



The Treatment(s) of *-*u*- after a Coronal in Oscan: Dialect Variation and Chronology

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Abstract

The evidence for the treatment in Oscan of *-*u*- after a coronal is examined. In the areas which use the Oscan alphabet (Campania and Samnium), this has become [iu]; in the areas which use the Greek alphabet (Lucania and Bruttium) it has become [y]. Contrary to previous assumptions, there is evidence for a change to [y] in the Latin-alphabet Tabula Bantina from Lucania, since the $\langle i \rangle$ in the forms *petiropert* 'four times' and *manim* 'hand' is most easily explained as coming directly from *-*u*-. Evidence from both relative and absolute chronology shows that this difference must be a dialectal rather than a chronological split between Campania-Samnium and Lucania-Bruttium, since the different reflexes of *-*u*- are already in place by the time of our earliest evidence, and are maintained throughout the history of Oscan.

Keywords

Oscan - variation - dialects - alphabets - historical phonology

1 Introduction

Compared to the question of the relationships between the Sabellic languages (on which see lately Clackson 2013, with copious references), rather less atten-

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tion has been devoted to the question of the identification of dialect variation within the individual languages; no doubt this is due to the relative paucity of our evidence for the languages, and because, where variation can be identified, this is often due to development over time (e.g. between the Umbrian of the Iguvine Tables I–V, and that of Tables V–VII). Nonetheless, Adiego Lajara (1992: 20–21, 78–79) and Weiss (1998: 708) argue for the existence of dialects in South Picene, and Rix (1996) has identified a range of possible dialect-based differences in Oscan. Oscan is a particularly fertile source for evidence of dialectal variation, because there is a relatively large amount of evidence spread over a wide geographical area (ancient Campania, Samnium, Lucania, Bruttium and Sicily).

In this article I examine the development of inherited *-*u*- after a coronal in Oscan, and in particular its treatment in the Latin-alphabet Tabula Bantina. I suggest that, contrary to previous claims, there is evidence for a change to *-*u*-after a coronal in the Tabula Bantina, which suggests that it had developed to [y] as in the Oscan spoken elsewhere in Lucania and Bruttium. Both spelling evidence from the Tabula Bantina, and evidence from the relative chronology of sound changes, suggest that there was a dialectal difference in the treatment of *-*u*- after a coronal; this became [y] in Lucania and Bruttium, while it developed to [iu] in Campania and Samnium (perhaps via a stage [y]).

2 Evidence from the Oscan and Greek Alphabets

Inscriptions in both the Oscan and Greek alphabets suggest that a particular change affected *-*u*- after a coronal consonant¹ (Buck 1928: 40; García Ramón 2011: 124).² In the Oscan alphabet, used in Campania and Samnium, this development is shown by the spelling (**iu**), as found in **eítiuvam** (Pom-

¹ The change is attested after [t], [d], [n] and [s]; presumably it also took place after [r], but the only examples are ερουχ(ι)η(ι)ς (Crimisa 1/Lu 23) < *erukio- and αρροντιες (Potentia 44/tLu 1) < *arruntiio-, whose spellings are ambiguous (see below). Sabellic inscriptions are given first the numeration of Crawford et al. (2011), followed by that of Rix (2002), except for Umbrian forms from the Iguvine Tables (IT), which are not included in Crawford's edition, and inscriptions which are in Crawford's edition and not in Rix's.</p>

² According to Lejeune (1970: 296–297), this did not apply to *-*u*- in final syllables, because $[o] < *-\check{o}$ - and $[u] < *-\check{o}$ -, *-*u*- fell together in final syllables in an archiphoneme with a realisation [u] (Lejeune 1970: 301–305). However, the existence of **pettiur** < **k*^wetur suggests that the change did occur in final syllables. Although the context is broken, there is no reason to assume, with Lejeune, that **pettiur** is an abbreviated form.

peii 24/Po 3), eítiuvad (Pompeii 16/Po 16, Pompeii 21/Po 3, Pompeii 24/Po 4), eítiuy[ad] (Pompeii 23/Po 14) 'money' < * $eituua\bar{a}$ -; pettiur (Aufidena 1/Sa 17) 'four' < *kwetur; siuttiis (Pompeii 13/Po 1) < *suttiio- (gentilicium); últiumam (Capua 22/Cp 31) 'last' < *oltumo-; and, most abundantly, the name [n]iumsis, niumsieís (Nola 3/Cm 6), niumsis (Cumae 8.2/Cm 14) < *numVsio-, once abbreviated to niu (Abellinum 9) and very frequently to ni,³ and its derivative niumediis (Bouianum 116/Sa 27; corrected from niumeriis in the written copy of this inscription, which is all that remains). The $\langle u \rangle$ in [n]iu(mseís) (Cumae 4/Cm 9), if this word is correctly read and restored, is presumably a mistake for $\langle u \rangle$. The same development is also suggested by the form vioµ σ δiηiς < *numVsVdiieis in Messana 4/Me 1 & 3 and Messana 5/Me 2.⁴ The most plausible explanation for this spelling is that it represents [iu], with a glide having developed after the coronal consonant.

