔaḥraš*
b. *kaḥala* ‘dark blue.F’ -1647 (Cassola 1992: 130v)
cf. Ar. *kaḥlāʔ*
(19) a. *ḥamera* ‘red.F’ -1647 (Cassola 1992: 116r)
cf. Ar. *ḥamrāʔ*
b. *ekereḥ* ‘uglier’ -1647 (Cassola 1992: 130v)
cf. Ar. *akrah*
c. *ḥaṣina* ‘thicker F’ -1647 (Cassola 1992: 169v)
cf. Mod. M. *ħoxna*

The auxiliary vowel exhibited by most of the past participles of the first forms is [a] in a back environment, as shown in the examples under (20), but [i] in a non-back environment, as illustrated by the examples under (21):

- (20) a. *maḥazu* ‘dug up’ (Cassola 1992: 158v)
cf. Ar. *maḥzūq*
b. *maḥaluf* ‘pastured’ (Cassola 1992: 158v)
cf. Ar. *maḥlūf* ‘stall-fed, fattened (animal)’
c. *maḥaḥur* ‘compassionated’ (Cassola 1992: 158v)
cf. Ar. *maḥdūr* ‘excused’
d. *maḥaru* ‘burnt’ (Cassola 1992: 159r)
cf. Ar. *maḥrūq*
e. *maḥazur*¹⁰ ‘wring’ (Cassola 1992: 160v)
cf. Ar. *maḥṣūr*

¹⁰ Where <z> should read <s>.

- (21) a. mebelul ‘wet’ (Cassola 1992: 160v)
cf. Ar. *mablūl*
b. mederus ‘threshed’ (Cassola 1992: 161r)
cf. Ar. *madrūs*
c. meseruṣ ‘stolen’ (Cassola 1992: 163v)
cf. Ar. *masrūq*
d. mešerub ‘drunk’ (Cassola 1992: 164v)
cf. Ar. *mašrūb*
e. metelub ‘demanded’ (Cassola 1992: 164v)
cf. Ar. *maṭlūb*

The following past participle, however, displays the auxiliary vowel [o], in a back environment:

- (22) moḡoti ‘given’ (Cassola 1992: 165v)
cf. Ar. *muḡt-*

The auxiliary vowel [o] in (22) can only be accounted for by assuming vowel harmony of the left-to-right (progressive) vowel copying type, whereby the first [o], the reflex of the Arabic stem vowel /u/, triggers the insertion of [o] into the word-medial consonant cluster:

- (23) /muḡt-/ > [moḡoti]
- | | | | | | |
|---------|---------|---------|---------|---------|---------|
| m | o | ḡ | _ | t | i |
| Root | Root | Root | Root | Root | Root |
| | | | | | |
| C-Place | C-Place | C-Place | C-Place | C-Place | C-Place |
| | | | | | |
| | V-Place | | V-Place | | V-Place |
| | | | | | |
| [lab] | [lab] | [phar] | [cor] | [cor] | [cor] |

Since consonants do not have a V-Place, spreading of [lab] does not violate the No Crossing Constraint “Association lines do not cross” (Goldsmith 1976, Hammond 1988).

Consider finally imperative forms of verbs. The first set of examples, under (24) below, illustrates the occurrence of the auxiliary vowel [a] in a back environment:

- (24) a. aḡaleb ‘milk!’ (Cassola 1992: 116r)
cf. Ar. *ḡiḡlib*
b. aḡaleḡ ‘gin [cotton]!’ (Cassola 1992: 116r)
cf. Ar. *ḡiḡliḡ*
c. aḡarab ‘run!’ (Cassola 1992: 116v)
cf. Ar. *ḡiḡrab*
d. aḡaraḡ ‘burn!’ (Cassola 1992: 116v)
cf. Ar. *ḡiḡraq*
e. aḡaraḡ ‘plough!’ (Cassola 1992: 116v)
cf. Ar. *ḡiḡrat*

A second set of forms exhibit the auxiliary vowel [i] in a non-back environment. Illustrative examples are given below:

- (25) a. ebezoq¹¹ ‘spit!’ (Cassola 1992: 129r)
cf. Ar. *ʔubzuq*
- b. eħerob ‘hurt!’ (Cassola 1992: 129v)
cf. Ar. *ʔuħrub*
- c. emela ‘fill!’ (Cassola 1992: 132r)
cf. Ar. *ʔimlaʔ*
- d. eseloħ ‘excoriate!’ (Cassola 1992: 135v)
cf. Ar. *ʔusluħ*
- e. eteboħ ‘cook!’ (Cassola 1992: 137v)
cf. Ar. *ʔuħbuħ*

