

Superlative Suffixes *-ismo- and *-ismmo- in Sabellian Languages

By KANEHIRO NISHIMURA, Los Angeles

Abstract: The superlative suffix *-ismmo- has widely been reconstructed in Latin. In this paper, through an analysis of some superlative forms which are sporadically attested in Sabellian languages, I establish another suffix, *-ismo-, and describe phonological or morphological changes which led it to the attested form. The *-ismmo- can also be reconstructed in Sabellian languages, based on other superlative forms. The suffixal variety of this kind probably resulted from the time difference in the formation of the superlative forms and the nature of the meaning inherent in the adjectival roots.

0. Introduction

The formation of superlative forms in Sabellian languages depends on the application of the basic suffix *-mo- as in Latin.¹ We can cite the following examples, which consist of this simple *-mo-:

- Oscan **imad-en** ‘ab imo, from the bottom’ (< ?**ndʰ-mo-*);
- Umbrian **çimu/šimo** ‘retro, backward’ (< **ki-mo-*; cf. Umb. **cive** ‘citra’ < **ki-uo-*);
- Umbrian **promom / prumom / prumu** ‘primum, first’ (< **pro-mo-*; cf. Osc. **pruter (pan)** ‘prius(quam), earlier (than)’ < **prō-tero-*); and
- Umbrian **somo** ‘sumum, topmost’ (< **sup-mo-*; cf. Osc. **supruis** ‘superis, upper’ and Umb. **subra** ‘supra, on the upper side’ < **sup-ero-*).

¹ For the process of variation of the Latin superlative suffixes, see Nishimura (2001).

For those which are based on *-tmmo-, examples may be given such as:

- Oscan **pustm[as]** ‘postremae, last’ and *posmom* ‘postremum, for the last time’ (< **pos-tmmo-*; cf. Osc. **pustrei** ‘in postero, later’, **pustiris** ‘posterius, later’, and Umb. *postra* ‘posteras, posteriors, the latter’ < **pos-tero-*);
- Oscan **últiumam** ‘ultimam, furthest’ (< **h₂ol-tmmo-*);
- Umbrian *hondomu* ‘infimo, lowest’ (< **ĝ^hom-*(or **ĝ^homi-*)*tmmo-*; cf. Osc. **hu[n]truis** ‘inferis, infernal’, Umb. *hondra* ‘infra, under’ < **ĝ^hom-*(or **ĝ^homi-*)*tero-*); and
- Oscan **nessimas**, *nesimum*, *nesimois*, and Umbrian *nesimeis* ‘nearest’.²

The suffixes *-mo- and *-tmmo- are attached to stems of temporal and spatial meaning.

Whether the simplex *-mmo- as assumed in Latin *īnfimus* ‘lowest’ should also be reconstructed in Sabellian languages remains unclear, because the Sabellian languages have no corresponding form.

The variant *-mmo- reminds us of the composite *-isimo- generally reconstructed in Latin, and it is necessary to consider whether the composite suffix of this kind can also be established in Sabellian languages. In this paper, first, I will try to show that there are some superlatives, even though sporadically attested, in Sabellian languages, which are based on *-ismo- and to describe the phonological or morphological changes through which the proto-forms led to the actually attested forms. Second, I will examine whether the composite *-isimo- should be reconstructed or not in Sabellian languages as well as in Latin. Taking into account the complicated history of the superlative formation, I will conclude that *-isimo- also existed there.

² These forms of the meaning ‘nearest’ are later discussed in section 2.1.

1. Evidence of *-ismo- in Sabellian languages

1.1. Paelignian *prismu*

We, first of all, should take notice of *prismu* (proper name, nom.sg.f.) in Paelignian. This form is juxtaposed to Latin *prīmus* ‘first’. It is highly possible that *prīmus* had a stage such as **prīsmos* like Paelignian *prismu*, seeing that its comparative *prior* is formed by means of *-īos- and supposing that -s- before -m- was deleted in the case of *prīmus*.³ In general, **pri-ismmo-* has been reconstructed as a starting point, from which **prīsumo-*⁴ was derived. This locates the accent on -ī-, which will cause the syncope of -u- in the following syllable. As a result, the cluster -sm- may have occurred.⁵ It is extremely rare that the vowel resulting from the prevocalic *-m̄- is situated in the second syllable, namely, in the position subject to the syncope. However, there is a counterexample in which -u- did not undergo the syncope even though it is positioned in the second syllable. The form *plūrimus* ‘most numerous’ is a superlative which is based on *-ismmo-, since it contains a vowel before -m- and its comparative *plūs* ‘more’ can be reconstructed as **ploh₁-is*. When the reconstructed form **ploh₁-ismmo-* leads to the stage of **ploisumo-*,⁶ the segment -u- occupies the second syllable and it might have been syncopated along the same lines as *prīmus*, but in fact, the syncope did not occur. Hence, we can imagine that *-ismo- in **prīsmos* (= **pri-ismo-s*) did not arise as a result of

³ The disappearance of -s- before a nasal is often observed in Latin, e.g., *aēnus* ‘of copper’ (< **aies-no-*), *cānus* ‘white’ (< **cas-no-*, cf. *cascus* ‘old’), *fānum* ‘temple’ (< **fas-no-*), and *sūmō* ‘I use’ (< **sus-mō* < **sup-s-(e)mo-*). The same sort of phenomenon is also found before a liquid, e.g., *dīruō* ‘I destroy’ (< **disruō*) and *prēlum* ‘press’ (< **preslom*).

⁴ As for the vowel before -m-, see Nishimura (2004).

⁵ See Meiser (1998, 66, 153, 174).