Von Planta (1892–1897: 1.125–128) takes the spelling $\langle iu \rangle$ to represent [y]. As we shall see shortly, [y] is certainly the result of *-*u*- after a coronal further South, but $\langle iu \rangle$ must have represented [iu] at some point at least, because the geminate $\langle tt \rangle$ in **pettiur** was caused by a following [i] (as noted by Lejeune 1970: 268; on this gemination see Buck 1928: 99). Von Planta's only good evidence for the development to [y] is the use of just $\langle i \rangle$ in **eitiv**(**ad**) (Aufidena 2/Sa 18, c.125–100 BC).⁵ For this form one could think of a late secondary development of

³ Bouianum 3/tSa 1, Bouianum 14/tSa 11, Bouianum 107/Sa 33, Capua 7/Cp 16, Capua 14/Cp 26, Italia 1.410, Pompeii 11/Po 7, Pompeii 12/Po 2, Pompeii 24/Po 51, Pompeii 30/Po 45, Pompeii 34/Po 40, Pompeii 53/Po 47, perhaps Pompeii 62/Po 61, Pompeii 63/Po 59, Pompeii 88, Pompeii 101/tPo7, 8, 9, Pompeii 117/tPo 10, 11, Pompeii 130/tPo 23, 6, Stabiae 5, Teanum Sidicinum 21/Si 12, Teanum Sidicinum 22/Si 11, **n** (Teruentum 36/Sa 2), *ni* (Larinum 2/Fr 3).

⁴ We know that Messina was taken over in the early 3rd century BC by Oscan-speakers from Campania or Samnium. The spelling with $\langle \upsilon \rangle$ rather than $\langle \upsilon \rangle$, which (along with $\langle o\upsilon \rangle$ and $\langle o \rangle$) is normal elsewhere in Greek-alphabet inscriptions is probably due to the influence of Oscan-alphabet orthographic habits (Zair forthcoming: Chapter 4).

⁵ The other pieces of evidence for a value [y] proposed by von Planta are not reliable. The (i) of Oscan n[e]ssimas (Capua 17/Cp 35), nessimass (Capua 22/Cp 31) 'nearest' cannot be the result of *-u-, because we also find (i) in Umbrian *nesimei* (IT VIa 9); in Umbrian, *-u- after a coronal is not affected in the same way as in Oscan, so this shared development must have another explanation (see Nishimura 2012: 381–386). According to von Planta, *sim* 'I am', in the Palaeo-Oscan inscriptions Saticula 1/Cm 22, Saticula 2/Cm 26, Saticula 3/Cm 25, Saticula 4/Cm 24, Saticula 5/Cm 23 comes from **sum* < **som*, which is the result of raising of unstressed *-*o*- to *-*u*- before *-*m*. But we do not find the change in suveís (Abella 1/Cm 1 A.9, B.9), suvad (Pompeii 16/Po 16), suv(ad) (Pompeii 17/Po 17) 'his/her' < **souo*-, beside súvad (Aufidena 2/Sa 18), súv(ad) (Teruentum 9/Sa 16), in which the variation (u) and (ú) is also due to unstressed raising. Since the raising caused by lack of stress in suveís etc. did not feed the glide-insertion

[iu] to [y], at least in some places, but a mistake or an abbreviation seem more likely. In the form **perisstu**[leís] (Abella 3/Cm 3) 'of the peristyle', borrowed from Gk. $\pi\epsilon\rho(\sigma\tau\upsilon\lambda\sigma\nu$, the $\langle u \rangle$ is in fact written Y, i.e. a Greek $\langle \upsilon \rangle$.⁶ Presumably this suggests an attempt to render Attic-Ionic (koine) [y] in this late loan word, implying that [y] was not a part of the Campanian Oscan phonemic system at the date of this inscription (around 100 BC, according to Crawford et al. 2011: 894).

The spelling with $\langle iu \rangle$ is also found in words borrowed from Greek: these are **diumpaís** (Teruentum 34 A.7, B.9/Sa 1) 'to the nymphs' \leftarrow Doric Greek νύμφā and **tiurrí** (Pompeii 2/Po 34, Pompeii 3/Po 35) 'tower' \leftarrow Greek τύρσις or τύρρις. There are several possible explanations for this:

In the case of $\nu \dot{\nu} \mu \phi \bar{\alpha}$, the vowel in the first syllable would have had the same value [u] as in Oscan (Buck 1910: 25–26), and been treated in the same way. If **tiurrí** was borrowed from an Ionic dialect, this vowel would have been [y]. If Oscan had no [y] at the time, this could have been borrowed as Oscan *-*u*-, which subsequently developed to [iu] after a coronal along with inherited *-*u*-; or it could have been borrowed directly as [iu], in attempt to reflect both the frontedness and roundedness of [y]. If *-*u*- became [y] after a coronal in the North as in the South, before further developing to [iu] in the North (for which see the next paragraph and section 5), the words could have been borrowed at the stage when Oscan had [y], and then Greek and Oscan [y] were subsequently treated in exactly the same way.