While forms such as those in the first two sets of examples comply with the distributional pattern posited by Borg (1978), the auxiliary vowel in two other sets of forms is not the one predicted. For instance, in a third set of forms the vowel [i] which is inserted into a word-medial consonant cluster, in a back environment:

- (26) a. aħeleb ‘turn!’ (Cassola 1992: 117v)
cf. Ar. *ʔiqlib*
- b. aħera ‘read!’ (Cassola 1992: 117v)
cf. Ar. *ʔiqrā*
- c. aħeles ‘hurry!’ (Cassola 1992: 118r)
cf. Ar. *ʔuħlus*
- d. aħelaħ ‘close!’ (Cassola 1992: 116r)
cf. Ar. *ʔiħliq*
- e. eħeda ‘cease!; calm down!’ (Cassola 1992: 130r)
cf. Ar. *ʔihdaʔ*

Consider also the fourth set of forms, such as those under (27), some of which are reflexes of Ar. *uCCuC*. As shown below, the auxiliary vowel inserted in a back environment is [o]:

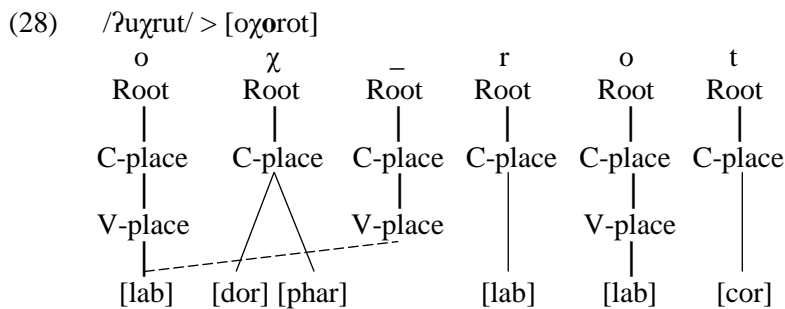
- (27) a. oħolom ‘to dream’ (Cassola 1992: 169r)
cf. Ar. *ʔuħlum!*
- b. oħorot ‘cut completely!’ (Cassola 1992: 169v)
cf. Ar. *ʔuħrut*
- c. oħoros ‘pinch!’ (Cassola 1992: 169v)
cf. Ar. *ʔiħras*
- d. omoħoħ ‘chew!’ (Cassola 1992: 170r)
cf. Ar. *ʔumħuħ*¹²

¹¹ This is another surprising form. On phonological grounds, the expected form would have been **obozoq*, cf. Mod M. *obżoq*.

¹² Barbera (1940a: 676).

- e. oroعوش 'get angry!'¹³ (Cassola 1992: 170r)
cf. Ar. *ʔurʕus*¹⁴

Since the influence of the consonant preceding the auxiliary vowel can safely be ruled out, the occurrence of [o] can only be the outcome of vowel harmony. Forms such as those in (27) appear at first sight to be indeterminate with respect of the directionality of vowel harmony: the occurrence of the auxiliary vowel [o] could be triggered either by the /o/ of the imperative prefix or by the second stem vowel /o/. However, as shown by the forms in (26), the quality of the second stem vowel plays no part in the selection of the auxiliary vowel: regardless of the quality of the second stem vowel, in all these imperative forms the auxiliary vowel is [i], in a back environment. Therefore, the most plausible account seems to be in terms of vowel harmony of the left-to-right (progressive) vowel copying type, illustrated in (28) below, where spreading of [lab] does not violate the No Crossing Constraint since the intervening /χ/ does not have a V-Place:



That left-to-right (progressive) vowel harmony can occasionally determine the quality of the auxiliary vowel is also shown by the past participle form in (23), discussed above.

To conclude, the evidence surveyed shows that auxiliary vowels inserted into word-medial consonant clusters do survive into the 17th century. Table 1 below summarizes the findings only about the comparative form of adjectives, past participles of the 1st form and imperative forms. As can be seen, forms containing an auxiliary vowel constitute a sizable minority in the relevant entries in Thezan's (by 1647) dictionary:

Table 1. Forms with vs. without auxiliary V (Thezan by 1647)

Word class	With auxiliary vowel	Without auxiliary vowel
Adjectives COMPARATIVE	6	7
Past Participles 1 st Form	36	85
Verbs IMP	67	100

¹³ This is a surprising form, which presupposes /o/ as the second stem vowel of the imperfective; in Mod M. the verb is *raġħax*, *jiġħax* and it means 'to blush, to be ashamed'.