⁶ Cf. Meiser (1998, 153-54).

some sound change but existed as an original suffix for the superlative formation.⁷

1.2. Oscan *maimas*

We should begin by reconstructing the root in *maimas* 'maximae' before discussing the history of its suffix. Two possibilities are typically proposed. One is **mag-* on the evidence of Latin *maximus*. The other is **meh₂-*, which may be reconstructed in comparison with some materials in Celtic (OIr. comp. *má/mó*, super. *máam/móam*) and Germanic (Goth. comp. *mais*, super. *maists*).⁸ In recent years, the latter idea has been regarded as more convincing,⁹ but taking into account the whole text of Tabula Bantina in which *maimas* is attested, we will find that an important problem arises.

The sequence of letters <ai> in *maimas* apparently stands for a diphthong. However, when paying attention to the writing system of Tabula Bantina, we see that <ae> is also employed and appears to truly express the diphthong /ai/. If we review their distribution in this inscription, while the use of <ae> is found in several forms such as *suae(pis)* 'si(quis)' (in paragraph 1-6, and Poccetti 185), *ualaemon* 'optimum' (2), *aeteis* 'partis' (2, 3, 5, and Poccetti 185), *Bansae* 'Bantiae' (4-6), *pae(i)* 'quae' (4), and *praefucus* 'praefectus' (5), <ai> is observed in *maimas* (1), its cognate comparative *mais* 'magis' (1, 3, 5), *tadait* 'censeat' (2), *deiuaid* 'iuret' (2), and *exaiscen* 'in his' (5). It is to be noted that although both *ualaemon* (for which see 2.2) and *maimas* are superlative forms, each shows a different orthography. From this we can

⁷ Leumann (1977, 497) also advances the reconstruction **pri-ismo-* and regards it as one which may form a certain morphological category with *dēmum* 'at last' and *summus* 'topmost'. See Untermann (2000, 579) as well.

⁸ See Jasanoff (1991, 176, 179 n. 19).

⁹ See Untermann (2000, 443).

conjecture that the graphic distinction between <ai> and <ae> reflects a phonetic distinction.¹⁰

Whether *maimas* is reconstructed as **meh₂-is̄mmo-* or **meh₂-ismo-*, these would have had an intermediate stage such as **maismo-*. In the development from **maismo-* to *maimo-*, the loss of *-s-* might have triggered a compensatory lengthening of the preceding vowel. But in fact, since *-ai-* is a diphthong and already heavy enough in terms of syllable weight, it is unlikely that this diphthong was made super-heavy. If this is correct, the *-ai-* should have been preserved unchanged and the <ae>-writing for it would have been expected as well as for the other forms with an *ai*-quality diphthong in Tabula Bantina. The actual writing, however, does not agree with this line of reasoning. We should consider the reason for these differing orthographies.

The answer to this problem can be supplied by assuming the root **mag-* in the reconstruction. Then, first of all, the absence of the root-final *-g-* in *maimas* must be explained. The point of departure may be its corresponding comparative *mais*, whose process of creation is as follows: **mag-ijos-* > **majios* > **majis* > *mais*. The change from **-gi-* to **-ji-* is also seen in Latin. In the superlative formation, on the other hand, since the vowel *-i-* in the zero grade of the suffix **-ijos-* follows **mag-*, the result **-gi-* must be retained as in Latin. In fact, however, the superlative would have obtained **maj-* as its root by analogy with the comparative **majis* (> *mais*)¹¹ at some stage of Oscan.¹²

¹⁰ von Planta (1897, 1: 142) and Buck (1928, 44) insist that <ai>-writing was caused by a following *-s-*, but this idea may be rejected on the basis of *tadait* and *deiuaid*.

¹¹ Buck (1928, 76, 92) also thinks of the analogy with the comparative. However, his morphological and phonological treatments are lacking in parallel examples.

¹² The same may be said for the superlative *Letaisama* (city name) in Celtiberian. This form was influenced by the comparative **letais* 'wider' in its prehistory in terms of the morphology. See Jasanoff (1991, 185).

To return to the question of the suffix, there are two possibilities as mentioned above, *-is̄mmo- and *-ismo-.¹³ If **maj̄-*, produced by analogy with the comparative, was followed by *-is̄mmo- (> *-isumo-) as in Latin *maximus*, the following diachronic process can be inferred: **maj̄isumo-* > **maisumo-* > **maismo-* > *maimo-*. This development involves two syncopes: first, *-i-* in the second syllable disappears, and then *-u-*, which is newly located in the second syllable, also disappears. However, **maismo-* which might have been produced by these changes does not differ from the above results based on the root **meh₂-*. Therefore, the <ai>-writing still remains unexplained.

Now we can introduce the suffix *-ismo- and reconstruct *maimas* as **maj̄ismo-* (← **mag-ismo-*).¹⁴ Although one may have expected the *-i-* in intervocalic position to have disappeared first, I suggest that it was retained as part of the root for a while by analogy with the comparative **maj̄ios-* (← **mag-ios-*). If we assume the loss of *-s-* before *-m-* to apply to **maj̄ismo-* with the *-i-* retained, we would expect a compensatory lengthening of the preceding short *-i-*. Namely, the result *ma(i)īmo-* would involve not a simple diphthong but a short vowel + a long vowel. That is probably why *maimas* was expressed by <ai> rather than <ae>. It is true that the <ae>-writing is preferable for the comparative *mais* because it derives from **maj̄is* (> *mais*) and it must have a normal diphthong /-ai-/, but the analogy with *maimas* may have promoted the use of <ai>.