In the area using the Greek alphabet outside Sicily, i.e. Lucania and Bruttium, it seems that *-*u*- after a coronal became [y], as demonstrated by the use of $\langle \upsilon \rangle$ in $\sigma \upsilon \pi$ (Metapontum 1/ Lu 37) 'under' < **sup*, the divine names/epithets $\upsilon \upsilon \psi \Diamond \delta \upsilon (\times 2)$, $\upsilon \upsilon [\mu \psi \delta \alpha \upsilon \alpha \iota]$ (Potentia 20/Lu 28) < **numVsVd*-, and the name $\upsilon \upsilon \upsilon \psi \psi$ $\psi \iota \omega$ (Teuranus Ager 1/ Lu 43); in Oscan inscriptions using the Greek alphabet, this sound could also be spelled with $\langle \upsilon \upsilon \rangle$ or $\langle \upsilon \rangle$, which are the usual spellings for [u] (< *-*u*- in other contexts, and *- \bar{o} -): the examples are the names $\tau \upsilon \upsilon \rho \varepsilon \iota \varepsilon \varsigma$ (Vibo 7/tLu 7) < **tureio*- and $\upsilon \upsilon \psi \upsilon (\times 2)$, $\upsilon \upsilon \psi (\iota) \alpha(\upsilon)$ (Laos 2/Lu 46), $\upsilon \omega \psi \upsilon \varsigma$ (Thurii Copia 1/Lu 47) < **numVsio*- (Zair forthcoming: Chapter 4). The further possibilties of explaining the apparently different reflexes of *-*u*- in the Oscan-alphabet and Greek-alphabet inscriptions will be postponed until after discussion of the evidence from the Latin alphabet.

rule, *sim* may reflect a separate development in these inscriptions (Joseph & Wallace 1987: 690; Rix 1996: 252; Mancini 1997).

⁶ I am grateful to James Clackson for pointing this form out to me.

3 Evidence from the Latin Alphabet

Since the evidence from both the Oscan- and Greek-alphabet inscriptions suggests a development of *-u- to either [iu] or to [y], it would be strange if the same feature were not found in the Oscan of the Tabula Bantina, which is an inscription from Bantia in Northern Lucania dating to the early 1st century BC.⁷ As noted by Buck (1928: 40), the frequent word for 'money' in the Tabula Bantina is eituam, eituas (Bantia 1.9, .13, .18, .19, .27/Lu 1), not xeitiua-, as might be expected on the model of eitiuva-. However, if the Tabula Bantina underwent the development to [y] which we find elsewhere in Lucania, the absence of the spelling (iu) would not be particularly surprising. In fact, I would argue that there is some evidence for precisely this development, which consists of the two words manim (Bantia 1.24/Lu 1) 'hand' and petirupert, petiropert (Bantia 1.14, 15/Lu 1) 'four times'.⁸ As shown by Latin *manus*, -ūs, South Picene abl. pl. manus (Asculum Picenum 2/AP 2), Umbrian abl. sg. mani (IT IIa 32), mani (IT VIb 24), loc. sg. (with postposition *en) manuve (IT IIb 23) we would expect manim to be the accusative of a u-stem, and to go back to *manum.9 The usual explanation for unexpected -im in this word is due to levelling from the ablative, where *-*ūd* gave -*id* regularly, as demonstrated by *castrid* (Bantia 1.8/Lu 1) 'head (?)' (Buck 1928: 132, followed by e.g. Bottiglioni 1954: 117, Wallace 2007: 20–21 and Tikkanen 2011: 41). Exactly what *-id* represents is not entirely certain: some scholars maintain that $-\bar{u}$ -became $[\bar{1}]$ in Oscan in some contexts, but remained $[\bar{u}]$ elsewhere; others recognise a development of *- \bar{u} - to $[\bar{y}]$ everywhere, ¹⁰ which could be written with $\langle u \rangle$ or with $\langle i \rangle$ in the Oscan alphabet, and which was written with (i) in *castrid* (Buck 1928: 41; Meiser 1986: 53; Seidl 1994: 349-351; and see Martzloff 2006: 116-117). Apart from *castrid*, the evidence is extremely slim, consisting only of fruktatíuf (Abella 1 A.21/Cm 1) 'produce' < **b^hrūg*- and **tiium** (Capua 34/Cp 37), **tiú(m)** (Saepinum 2/Sa 31) 'you' < **tū-om*. If the change were to [1], this would provide an additional reason for the generalisation of the vowel of -id to the accusative singular in *-um, since this would set up a closer parallel with the *i*-stems, which also had an ablative in -*id* and an accusative in *-im* (Poccetti 2002: 50-52, who sees this development as affecting both Oscan and Umbrian). Such a possibility cannot be denied, but if

⁷ On the date of the Tabula Bantina see Crawford (1996: 274–276).

⁸ The second vowel of *petirupert, petiropert* would normally be expected to have been lost by syncope; presumably it was restored by analogy with **pettiur**.

⁹ Umbrian also has acc. pl. **manf** (IT IIA 38), with a consonant stem ending (if not a mistake for **manuf**; Untermann 2000: 450).

¹⁰ In non-initial syllables this $[\bar{y}]$ would have been shortened to [y] (see Section 4).

the *u*-stem acc. sg. in *-im* were due to analogy with the *i*-stems, it is peculiar that this analogy did not affect the gen. sg., as shown by *castrous* (Bantia 1.3/Lu 1). Since the *i*-stem gen. sg. in *-eis* was also shared with the *o*- and consonant stems, we might expect that if remodelling of the *u*-stems had occurred, it would have affected the gen. sg. as well as (if not before) the acc. sg.