¹⁴ Arabic *rašaša/rašiša* means 'to tremble, to shiver'

Two other 17th-century sources provide evidence for the occurrence of auxiliary vowels in word-medial consonant clusters. Consider first the following forms occurring in place names recorded by Abela (1647), which display the auxiliary vowel [a] in word-medial consonant clusters, in a back environment:

- (29) a. L'Aharasc/Laharasc 'the Rugged' (Abela 1647: 25, 61)
cf. Ar. *ʔahraš*
- b. Machadar 'Assembly' (Abela 1647: 258)
cf. Ar. *maḥdar*
- c. Zahara 'Blossom' (Abela 1647: 408)
cf. Ar. *zahra*

Skippon's (1732) wordlist, collected in 1664, also contains several forms displaying auxiliary vowels in word-medial consonant clusters. In two of them [a] is the auxiliary vowel:

- (30) a. chagiara 'stone' 1664 (Skippon 1732: 624)
cf. Ar. *ḥağra*
- b. tachara 'to defecate' 1664 (Skippon 1732: 626)
cf. Ar. *taḥraʔ*

Note that [a] in (30a), in a non-back environment, violates Borg's (1978) conditions on the quality of the auxiliary vowel. Four other forms exhibit the auxiliary vowel [i], in non-back environments:

- (31) a. ascerin¹⁵ 'twenty' 1664 (Skippon 1732: 625)
cf. Mod. M. *għoxrin*
- b. iscirob 'to drink' 1664 (Skippon 1732: 626)
cf. Mod M. *ixrob*
- c. kiscira 'scale' 1664 (Skippon 1732: 625)
cf. Ar. *qišra*
- d. tizira 'plantare' 1664 (Skippon 1732: 626)
cf. Mod M. *tiżra'*

The forms in (30a)–(31c) have been included, since in Skippon's transcriptions <sc> consistently stands for [ʃ]¹⁶; therefore, <sce> or <sci> renders the syllable [ʃi].

¹⁵ Where <e> probably represents [i].

¹⁶ As in *sceluk* 'left', cf. Mod. M. *xellug*, *tisctri* 'to buy', cf. Ar. *tištirī*, *achrasc* 'coarse', cf. Ar. *aḥraš* (Skippon 1732: 625).

4. Discussion

4.1 Accuracy of transcriptions

The data presented in sections 2 and 3 illustrate the occurrence of forms exhibiting auxiliary vowels in word-medial consonant clusters in Maltese, over a period ranging from the 15th century to (at least) the second half of the 17th century.

One issue which might be raised concerns the faithfulness of the transcriptions, given that most of the transcribers were not native speakers of Maltese. Indeed, notaries may have been native speakers of Sicilian, Megiser was a native speaker of German, Thezan was a native speaker of Provensal¹⁷, and Skippon was a native speaker of English. Moreover, Megiser and Skippon certainly spoke no Maltese. Under the circumstances, it is instructive to show, in Table 2 below¹⁸, that a number of such forms are independently attested in two or three sources. This fact constitutes further confirmation of the accuracy of the transcriptions in the sources examined.

Table 2. Forms with auxiliary vowels found in more than one source

Notarial records 15 th -16 th c.	Megiser 1588	Thezan (-1647)	Abela (1647)	Skippon 1664
—	—	شaraح	L'Aharasc/ Laharasc	no auxiliary vowel
—	assirin	شerinع	—	ascerin
—	nissitop	شiroب	—	iscirob
—	—	شeraك	—	kiscira
—	—	شaraخ	—	tahara
—	—	Ezera	—	tizira
zahara	—	Zahara	Zahara	—
misirach	—	meseraه	no auxiliary vowel	—
simine	—	semena	—	—

4.2 Auxiliary vowels in Sicilian Arabic

As put by Isserlin (1977: 20), “that the Arabic of Sicily should have been related to the language spoken in Medieval Malta [...] is a natural assumption”. However, the exact nature of the historical-linguistic relationship holding between these two varieties of Arabic is a matter of dispute.

¹⁷ Joseh Brincat, personal communication, 18 September 2023. See also Cassola (1992: xxx–xxxi).