These arguments amount to the establishment of **mag-* as the root and of *-ismo- as the suffix. The validity of **mag-* may be strengthened by the proper name **magiium** in one of the iovilae-inscriptions (Vetter 1953; no. 74). This inscription is regarded as rather old because newly invented letters in Oscan

¹³ Untermann (2000, 442) argues for “Ersatz des *s* im Kompar.-Suffix *-is-* durch das Superl.-Suffix *-mo-/-ā-*,” which means **ma-i-mo-/-ā-*. His idea does not seem probable.

¹⁴ The reasoning of this kind for *maimas* is already suggested by Brugmann (1903, 11) in the form of **māismo-*.

such as *í* or *ú* are still not used. This fact also supports the possibility that the root **mag-* originally existed in Sabellian languages.

As for the other <ai>-forms, *tadait*, *deiuaid*, and *exaiscen*, it seems that they also have different origins from that of <ae>-forms in view of their phonology. The verbal forms, *tadait* and *deiuaid*, are both so-called *ē*-subjunctive forms, in which <ai> stands for /*āē*/ in the original formation. The pronominal form *exaiscen* in dative plural originally had a case ending *-āis-*, with a long vowel, followed by a clitic and a postposition. It seems here that the clitic played a crucial role in the orthography; it may have retracted the accent towards the end of the word, and this form was probably inherited with the accentuation such as [eksāísken]. In this case, [-i-] should not be interpreted as the off-glide of a diphthong. Rather, a syllable boundary can be presumed between [-ǎ-] and [-i-]. Although these examples show a different context from that of *maimas* and *mais*, there is no doubt that they too were originally not simple diphthongs.¹⁵

1.3. Umbrian *nuvime*

Umbrian *nuvime* has frequently been discussed in terms of its interpretation. We also have *nuvis* of quite close relationship to *nuvime*; both of these are attested in *Tabulae Iguvinae* II A and are recorded in successive lines; this must show not only their morphological but also contextual relevance. Buck (1928, 294) and Pisani (1964, 199) interpret *nuvis* as ‘*novie(n)s*’ and *nuvime* as ‘(in) *nonum*’.¹⁶ Based on this interpretation, the passage containing these forms prescribes that “the act of dancing is repeated *nine times*... and *at the ninth time* the braziers are carried

¹⁵ Note that in Latin inscriptions the transition from <ai> to <ae> in *ā*-stem nouns slowly occurred in genitives rather than datives. See Wachter (1987, 485-86). This may relate to the fact that the genitive appears in Roman comedies and Lucretius in the form of *āī*.

¹⁶ von Planta (1897, 2: 197) advances the same interpretation and doubts if *nuvime* can be translated as ‘*novissime*’ (2: 206-7).

back as well as the spits,” which seems perfectly natural. As for their morphology, Buck and Pisani analyze these words in different ways from each other. According to Buck (1928, 139), **nuvis** can be compared with *bis* ‘twice’ (< **dui-s*) and *ter* ‘three times’ (< **tri-s*) in Latin.¹⁷ The series of segments *-i-s* was originally derived from **tri-s*, and **dui-s* was modeled after it.¹⁸ Buck suggests that this *-i-s* also spread to the root which means ‘nine’. In Latin, when the adverbs of this sort are produced for numeral roots whose value is more than ‘4’, another suffix *-iē(n)s* is used; therefore, the situation in Umbrian is rather similar to that in Greek. For **nuvime**, Buck (1928, 56, 138) presents a reconstruction such as **noṁemo-*; probably he means that the original **neṁo-* came to accompany *-mo-* as a suffix from the analogy of **septṁmo-* ‘seventh’ and **dekṁmo-* ‘tenth’, and passed through **neṁmo-*. This formation is different from that in Latin *nōnus*. Pisani, on the other hand, seems to regard **nuvis** as corresponding to Latin *noviēs*. Besides, he divides **nuvime** into **nuvim-e** and seems to interpret this as an accusative form plus a postposition.¹⁹

Poultney (1959, 89, 182-83), Cowgill (1970, 137), Sihler (1995, 40, 387, 416), and Untermann (2000, 505-6) state that **nuvis** and **nuvime** are a comparative and a superlative, respectively, of ‘new’, and Vine (1993, 119) also refers to **nuvime** as a superlative form and translates it as ‘novissime’.²⁰ In this interpretation, the context will be a prescription like “the act of dancing is done *again...* and *finally* the braziers are carried back as well as the spits.”

¹⁷ The multiplicative numeral adjectives of the same kind are also observed in other daughter languages, e.g., Gk. *δίδ, τρίς*, Ved. *dvīs, trīs*, Av. *biš, θriš*, etc.

¹⁸ See Sihler (1995, 437).

¹⁹ See also Benediktsson (1960, 254).

²⁰ Sihler (1995, 40, 416) translates **nuvis** as ‘more recent’ and **nuvime** as ‘veterans’ and assigns different roles to them even though they appear near to each other. He claims that **nuvime** is used in the context about soldiers, but the passage in question expresses a religious scene of dog-sacrifice, so it has nothing to do with soldiers.

The first explanation given by Buck and Pisani and the second one reviewed just above make good contextual sense, and these two interpretations truly fit with both preceding and following passages.