The alternative possibility would be to see the $\langle i \rangle$ of *manim* as reflecting the regular result of *-u- after a coronal elsewhere in Oscan, as proposed by von Planta (1892-1897: 1.125-126, 2.158-159). Such an interpretation would also have the advantage of explaining the other attested accusative singular of this word, which is usually read µavoµ (Buxentum 1/Lu 62; thus Crawford et al. (2011) and all previous editions). However, having examined the inscription (Soprintendenza per i Beni Archeologici di Salerno Avellino Benevento e Caserta, Salerno, 11/04/2012), I conclude that the existence of the final $\langle \mu \rangle$ is extremely doubtful, notwithstanding the comment "[l]eft-hand hasta only of final µ visible" (Crawford et al. 2011: 1330). The broken edge of the tablet occurs shortly after the (0) of μανο[, and runs through a circular flaw in the bronze, of a sort that occurs elsewhere on the tablet (e.g. on side B.4, above the $\langle \alpha \rangle$ of $\alpha \upsilon \tau$, and B.5, just before]ις); this is visible on the photographs in Crawford et al. (2011) and earlier editions, and is not the "hasta" seen by Crawford et al. (2011). Just below the flaw is the end of a thin line running diagonally upwards from left to right, which is presumably the "hasta". However, this line is much more lightly scratched than the other letters, and only visible in certain lights, and in my view is just as likely to be a flaw or the result of the damage inflicted on the tablet when it was broken. As described above, in the Greek alphabet, [y] can be spelled the same as [u] (i.e. as (ov) and (o)), and in Buxentum 1/Lu 62, (ov) is the usual way of spelling [u]. Consequently, for this word I would read μανο[υμ], which would follow the usual spelling conventions of this tablet and the Greek alphabet inscriptions more generally. If one reads $\mu\alpha\nu\sigma[\mu]$, it is necessary to posit two sources for the Oscan forms: either an i-stem for manim and a consonant-stem for $\mu\alpha\nu\sigma[\mu]$ (which at least has the support of Umbrian manf),¹¹ or separate analogical generalisations of the *i*-stem and *o*-stem accusative singular endings respectively, as assumed by Poccetti (2002: 51, and passim). The reading μανο[υμ] has the great advantage of allowing both it and *manim* to represent a single form [manym] from the *u*-stem which is the best-attested noun-class for this word in Italic.¹²

¹¹ I am grateful to an anonymous reviewer for pointing out that $\mu\alpha\nu_0[\mu]$ could be a consonant stem.

¹² In fact, even if $\mu\alpha\nu\rho\mu$ were the correct reading, this would not necessarily rule out

As for *petiropert*, *petirupert* 'four times', these are clearly to be analysed as the neuter plural of **pettiur** 'four' (Aufidena 1/Sa 17) followed by *-pert* 'times'. One explanation for the spelling of the vowel of the second syllable with $\langle i \rangle$ is that *petiropert* reflects a preform **petrițā* > **petirițo* > **petirço* > **petirro* (Thurneysen 1893: 565 fn. 3; Buck 1928: 52, 66, 139). But motivating such a form turns out to be rather an involved business. First of all, it has to be assumed that **peturā* was remodelled to **petrițā* after **trițā* 'three', which is not attested in Oscan (although reconstructed in $\tau \rho \iota [o\pi \epsilon \rho \tau]$, Buxentum 1 A.3/Lu 62), but is found in Umbrian **triia** 'three' (IT IV.2), **triiuper** (e.g. IT Ib.21) 'three times'. Then, after the usual Oscan anaptyxis to give **petirițo*, **-ițo* has to become **-țo* in a more or less *ad hoc* development,¹³ before **-ți*- is lost after *-r*- (a development for which there is some evidence in Oscan; cf. **víkturraí** Teruentum 20/Sa 24 < Lat. *Victoria*). A far more straightforward approach is simply to accept that *petiropert*, *petirupert* is the regular result of **peturā*- > [petyro-] (von Planta 1892–1897: 1.126).

If *manim* and *petiropert*, *petirupert* are correctly analysed as containing [y], which seems much simpler than the alternative proposals, how are we to understand the spelling of *eitua*- with a $\langle u \rangle$? There are two possible explanations. The first is that both $\langle u \rangle$ and $\langle i \rangle$ are being used to represent [y] as the reflex of *-*u*- after a coronal. This would be because, in the absence of a letter $\langle y \rangle$ in the Latin alphabet (not yet borrowed from the Greek alphabet), the writer of the Tabula Bantina did not have a separate letter to represent this sound, and chose whichever of $\langle i \rangle = [i]$ or $\langle u \rangle = [u]$ sounded to him closer to