¹⁸ Where “—” indicates that no corresponding form is attested in the respective source.

The main controversial issues focus on the history of Malta in the wake of the Arab invasion. One view is found in Brincat's (1995), who analyzes an Arab historian's account of two key events. According to Al-Ḥimyarī, after the Arab invasion in 870 "the island of Malta remained an uninhabited ruin" at first, but later, "after the year 440 AH [= 1049–1049] the Muslims peopled [Malta]". Brincat (1995: 22) admits that "whether the community which settled in Malta came from Southern Italy (Apulia?) or Sicily is difficult to establish, due to the lack of written evidence" and states that one should therefore turn to linguistic evidence. Brincat (1995: 22) therefore calls for "a thorough comparative investigation" of Sicilian Arabic and Maltese, but explicitly mentions "the impression that Maltese has stronger contacts with Sicilian Arabic than with any other Arabic dialect". According to Brincat's (1995: 27) categorically formulated conclusion, "the historical and geographical factors now decidedly point to Sicilian Arabic as the basic source of the Maltese language".

A different view is put forth by Agius (1996: 432), according to whom "during the twelfth century Siculo-Christians from Sicily [...] populated the Maltese islands as part of the Norman expansionist policy". Although assuming that an immigration flow took place at a later date and involved a different population group, Agius (1996: 432) reaches a similar conclusion with respect to the origin of the Maltese language: "Maltese [...] is directly linked with the Siculo-Arabic and not with North African dialects".

In addition to historical and demographic arguments, the hypothesis that Maltese is a descendant of Sicilian Arabic certainly needs to be bolstered by linguistic arguments (Isserlin 1977, Avram 2017). In this context, one question which arises is whether there is any evidence for the occurrence of auxiliary vowels in Sicilian Arabic. Several lines of evidence suggest that the answer appears to be an affirmative one.

Illustrated in what follows are examples first from Siculo-Arabic, which was according to Agius (1996: 109), "the hybridization of Arabic and Romance (and to a lesser extent Greek)". The auxiliary vowel [a] in a back environment is found in Siculo-Arabic forms, such as those listed below:

- (32) a. macalubbi 'small volcano of mud' (Agius 1981: 11)
cf. Ar. *maqlūb* 'overturned'
- b. macaluffo/magaluffo 'retribution given to the auctioneer in an auction' (Agius 1981: 10)
cf. Ar. *maḥlūf*
- c. macaluggiu 'cotton cleaned from seeds' (Agius 1981: 10)
cf. Ar. *maḥlūḡ*
- d. macaruqa/macaruca 'barren land' (Agius 1981: 10)
cf. Ar. *maḥrūqa* 'burnt-F'
- e. machadaru 'place where people are assembled' (Agius 1996: 391)
cf. Ar. *maḥḍar*
- f. mahabub[us] 'cotton seed' (Agius 1996: 391)
cf. Ar. *maḥbūb*
- g. rahaba 'court of a mosque or a house' (Agius 1996: 140)
cf. Ar. *raḥba*
- h. zàgara 'flower or blossom of a plant' (Agius 1996: 283)
cf. Ar. *zahra*

The auxiliary vowel [a] occurs in a non-back environment as well, but in a single form, which can thus be viewed as an exception to the phonological conditioning:

- (33) marabbutu ‘hypocrite scoundrel’ (Agius 1981: 11)
cf. Ar. *marbūt*¹⁹

The insertion of the auxiliary vowel [a] in a back environment is also attested in the following personal names:

- (34) a. Machalub 1136 (Metcalf 1999: 75)
cf. Ar. *Mahlūf*²⁰
b. Zàgara (Agius 1996: 283)
cf. Ar. *Zahra*

As for forms exhibiting auxiliary [i] in a non-back environment, these are harder to come by. One such example is attested in Siculo-Arabic:

- (35) michichala ‘large support for a light’ (Agius 1996: 306)
cf. Ar. *maššala*

4.3 Auxiliary vowels in Sicilian loanwords from Arabic

The strong tendency to insert [a] in a historically back environment is also illustrated by the adaptation of Arabic loanwords in Sicilian:

- (36) a. macadaru ‘meeting place for conversation’ (Traina 1868: 548, De Gregorio & Seybold 1903: 239, Sottile 2013: 153)
cf. Mor. Ar. *meçder*²¹
b. macalubba/macalubbu/macalupa ‘small mud volcano’ (Caracausi 1983: 272, Sottile 2013: 145)
cf. Ar. *maqlūb* ‘overturned’
c. macalucu ‘chicken’s milk’ (De Gregorio & Seybold 1903: 239)
cf. Ar. *mahlūq*
d. macaluggiu ‘cotton cleaned of seeds’ (Caracausi 1983: 274)
cf. Ar. *mahlūğ*
e. zàgara ‘flower of orange tree’ (Traina 1868: 1112, De Gregorio & Seybold 1903: 248)
cf. Ar. *zahra*

¹⁹ Kazimirski (1860: 807).