However, making a survey of the whole of *Tabulae Iguvinae*, the number of times to do something repeatedly is uniquely ‘3’.²¹ Given this fact, the number ‘9’ shown in the first interpretation seems to be bizarre.²² Although *Tabulae Iguvinae* are not a text that was completed at a single stroke, the custom that when an act is to be done, one is required to repeat that act three times may have consistently been carried out as a kind of tradition to keep religious activities purified. Therefore, I follow the interpretation that **nuvis** and **nuvime** are a comparative and a superlative.²³

Then, next, we should consider the morphological history of the forms **nuvis** and **nuvime**. By comparison with the comparative *novius* in Latin, it can safely be said that **nuvis** was formed by means of **-ijos-*. In view of this fact, **nuvime** seems to have been created by attaching a superlative suffix to **-is-*, the zero grade of **-ijos-*. Note that there is no *-s-* in **nuvime**. This point is shared with *maimas*. If **neu-ismmo-* is correct, the same sound change as shown above, *-sm- > -m-*, would need the syncope of *-u-* in the intermediate stage **nouisumo-*. However, the assumption that *-u-* in the third syllable in **nouisumo-* was syncopated earlier than the vowel in the second syllable is in conflict with the chronology

²¹ I B 21-22, II B 25, V A 8-9, VI B 55, VI B 64, and VII A 51.

²² See, however, Poultney (1959, 183).

²³ Sihler (1995, 416) takes note of *-i-* in **nuvime**. If this form was referred to *neuṅ-o-* and *-ṅ-* changed into *-en-*, this result should further be weakened into *-in-*. In this point, Sihler argues that “weakening of short vowels medially is a L[atin] trait, not Sab[ellian].” However, as for the prevocalic **ṅ*, the same thing as in the development of the prevocalic **ṅ* can be applied. See Nishimura (2004). In short, the vowel which occurred before the nasal may be so obscure that its quality was affected by the surrounding phonetic context and that it was not sensitive enough to be weakened. That is why it is not reasonable to criticize the reconstruction of **nuvime** as *neuṅ-o-* on the basis of vowel weakening.

of syncope in Umbrian; this problem was also mentioned in the section of *maimas*. Therefore, the origin of the suffix of *nuvime* should be sought not in **-isṃmo-*; this form is reconstructed as **neu-ismo-*.

1.4. **-sm- > -m-* in Sabellian languages

I have to comment on the sound change **-sm- > -m-*, which the composite **-ismo-* experienced. If we establish the variant **-ismo-*, one might suspect that it would maintain its form, and *-ismo-* would simply be attested without the application of the change **-sm- > -m-*. This suspicion might be supported by the fact that some examples keeping *s* before a nasal are attested in Sabellian languages, for example, Oscan *fīisnú*, Umbrian *fesnaf-e*, and Paelignian *fesn* 'temple' (Lat. *fānum*); Umbrian *ahesnes* 'of bronze' (Lat. *ahēnus*); Oscan *kersnu* and Umbrian *šesna* 'dinner' (Lat. *cēna*); Oscan *casnar* 'old' (Lat. *cānus* 'white', cf. *cascus* 'old'); Umbrian *esmei* 'huic', *esmik* 'ei', and *esme* 'in hoc'; and Umbrian *snata* 'humide' (Lat. *nāre* 'to swim'). The diachronic process **-ismo- > -īmo-* might well not seem to be reconcilable with these examples.²⁴

However, it is mainly *-n-* that appears after *-s-* in these forms. Vine (1993, 116-22) discusses the consonant cluster **-sN-* in Italic languages in detail. Starting from the results of Wachter (1987, 255-56) that CIL I² 60 presenting PRIMO.ŌENIA is the oldest among a whole series of inscriptions found in Praeneste which belongs to between the third century and the beginning of the second century B.C., Vine points out its temporal proximity to CIL I² 549 containing the form LOSNA, which can be placed between the end of the fourth century and the third century B.C., and he suggests that **-sn-* could be more conservative than

²⁴ Cowgill (1970, 139) says that "I can think of no language in which intervocalic **s* underwent serious phonetic change without *s* between vowel and resonant being similarly affected" and regards as the above-mentioned forms as exceptional.

*-sm-.²⁵ Moreover, Vine pays special attention to the variation **posmúi** ~ **pom**[²⁶ ‘cui’ in South Picene and reasons that “SPi. [= South Picene] *pom*-... would show the phonologically regular result of the early loss of -s- in sequences -Vsm-, as in Osc. *maimas*, Umbr. **nuvime**” (1993, 121). For -sm- preserved in Umbrian *esmei* ‘huic’, it is supposed that the pronominal stem *es-* keeps its shape under the influence of forms such as *estu* which have a stable consonant cluster. Then, he concludes that “the contrast between Umbr. **nuvime** vs. **ahesnes** (and Osc. *maimas* vs. *casnar*, **ffísnú**) may be phonologically real..., reflecting a chronological difference in the development of *-sm- and *-sn- in Sabellian” (1993, 122). If his statement is correct, the establishment of the diachronic process *-ismo- > -īmo- and the retention of -s- in *-sN- in other examples will not contradict each other. Paelignian *prismu* discussed above may have been written in an archaic style or may be a form in a transitional period of this sound change.

²⁵ The antiquity of CIL I² 60 can be proven by the use of \oslash , which means that this inscription was written before the letter G was imported from Rome. It is only in this inscription that the letter \oslash is used among inscriptions in Praeneste which belong to the third century B.C. and after. See Wachter (1987, 255-56). Wachter (1987, 216) says that “man den Spiegel CIL 549... für alter muss” and acknowledges a time lag between 549 and 60 in CIL I². However, since both of these inscriptions experienced the monophthongization of diphthong, we do not view them as temporally very separated. For LOSNA, since it is a divine name, an archaic writing might have deliberately been used. If this is true, one would have to doubt whether -s- was actually pronounced, but this form originated from *leuks-nā- and clearly shows the expected result of the monophthongization of the diphthong in the initial syllable. Therefore, it is highly possible that LOSNA was engraved in a contemporary writing and that -s- was really pronounced. See Wachter (1987, 266).