[[]manym]. Firstly, the scribe could have simply missed out $\langle \upsilon \rangle$ (there are several other mistakes in this tablet). Secondly, as already noted, $\langle \circ \rangle$ is also attested as a spelling for [y] in other inscriptions, and consistency in spelling is not a characteristic of this tablet (the Oscan vowel [e] is spelled $\langle \varepsilon \rangle$, $\langle \varepsilon \iota \rangle$ and $\langle \iota \rangle$). Although there are a large number of instances of $\langle \upsilon \upsilon \rangle$ for [u] in what remains of Buxentum 1/Lu 62, this does not rule out the possibility that $\langle \circ \rangle$ was also used: it may simply be a coincidence that the fragment that we have happens to present a large number of uses of $\langle \upsilon \upsilon \rangle$. Indeed, there may be an example of the use of $\langle \circ \rangle$ for [u] in $\rho \varepsilon \varkappa \circ \varsigma$ (Buxentum 1 B.5/Lu 62), whose context suggests comparison with $\langle f \rangle acus$ of the Tabula Bantina (Bantia 1.30/Lu 1) (Poccetti 2002: 59–63). Poccetti tries to explain the form $\rho \varepsilon \varkappa \circ \varsigma$ as reflecting [-os] by means of a highly implausible series of analogical remodellings, but if $\rho \varepsilon \varkappa \circ \varsigma$ is rightly compared with *facus*, it is far more likely that this is simply to be seen as an example of the use of $\langle \circ \rangle$ for [u] in this inscription.

¹³ The sequence *-*iiV*- was reduced to *-*iV*- in Oscan, but at a far earlier stage (the development is shared with Umbrian, and took place prior to final syncope, which is also a shared feature with Umbrian; Buck 1928: 66–67; Meiser 1986: 63). Hence Buck's description of the proposed development of **petirijo* > **petirijo* as "a local change of vocalic *i*" (Buck 1928: 67); it is not clear that the same change can be seen in *zicolom* 'day' < **dijēkelo*- < **dijē-kelo*-, as implied by Buck: see Untermann (2000: 868–869) and Rix (2004: 496–497).

[y] at the time (hence perhaps according to very fine-grained differences in the realisation of [y] in different phonetic contexts).¹⁴ Thus, the preference for $\langle u \rangle$ in *eitua*- might be due to a slightly more back realisation of [y] caused by the following back vowel.¹⁵ An alternative possibility is that the Oscan of the Tabula Bantina went through a stage *-*iu*-; in the sequence [eitiua], the second [i] was dissimilated (i.e. misinterpreted as the result of a progressive palatalisation caused by the first [i], and removed by hypercorrection; for this process see Ohala 2003: 677–680).¹⁶ If this were the case, it would be evidence for the development of *-*u*- after a coronal to [iu] in all of Oscan, with a subsequent change to [y] in the South, including the Tabula Bantina. A development of this sort cannot be ruled out, but, as discussed in Section 5, the evidence of relative and absolute chronology seems to me to suggest the opposite order: of *-*u*- to [y] everywhere, followed by a development to [iu] in the North.

4 Relative and Absolute Chronology

Relative and absolute chronology suggest that the change of *-*u*- after a coronal was fairly early in the pre-history of Oscan. In Oscan, *- \bar{o} - and *-*u*- fell together in quality to give [\check{u}], and at some point it seems likely that distinctions of vowel length were lost outside initial syllables in Oscan, which had taken place at least by about 300 BC (Lejeune 1975: 244–245).¹⁷ However, the spelling (iu) is never found after a coronal followed by original *- \bar{o} -, even in a non-initial syllable, e.g. **regatureí** 'ruler' (Teruentum 34 A.12, B.15/Sa 1) < **regatōr*-, **líkítud** (Abella 1 B.10–11/Cm 1) 'it is permitted' < **likētōd*. Consequently, we can deduce that *-*u*-had already begun to change before loss of vowel length in non-initial syllables.

¹⁴ If *- \bar{u} - gave $[\bar{y}]$, this is paralleled by the use of both $\langle i \rangle$ and $\langle u \rangle$ in the Oscan alphabet. One could also compare the spelling with $\langle u \rangle$ and $\langle i \rangle$ of vowels in non-initial syllables before labials in Latin in forms like *optumus*/*optimus*, although in this instance these vowels had probably become [ə] (Weiss 2009: 118).

¹⁵ I owe this suggestion to an anonymous reviewer.

¹⁶ This ingenious suggestion is also owed to an anonymous reviewer.

¹⁷ The evidence for this claim consists of the fact that we almost never find double writing of vowels to mark length outside initial syllables. There are three exceptions: trístaamentud (Pompeii 24/Po 3) is an adapted loan-word from Latin; in αfααματεδ (Potentia 9/Lu 6), αfααμα[τεδ] (Potentia 10/Lu 7), the long vowel is presumably analogical on the simplex faamated (e.g. Pompeii 2/Po 34). The shortening may have taken place much earlier than 300 BC, but it can only be identified once the custom of using double letters to represent long vowels begins. Our earliest instance of double letters for long vowels is perhaps fiis[ias] (Capua 7/Cp 16), which is dated to 325–300 BC.