²⁰ That this is the Ar. name transcribed is demonstrated by its occurrence in a later, 1445 copy of the same document as well as by its transcription with Greek letters <μουχλόφ>.

²¹ Harrell (1963: 95).

Rare exceptions can be found, such as:

- (37) marabbutu ‘superstitious, hypocrite’ (Traina 1868: 568)
cf. Ar. *marbūṭ* ‘marabout, ascetic’

Auxiliary vowels are also attested in Sicilian surnames:

- (38) Macaluso (Agius 1981: 10)
cf. Ar. *maḥlūṣ*

Further evidence in support of this claim can be adduced from Arabic loanwords in the Sicilian dialect of Pantelleria²². Generally, [a] occurs in a historically back environment, as in (39), and [i] elsewhere, as in (40):

- (39) a. maccabisu ‘bread baked in a clay pot’ (Ruffino & Sottile 2015: 11)
cf. Ar. *maḥbaz* ‘bakery’
b. macalubbu ‘mud volcano almost at ground level’ (Caracausi 1983: 272, Agius 1996: 391)
cf. Ar. *maqlūb* ‘overturned’
c. makasènu ‘wine factory’ (Brincat 1977: 49)
cf. Ar. *maḥzan*
d. mahalugġu ‘waste raw cotton’ (Staccioli 2015: 208)
cf. Ar. *maḥlūġ*
e. zàgara ‘flower or blossom of a plant’ (Agius 1996: 283)
cf. Ar. *zahra*
- (40) ššitirà ‘lack of squareness of the fabric because of defective weaving’ (Brincat 1977: 54)
cf. Ar. *šatṛ* ‘defect, slit’²³, *šatṛa* ‘partition, division’²⁴

An exception is the exclamation reproduced below, in which the auxiliary vowel [a] occurs in a historically non-back environment:

- (41) hasàra (Brincat 1977: 47), casàra! ‘[it’s a] pity!’ (Staccioli 2015: 213)
cf. Ar. *ḥasra*

One last piece of evidence is provided by place names of Arabic origin in Pantelleria:

- (42) a. Dakhalè ‘entrance’ (Staccioli 2015: 197)
cf. Ar. *daḥla*
b. Triknakhale ‘road of the palm tree’ (De Gregorio & Seybold 1901: 238)
cf. Ar. *ṭarīq al-naḥla*

²² Which has an unusually high number of borrowings from Arabic.

²³ Aquilina (1990: 1550).

²⁴ Barbera (1940b: 1131).

5. Conclusions

The findings of the present paper can be summarized as follows.

Auxiliary vowels in word-medial consonant clusters are attested in earlier Maltese reflexes of a variety of reflexes of Arabic patterns, including *aCCaC*, *maCCaC*, *maCCūC*, various other noun patterns and imperatives. Such vowels are documented over a period ranging from the 15th century to (at least) the second half of the 17th century.

Earlier Maltese resorted to three auxiliary vowels to break up word-medial consonant clusters – [ɪ], [a], and [o], *contra* Borg (1978: 21), who only mentions the first two. The auxiliary vowel [a] is preferred in back environments, whereas [ɪ] occurs mostly in non-back environments. Phonological conditioning is therefore less strict than assumed by Borg (1978). Attested in several forms, [o] is the outcome of vowel harmony of the left-to-right (progressive) vowel copying type, i.e. the /o/ in the preceding syllable determines the selection of [o] as the auxiliary vowel. Therefore, in addition to the type of word-medial consonant cluster (Borg 1978: 21), vowel harmony of the vowel copying type also plays a role in determining the quality of the auxiliary vowel.

The epenthesis of auxiliary vowels into word-medial consonant clusters is also attested in Sicilian Arabic as also evidenced by Arabic loanwords in Sicilian. This finding is therefore compatible with the view that Maltese might be a descendant of Sicilian-Arabic.

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