²⁶ I follow the way of expression with bold fonts and the unambiguous reading of **m** in **pom**[(AQ 1), which is presented by Rix (2002, 69).

1.5. Concluding remark

So far, we have been dealing with Paelignian *prismu*, Oscan *maimas*, and Umbrian *nuvime*, and as a result, *-ismo- has come in our sight as a superlative suffix with a certain productivity. Based on this fact, *-ismo- supposed in Latin *prīmus* does not have to be interpreted just as an isolating variant, and it should be considered in connection with the neighboring Sabellian languages.²⁷

2. *-isṃmo- in Sabellian languages

In the preceding section, we mentioned some productivity of *-ismo- in Sabellian languages. Now, it should be discussed whether or not *-isṃmo- also existed in these languages.

2.1. Oscan *nessimas*, *nesimum*, *nesimois*, and Umbrian *nesimeī*

There is a series of examples which has been alleged to have been formed by *-isṃmo- for one and the same adjectival root, namely, Oscan *nessimas*, *nesimum*, *nesimois*, and Umbrian *nesimeī*. They correspond to Old Irish *nessam* 'nearest'. In view of Vedic *nédīyas-* and *nédiṣṭha-*, and Avestan *nazdyah-* and *nazdišta-* 'nearer/nearest', Cowgill (1970, 132) traces Oscan and Umbrian examples back to the composite *-isṃmo- and presents a reconstruction such as **nesd-isṃmo-* (> **netssṃmo-* >

²⁷ Coleman (1992, 438 n. 62) acknowledges *-ismo- in Latin *maximus* and advances a diachronic process such as **magismos* > **magsmos* > **magsumo-*, but its validity remains unproven. Vine (1993, 117 n. 90) criticizes Coleman's idea in that it is "in violation of normal expectations with regard to the assumed syncope and anaptyxis." Szemerényi (1989, 44) also regards *-ismo- as "unzulässig," but his argument partially depends on the evidence found in Sanskrit, so the standard there cannot necessarily be adopted to Italic languages.

nessimas, *nesimeis*, etc.).²⁸ He explains the change within the root from **nesd-* to **nets-* by means of metathesis. The reason why he resorts to the metathesis is because it is quite difficult to directly derive Oscan and Umbrian *ness-* from **nesd-*. But note that Umbrian *sistu* ‘sidito, sit’ has the following history: **si-sd-e-to* > **sizedeto* > **sizedto* > *sistu*; through this diachronic process, the intermediate consonant cluster, a fricative + a dental, is supposed to be maintained.²⁹ Based on this fact, Cowgill’s idea of metathesis seems groundless, because in spite of the fact that both **nesd-* and **si-sd-e-to* originated from the zero-grade of **sed-*, to assume the metathesis only in the former is unreasonable. Latin *sīdō* which corresponds to Umbrian *sistu* also started from **si-sd-* and did not undergo the metathesis. Therefore, as for the root, it seems best to choose **ned-* in the meaning ‘bind’ which is seen in both Italic and Germanic. The Celtic form is also easily derived from this root.

To consider the suffix form of *nessimo-*, we have to take notice of Oscan comparative form *nistrus* ‘propinquos’, a counterpart of the superlatives. This example is created by the comparative suffix **-tero-*, which is morphologically and semantically juxtaposed to the superlative suffix **-tmmo-*. Based on this fact, it is not natural to refer *nessimo-* to **-ismmo-*, because this superlative suffix should be paired with the comparative suffix **-ios-*. It is true that two different series of the comparative/superlative suffixes can be applied to the same root, for example, in Greek, we have *βελτίων/βέλτιστος* ~ *βέλτερος/βέλτατος* ‘better/best’, *φέριστος* ~ *φέρτατος* ‘best’, and other pairs, but in Latin, the use of suffixes of this kind is not observed. For Italic languages, the scarce quantity of materials keeps us from comprehensively grasping their situation, but at least the morphology such as that in Greek has not been found. Therefore, **-tero-/*-tmmo-* rather than **-ios-/*-ismmo-* would have been

²⁸ See also Jasanoff (1991, 172) and Meiser (1986, 242).

²⁹ See Buck (1928, 75) and Benediktsson (1960, 174).

suffixed to the root **ned-* in Sabellian languages to process the formation of the comparative and superlative forms.³⁰

In this line of reasoning, it might seem to be a problem that the consonant cluster *-ss-* in the superlatives like *nessimas* differs from that in the comparative *nistrus*, but this can easily be resolved. The superlative **ned-timo-* came down to *nessimo-* through the regular change **-d-t-* > *-ss-*. The comparative **ned-tero-* should have undergone the same change **-d-t-* > *-ss-*, but in reality, since the original cluster came into contact with the following *-r-* due to the syncope of *-e-*, **-d-t-* developed into *-st-*. The change of this kind, *dental + dental* > *st* before *r*, can be observed in Oscan *castrous* (< **cat-tro-*), which corresponds to Umbrian *castruo* and Latin *castrum* ‘castle’. Hence, the difference of the consonant cluster between the comparative and the superlative does not contradict the assumption that these share the same root.

Accordingly, this array of examples should be excluded from our discussion about whether *-isimo-* can be reconstructed in Sabellian languages.