Our inscriptional evidence backs up this claim to an early change, and allows us to be more precise about the date. The earliest usage of $\langle v \rangle$ in Oscan written in the Greek alphabet is $\sigma \upsilon \pi$ (Metapontum 1/Lu 37), which belongs to c. 400– 375 BC, while $\langle iu \rangle$ is already in use in **niumediis** (Bouianum 116/Sa 27, c. 325 BC) and the abbreviation **ni** is already found in the *iúvila* inscriptions which use the unreformed alphabet and hence belong to before c. 300 BC (Capua 7/Cp 16, Capua 14/Cp 26). On the other hand, we do not find (iu) in supruis, supr[us (Capua 34.7, .10/Cp 37) 'above' < *supro- (cf. Latin super 'above'),¹⁸ which is to be dated early since it uses the unreformed Oscan alphabet; its consistency in avoiding double letters for geminate consonants and long vowels also suggests an early date (Buck 1928: 100).¹⁹ It seems possible that the adoption of (iu) to spell [iu] after a coronal may have taken place towards the end of the fourth century BC (or a little before, given the establishment of ni as the standard abbreviation for **niumsis** by this time). The absence of $\langle iu \rangle$ in Capua 34/Cp 37 would then be an 'old-fashioned' feature of the orthography of this inscription, along with the absence of double letters.²⁰

¹⁸ Possibly also in turumiiad, whose etymology and meaning are, however, very uncertain (Untermann 2000: 778).

¹⁹ This inscription is dated by Crawford et al. (2011) to 200–150 BC, on the basis of Bücheler (1878: 74–76). According to Bücheler the archaeological evidence does not allow a dating prior to the third century BC. If this dating is reliable, we should posit a date as early as possible in the third century, i.e. around or just after 300. Bücheler's attribution of the inscription to the first half of the second century rests on very dubious assumptions about its linguistic idiosyncracies, and cannot be relied on.

The use of $\langle \mathbf{u} \rangle$ for $\langle \mathbf{iu} \rangle$ may have continued as a possibility, on the basis of \mathbf{sup} (Teanum Sidicinum 34/Si 1b, 150–100 BC). This may come from "*sup* (cf. $\sigma \upsilon \pi$, Lat. *sub*), but this inscription consists of several broken blocks of badly damaged tufa, with numerous natural holes. Consequently, the identification of \mathbf{sup} as 'below' cannot be confirmed by context, and it may instead be part of a longer word \mathbf{supi} [. A preform "*sop*- therefore cannot be ruled out. On the basis of the photographs in Crawford et al. (2011: 572) it also seems at least possible that $\langle \mathbf{u} \rangle$ should be read $\langle \mathbf{u} \rangle$ (there is an off-centre hole above the $\langle \mathbf{u} \rangle$, which looks much the same as that which forms part of the $\langle \mathbf{u} \rangle$ in the preceding \mathbf{trij}] \mathbf{b} \mathbf{un}). In this case, \mathbf{sup} (recte \mathbf{sup}) would be the beginning of a word "*sop*-. The divine name or epithet fatuveís (Aeclanum 1/Hi 6) probably does not show $\langle \mathbf{u} \rangle$ for $\langle \mathbf{iu} \rangle$. It comes from Proto-Italic "*fa-teu-o*-> Proto-Sabellic "*fatouo*- (Untermann 2000: 268; de Vaan 2008: 205), with raising of "-o- to [u] in a non-initial syllable followed by a labial (Buck 1928: 55–57; Nishimura 2012: 381–386).

5 Evidence for Dialect Variation

The identification of [y] < *-u- after a coronal in the Tabula Bantina suggests a dialectal connection with the Oscan spoken elsewhere in Lucania and Bruttium, which had [y] already in the early fourth century; while in Samnium and Campania we only have good evidence for [iu]. One of the explanations for the use of $\langle u \rangle$ in *eitua*- discussed in Section 3 implied that [y] in Lucania and Bruttium was a later development of the [iu] attested in Campania and Samnium, and this is the development assumed by Lejeune (1970: 296–299). However, it is equally plausible that [y] should be a primary development of *-*u*- after a coronal;²¹ the development to [iu] in Campania and Samnium only could then be a later change from [y], or it could be that the fronting effect on *-*u*- after a coronal had different realisations in the two areas. The evidence available to us does not allow us to distinguish between these scenarios with certainty, but in my view it is more likely that there was no stage [iu] in the South, so that [iu]in the North is either a secondary development of [y], or there was a dialectal difference in realisation of the result of fronting of *-*u*-.

This is suggested by the evidence of fronting of *-*u*- to [y] in Lucania by c. 400–375 BC (which was still in existence in the Tabula Bantina in the early 1st century BC); by comparison, the old-fashioned spelling with $\langle u \rangle$ was still possible in Campania around the beginning of the third century, which suggests that the development to [iu] had taken place not too long before (the spelling $\langle iu \rangle$ is found in Samnium around 325). If the change were *-*u*- > [iu] everywhere, it would have to have taken place early in the 4th century, and the further development to [y] in Lucania would have to have taken place very quickly indeed.