2.2. Superlatives based on **uelH-*

In Sabellian languages, several superlative forms which are based on the root **uelH-* are observed, for example, Oscan *ualaemom* ‘optimum’, *valaimas* (proper name), and South Picene *uelaimes* (proper name). We can also find some materials in Latin which are connected to Sabellian examples, such as *volaemum/volēnum* (*pirum*) ‘a kind of large pear’. Steinbauer (1993, 302-3) emends *Volsimi* (Paulus ex Festo) into *uolaimi* and attributes this to the group of the above-mentioned forms with Etruscan word *velimna-* borrowed from Umbrian. Lazzarini and Poccetti (2001) add a new form, *φολαισμοσ*, which appears in an inscription from Tortora. The Oscan and South Picene forms

³⁰ See also Poultney (1959, 89). The root in his reconstruction **nedh-timo-* is unclear.

have frequently been supposed to have some connection with the superlative forms in Latin which end in *-ēmo-*, namely, they might have been created by means of a process in which former instrumental forms were followed by the suffix **-mo-*; but this sort of idea has become more suspicious due to the discovery of ῥολαισυμος .³¹

We pay attention to the root form of these examples, because (1) they show some differences among themselves with respect to the vowel quality of the root and (2) they have a vowel *-a-* in the second syllable.

(1) For the ablaut in the root, we can clearly distinguish two different patterns, full-grade and zero-grade. Examples which belong to the former are South Picene *uelaimēs*, Latin *volaemum/volēmum*, *uolaimi*, Etruscan *velimna-*, and ῥολαισυμος from Tortora. The fluctuation between *-e-* and *-o-* is secondary; the original vowel is *-e-*, which changed into *-o-* before a dark *-l-*. The proper name *Valerius* in Latin should also be placed here; the original vowel is observed in ancestral forms such as *Volesus*, praenomen, from which *Valerius* was derived by means of the suffix **-iō-*.³² Therefore, *Valerius* can be reconstructed as **uelēsio-*. The vowel *-a-* in the first syllable will be interpreted as a result of the analogy with *valor* 'value', *valēre* 'to be strong, well', and so forth. Latin forms such as *valor* and *valēre* reflect the zero grade, and they are reconstructed as **u̯l̥H-os-* and **u̯l̥H-eh₁-* respectively.³³ The root **u̯l̥H-* simply changed into *val-* in them. This is a normal pattern of development which

³¹ Brugmann (1903, 15) argues that the part of *māimas* without the initial *m-* was attached to *val-*. His idea can be neither proved nor disproved.

³² See Leumann (1977, 179, 289). Cf. Schulze (1904, 104-7).

³³ The reason why **H* is reconstructed in the root is offered by OIr. *flaith* 'sovereignty' and Gaul. *gwlad* 'country' (< **u̯lati-* < **u̯l̥H-ti-*). See Kortlandt (1988, 82) and Pinault (1989, 81). For the short vowel in *flaith*, see Kuryłowicz (1956, 197-98). Concerning the quality of **H*, Welsh *gwladr* 'ruler' (< **u̯lh₂-etro-*) given by Schrijver (1991, 214) is suggestive, but if *h₂* is chosen, a homonymous ambiguity with **uel-h₂(h₃ ?)-* "mourir par blessure" (Bader 1990, 10 n. 32) will happen.

occurred in roots of the configuration *CRH-, when they are located before a vowel, that is to say, *CRHV- > CaRV-. We can cite other forms which underwent the same development, though their detail is disputable:³⁴ *caleō* ‘be hot’ (< *k_lh₁-eh₁-je-), *carō/carnis* ‘flesh’ (< *karon-/karn- < *(s)k_rH-on/n-),³⁵ *haruspex/hariolus* ‘soothsayer’ (< *ǵ^h_rHu-/*ǵ^h_rHi-), *palea* ‘chaff’ (< *p_lHejo-), *palam* ‘openly’ (< *p_lh₂-eh₂-m), and *parentes* ‘parents’ (< *p_rh₃-ent-).

The zero-grade root, on the other hand, may be reflected in *ualaemom* and *valaimas*. The vowel -a- in the initial syllable will also be sought within the historical framework of root structure and its development. We have just mentioned the change *CRHV- > CaRV-. *CRHC- in Latin is normally expected to have CRāC- as its reflex, but it sometimes deviated from the usual development and is said to have changed into CaRaC-. It is thought that this CaRaC- led further to CaRC- through syncope.³⁶

³⁴ See Schrijver (1991, 205-17), Sihler (1995), Meiser (1998), and Rix (2001).

³⁵ In the genitive form, the sequence *CRHC- would be expected. The appearance of CaRC- probably resulted from the analogy with the nominative.

³⁶ See Watkins (1965, 183), Lindeman (1965, 88), and Mayrhofer (1987, 101). Beekes (1972, 118) cites Greek κάλαμος ‘reed’ (*kelh₂-), παλάμη ‘palm’ (*pelh₂-), which may directly reflect CaRaC-, and Latin *palma* ‘id.’, which may have undergone a syncope, and he derives them from the reduced grade of the root. The concept of reduced grade was firmly introduced by Kuryłowicz (1956, 198-201). He supposes that the three types of ablaut, full grade, zero grade, and reduced grade, of the *aniṣ* root (*CeR(T)*, *CR(C)*, and *Car(C)* respectively) were applied to the *seṣ* root. In this case, their actual reflexes are *CeRa*, *CRā*, and *CaRaC* (< **CeRH(C)*, **CRH(C)*, and **CaRHC*), by the action of the laryngeal. Based on the assumption that the reduced grade secondarily occurred from the zero grade, *CaRaC* would be a more recent result than *CRā*. The problem of this idea is that we have only *a* as a reflex of *H* even in Greek.