Relative chronology in the Tabula Bantina also shows that there was a dialectal divide in the treatment of *-*u*- after a coronal. In the Tabula Bantina, the sequence *-*ti*- normally appears written with $\langle s \rangle$, as in $\langle b \rangle$ *ansae*, *bansae*, *bansa*[*e*] 'at Bantia (loc. sg.)' (Bantia 1.19, .23, .31/Lu 1) < **bantiāi*, presumably due to palatalisation followed by assibilation of the *-*t*-. A similar assibilation also affects *-*ki*-, as demonstrated by *meddixud* (Bantia 1.13, 21/Lu 1) 'magistracy (abl. sg.)' < **meddikiād*. This development can be seen as the (diachronic or dialectal) next step from gemination (and perhaps already palatalisation) of

Fronting of vowels in the vicinity of coronals is common cross-linguistically (Hume 1994: 8–12, 214–226; Flemming 2002: 66–81, 2003: 348–352). The restriction of fronting to *-*u*is presumably due to the fact that high vowels are intrinsically shorter than mid and low vowels (Keating 1985: 118–120), and hence the perceptual cues to backness were reduced more in *-*u*- than in *-*o*-. Alternatively, one might see this process in terms of phonological space, with fronting being more easily perceptible in the higher vowel (Ronald Kim, p.c.).

*-t- before -i- in examples like mamerttiais (Capua 25/Cp 30), úíttiuf (Abella 1 B.14, .17/Cm 1). In *petiropert*, *petirupert* and *eitua*-, clearly no such assibilation has taken place (and hence presumably no palatalisation) before *-u- after a coronal. This data is susceptible to two possible explanations. If *-u- had developed to [iu], we would expect *petur- > *petiur- > *pettiur- > *pesiropert and *eituā- > *eitiuā > *eittiuā > xeisua- in the Tabula Bantina, just like bansae < **bantiāi*. Since this is not the case, we could posit the development of **-u*only to [y] and not via a stage [iu] in Bantia, and presumably in the rest of Lucania. An alternative explanation is to posit two rounds of palatalisation, whereby original *-*i*- caused gemination and palatalisation of preceding *-*t*in all of Oscan (and then assibilation in the Oscan of the Tabula Bantina), and secondary [i] in [iu] from *-u- after a coronal caused gemination and palatalisation in Oscan in the North (cf. pettiur Aufidena 1/Sa 17 < *petur) but not in the South (eitua-, petiropert).²² Either way, there would be a dialectal difference between North and South, but the first proposal is more straightforward, since it requires only *-*u*- to [y]/[iu] (or *-*u*- > [y] and then > [iu] in the North), rather than having to suppose two separate rounds of the same sound change with the same effect (in the North).

6 Conclusion

Original *-*u*- after a coronal in Oscan gave [y] in Lucania and Bruttium, written with $\langle \upsilon \rangle$ as well as $\langle \upsilon \upsilon \rangle$ and $\langle \upsilon \rangle$ in the Greek alphabet, and with $\langle i \rangle$ and $\langle u \rangle$ in the Latin alphabet of the Tabula Bantina. In Campania and Samnium *-*u*developed to [iu], written $\langle iu \rangle$, perhaps also via a stage [y]. The treatment of *-*u*- after a coronal thus represents a dialect boundary between Northern and Southern varieties of Oscan. Relative chronology shows that the change to [y] took place early in the history of Oscan; the *terminus ante quem* for this change is our earliest example of $\langle \upsilon \rangle$, from 400–375 BC. The development to [iu] in the North had taken place by the end of the 4th century BC, but perhaps not long before, since one early 3rd century inscription still uses $\langle u \rangle$ rather than $\langle iu \rangle$.

In this case, the dialect boundary might not necessarily be precisely between Lucania-Bruttium and Campania-Samnium, since no gemination is shown in últiumam (Capua 22/Cp 31) or eítiuva- (Pompeii 24/Po 3, Pompeii 16/Po 16, Pompeii 21/Po 3, Pompeii 24/Po 4, Pompeii 23/Po 14). However, this is not conclusive evidence for its absence, since the use of double letters to write geminates was always optional in the Oscan alphabet.

References

- Adiego Lajara, Ignacio-Javier. 1992. Protosabelio, osco-umbro, sudpiceno. Barcelona: PPU.
 Bottiglioni, Gino. 1954. Manuale dei dialetti italici. Osco, umbro e dialetti minori. Grammatica, testi, glossario con note etimologiche. Bologna: STEB.
- Bücheler, Franz. 1878. Oskische Bleitafel. Rheinisches Museum 33, 1-77.
- Buck, Carl Darling. 1910. *Introduction to the Study of the Greek Dialects*. Boston, New York, Chicago & London: Ginn and Company.
- Buck, Carl Darling. 1928. A Grammar of Oscan and Umbrian. With a Collection of Inscriptions and a Glossary. 2nd edition. Boston: Ginn and Company.
- Clackson, James. 2013. Subgrouping in the Sabellian branch of Indo-European. *Trans*actions of the Philological Society. Early view: available at http://onlinelibrary.wiley .com/journal/10.1111/%28ISSN%291467-968X/earlyview.
- Crawford, Michael. 1996. *Roman Statutes*. London: Institute of Classical Studies, School of Advanced Study, University of London.
- Crawford, Michael, with W.M. Broadhead, J.P.T. Clackson, F. Santangelo, S. Thompson & M. Watmough. 2011. *Imagines Italicae. A Corpus of Italic Inscriptions*. London: Institute of Classical Studies.
- de Vaan, Michiel. 2008. *Etymological Dictionary of Latin and the Other Italic Languages*. Leiden & Boston: Brill.
- Flemming, Edward S. 2002. *Auditory Representations in Phonology*. New York & London: Routledge.
- Flemming, Edward S. 2003. The relationship between coronal place and vowel backness. *Phonology* 20, 353–373.
- García Ramón, José Luis. 2011. Initial stress and syncope as implicators of secondary yod and palatalization: Sabellic and Thessalian. *Alessandria* 5, 115–135.
- Hume, Elizabeth V. 1994. Front Vowels, Coronal Consonants and their Interaction in Nonlinear Phonology. New York & London: Garland Publishing, Inc.
- Joseph, Brian & Rex Wallace. 1987. Latin *sum*/Oscan súm, sim, *esum*. *American Journal* of *Philology* 108, 675–693.
- Keating, Patricia A. 1985. Universal phonetics and the organization of grammars. In Victoria A. Fromkin (ed.), *Phonetic Linguistics: essays in honor of Peter Ladefoged*, 115–132. Cambridge, Mass.: MIT Press.
- Lejeune, Michel. 1970. Phonologie osque et graphie grecque. *Revue des Études Anciennes* 72, 271–315.
- Lejeune, Michel. 1975. Réflexions sur la phonologie du vocalisme osque. *Bulletin de la Société Linguistique de Paris* 70, 233–251.
- Mancini, Marco. 1997. Nochmals über oskisches *sim. Historische Sprachforschung* 110, 109–121.
- Martzloff, Vincent. 2006. Picénien ímih puíh. Contribution à l'interpretation des cip-

pes paléo-sabelliques de Castignano (AP 2) et de Penna S. Andrea (TE 5). *Lalies* 26, 105–140.

- Meiser, Gerhard. 1986. *Lautgeschichte der umbrischen Sprache*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Nishimura, Kanehiro. 2012. Vowel reduction and deletion in Sabellic: a synchronic and diachronic interface. In Benedicte Nielsen Whitehead, Thomas Olander, Birgit Anette Olsen & Jens Elmegård Rasmussen (eds.), *The Sound of Indo-European. Phonetics, Phonemics and Morphophonemics*, 381–398. Copenhagen: Museum Tusculanum Press.
- Ohala, John J. 2003. Phonetics and historical phonology. In Brian D. Joseph & Richard D. Janda (eds.), *The Handbook of Historical Linguistics*, 669–686. Malden, Oxford & Carlton: Blackwell.
- Poccetti, Paolo. 2002. Note sulla declinazione italica dei temi in *-u. Incontri Linguistici* 25, 47–64.
- Rix, Helmut. 1996. Variazioni locali in osco. In Loretta Del Tutto Palma (ed.), *La tavola di Agnone nel contesto italico. Convegno di studio. Agnone, 13–15 aprile 1994,* 243–261. Firenze: Leo S. Olschki.
- Rix, Helmut. 2002. Sabellische Texte. Die Texte des Oskischen, Umbrischen und Südpikenischen. Heidelberg: Universitätsverlag C. Winter.
- Rix, Helmut. 2004. Ein neuer oskisch-griechischer Göttername in Pompei. In Adam Hyllested, Anders Richardt Jørgensen, Jenny Helena Larsson & Thomas Olander (eds.), *Per Aspera ad Asteriscos. Studia Indogermanica in honorem Jens Elmegård Rasmussen sexagenarii Idibus Martibus anno MMIV*, 491–505. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Seidl, Christian. 1994. Gemeinsabellisch und Vulgärlateinisch: Der Vokalismus. In George E. Dunkel, Gisela Meyer, Salvatore Scarlata & Christian Seidl (eds.), Früh-, Mittel-, Spätindogermanisch. Akten der IX. Fachtagung der Indogermanischen Gesellschaft vom 5. bis 9. Oktober 1992 in Zürich, 349–370. Wiesbaden: Dr Ludwig Reichert Verlag.
- Thurneysen, Rudolf. 1893. Italisches. Zeitschrift für vergleichende Sprachforschung auf dem Gebiete der Indogermanischen Sprachen 32, 554–572.
- Tikkanen, Karin. 2011. A Sabellian Case Grammar. Heidelberg: Universitätsverlag Winter.
- Untermann, Jürgen. 2000. *Wörterbuch des Oskisch-Umbrischen*. Heidelberg: Universitätsverlag C. Winter.
- von Planta, Robert. 1892–1897. *Grammatik der oskisch-umbrischen Dialekte*. (2 vols.). Strassburg: Verlag von Karl J. Trübner.
- Wallace, Rex E. 2007. The Sabellic Languages of Ancient Italy. München: Lincom.
- Weiss, Michael. 1998. On some problems of final syllables in South Picene. In Jay Jasanoff, H. Craig Melchert & Lisi Oliver (eds), *Mír Curad. Studies in Honor of Calvert Watkins*, 703–715. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

- Weiss, Michael. 2009. *Outline of the Historical and Comparative Grammar of Latin*. Ann Arbor & New York: Beech Stave Press.
- Zair, Nicholas. Forthcoming. *Oscan in the Greek Alphabet*. Cambridge: Cambridge University Press.