Bader (1990) suggests that if **CRHC-* is divided into **CRH-C-* on the basis of morphological boundary, a vowel can be inserted between -*H-* and -*C-*, for example, Greek ἐπρίατο ‘bought’ (< *e-k^wrih₂-^oto-), Hittite *palḫatar*, *palḫasti* ‘breadth’ (Greek παλαστι-αῖος ‘palm long or broad’ (< *p_lh₂-^ot_ṣ-, *p_lh₂-^osti-), Luwian *palḫami-* ‘spread (adj.)’, Greek παλάμη (< *p_lh₂-^omi, *p_lh₂-^omeh₂-;

For example, *antae* ‘pillars’ (< **anatā-* < **h₂nHt-eh₂₋*), *armus* ‘shoulder’ (< **aramo-* < **h₂rHmo-*),³⁷ *calvor* ‘deceive’ (< **kalaue-* < **k̥l̥h₁-u-e-*),³⁸ *palma* ‘palm’ (< **palama-* < **pl̥h₂-meh₂₋*),³⁹ *parō* ‘make ready’ (< **paraie-* < **p̥rh₃-ie-*),

cf. OHG. *folma* ‘hand’ < **pl̥h₂-meh₂₋*), Hittite *kuwaszi* ‘kiss, embrace’ (< **kuH^o-s-ti*; cf. Skt. *cūṣati* ‘suck’ < **kuH-s-ti*), Old Irish *tarathar* ‘gimlet’, and Gaulish *Taranis* (divine name; < **t̥rh₂^o-t̥r-*, **t̥rh₂^o-ni-*). Bader (1990, 41) assumes that an inserted vowel is *-a-* and, therefore, that it is not affected by the preceding laryngeal. According to her, in Old Irish *arathar* ‘plow’ (< **h₂er-h₃^o-t̥r-*), although the inserted vowel will follow *h₃*, the former is not influenced by the latter. (The majority of examples which Bader gives, however, have a *h₂* before an anaptyctic vowel; hence, whether Bader’s *a* originates from the insertion or the vocalization of *h₂* cannot strictly be decided.) Bader supposes that this change is older than the development to *CRāC-* as in Latin *plānus* ‘flat’ (< **pl̥h₂-no-*). Namely, in her opinion, *CRāC-* is thought of as a reflex which occurred after the laryngeal had lost its consonantal feature. Compared with Kuryłowicz’s idea, her chronological scenario is constituted in the reverse order. If Bader’s idea is correct, it may be that the reflex **CaRaC-* with an anaptyctic *a* between *-H-* and *-C-* was conserved in Latin as a relic. For the context in which the anaptyxis occurs, Bader (1990, 18 n. 53, 23) supposes that it is scarcely sensitive to limitations. In Sanskrit *Parjanya-* (divine name; < **perg^o-n̥jo-*), its stem ends in not a laryngeal but an obstruent.

³⁷ Hamp (1982, 187; 1983a, 102) derives *antae* and *armus* from the full-grade root. Hamp refers to the latter example as **H_aoHmo-* and establishes the change **h₂o- > a-*, but this should probably be corrected. See Beekes (1972). The reason that Hamp chooses *o*-grade is because he presumes that **-mo-* generally tends to need *o*-grade in the root. According to Beekes (1972, 118), however, this is just a tendency, not an absolute rule. He reconstructs *armus* as **h₂erHmo-*.

³⁸ We have another possibility that the *u*-stem *kalu-* (< **k̥l̥h₁-u-*) was secondarily thematized and changed into *calvor* (< **kalu-e-*). See Rix (2001, 349).

³⁹ Bader (1990, 26) reconstructs this form as **pl̥h₂^o-meh₂₋* (> **palama-* > *palma*) with the anaptyxis. See footnote 36. Hamp (1983b, 175) comments on this *palma* and says that it is “explained... presumably as **pl̥H_ao-mā*, or at least as **pl̥H_aV-mā*.” In both of his reconstructions, an insertion of a vowel is undertaken between the zero-grade root and the suffix. For *-o-* in the first reconstruction, the general tendency of **-mo-* to require *o*-grade in the root

pars/parti-* ‘part’ (< **paras/parati-* < **pṛh₃-ti-*, cf. Ved. *pūrti-*), *salvus* ‘safe and sound’ (< **sala_uo-* < **s_lh₂-u_o-*),⁴⁰ and *spargō* ‘throw here and there’ (< **sparg-* < **sparag-* < **sp^hṛh₂g-*). Joseph (1982, 32-33) cites the idea of Cowgill (1963, 253), which is supported by Greek θάνατος and Old Irish *talam*, that *CaRaC*- secondarily occurred from **CeRaC*- as a result of vowel assimilation,⁴¹ and he argues that this sort of innovation should have occurred in Latin. Schrijver (1991, 193-97) investigates this problem carefully and insists that forms which might apparently have undergone the change **CRHC-* > *CaRaC-* in fact originated from **HeRHC* or **CRHeC*.⁴² However, the apparently irregular development **CRHC-* > *CaRaC-* may be motivated by accent. Mayrhofer (1987, 101 n. 64) explained *palma*, assuming a secondary accent shift to the root vowel (p_lh₂-*). Rix (2001, 475, 586) also treats *parō* and *spargō* in the same way (**pṛh₃-ie-* and **sp^hṛh₂g-e-*).⁴³ If this hypothesis is correct,⁴⁴ the vowel *-a-* in the root of *ualaemom* and *valaimas* will be well explained without any secondary sound change.

(2) The vowel *-a-* in the second syllable of the superlatives based on **uelH-* has two sources. One is, as discussed in (1),

seems to prompt it to occur, but the reason why its appearance does not take place inside of the root remains uncertain. The second one is based on the idea that a vowel was inserted between the root and the suffix, whatever its quality actually was. This follows Bader’s view for the most part. Besides the idea that the root reflects an original zero-grade, Mayrhofer (1987, 101 n. 64) also introduces the reconstruction with an appeal to *e*-grade. The diachronic process is as follows: **pelh₂-mah₂* > **pelama* > *palma*. However, Schrijver (1991, 210) maintains that the change as **pela-* > *pal(a)-* is not probable.

⁴⁰ This can also be traced back to **s_lh₂-eu_o-*. See Nussbaum (1997, 186-87).

⁴¹ See also Sihler (1973, 112-13) and Stifter (1999, 66). For the Greek example, Cowgill (1965, 150) points out the possibility of the analogy with aorist ἔθανον. Beekes (1974, 11, 14) rejects the idea of vowel assimilation due to the existence of counterexamples.

⁴² See also Beekes (1974).

⁴³ See also Rix (1992, 73).

⁴⁴ But see also Kuryłowicz (1956, 200).

attributed to the root innovation *CRHC- > CaRaC-. In this case, we have to start from the comparative * μ l̥H-*ios-*, because the root was followed by *-is-* in the superlative and thus the phonological sequence *CRHV- must have occurred. Therefore, *ualaemom* and *valaimas* can be explained by means of the stem substitution with the comparative as in *maimas*. The other examples with *e*-grade came to have *-a-* from the second source. We always should begin with the comparative, which can be reconstructed as * μ elH-*ios-*. The laryngeal in it was replaced by *-a-* in the interconsonantal position, and the resulting stem * μ ela- was probably employed to form the superlative as well, as with *uelaimes* and φολαισμος .

The so-called Pinault's Law might have triggered the laryngeal loss in the diachronic stage * μ elH-*ios-*. However, there are some well-known examples in which the laryngeal was retained or restored. With regard to the Vedic comparative suffix *-īyas-*, which reflects vocalization of the laryngeal of the *set* root, as in *tāvīyas-* 'stronger' (< * $\text{te}\mu\text{h}_2\text{-ios-}$), it seems that either Pinault's Law does not operate or else the laryngeal was restored for some reason.⁴⁵ The laryngeal of the root may have occasionally been retained by analogy with phonological contexts to which Pinault's Law would not have applied in the system of Caland's suffixes or other types of derivatives, as observed in Greek ἀρόω 'I plough' (< $\text{h}_2\text{erh}_3\text{-ie/o-}$; cf. OIr. *airid*, with the laryngeal loss) vis-à-vis ἄροτρον 'plough'.⁴⁶ In view of these facts, I suggest that the comparative form * μ elH-*ios-* in Sabellian languages also retained its laryngeal and implanted the root shape * μ ela- with *-a-* into the superlative form.

So far, we have discussed the root structure of the superlative in (1) and (2). Next, I will return to the main point of this paper and will focus on the suffix of these forms. The starting point should be φολαισμος in the inscription from Tortora, because it contains *-s-* and a vowel between this *-s-* and the following *-m-*

⁴⁵ As for the length of *-ī-*, see Jamison (1988, 218).

⁴⁶ See Jasanoff (1991, 175 n. 9).

while none of the other superlatives have these segments. To account for this difference, Lazzarini and Poccetti (2001, 135) presents ‘un quadro di concorrenza tra i suffissi *-is-ṃho- > *-is-ṃmo- > *-isVmo- e *-ṃho- > -īmo-, rispettivamente rappresentati tanto nel latino -issimus e -(ī)mus (tipo fortissimus/summus < *sup-mo-),’ that is to say, they try to establish the co-occurrence of two kinds of suffix; but the change *-ṃho- > -īmo- is not satisfactorily explained. Nevertheless, their reference to the complicated situation of the superlative suffix in Latin is quite important. In my study concerning this topic,⁴⁷ I concluded that all superlatives in Latin were not created at the same time but were formed gradually in different periods. For pairs of adjectival roots with a bipolar and gradable meaning such as ‘big’-‘small’, their superlatives came into existence earlier by means of suffixation of *-ṃmo- to *-ios-forms.⁴⁸ Later, the superlative formation took place for other adjectival roots, but at that time, various kinds of suffix rather than a unique suffix were used, which led to the variety of superlative suffixes. The three examples, *prismu*, *maimas*, and *nuvime*, that we examined in section 1 seem to be based on bipolar and gradable adjectives, which can be juxtaposed to ‘last’, ‘small’, and ‘old’ respectively. On the other hand, adjectives which derived from **uelH-* would be qualifying rather than bipolar and gradable in comparison with those three above. Therefore, it is highly possible that a superlative for **uelH-* was formed in a different way from *prismu*, *maimas*, and *nuvime*. While the *-ios-forms with the meanings ‘first’, ‘big’, and ‘new’ were morphologically extended with the simple *-mo-, the suffixation of *-ṃmo- to the *-ios-form of **uelH-* may have taken place. In other words, the superlatives derived from **uelH-* were formed by *-isṃmo- (= *-is-[zero-grade of *-ios-] + *-ṃmo-). If this idea is correct, its reconstructed form with e-grade **uela-isṃmo-* would change into

⁴⁷ See Nishimura (2004).

⁴⁸ The similar treatment of adjectives of this sort can be seen in Celtic languages. See Jasanoff (1991, 180-81).

*uolaisumo- with the change -e- to -o- due to the following dark -l-, which is actually attested as φολαισμοϛ. The *uela-ismo- also became *uelaisumo-, with e-vocalism sustained, in South Picene, then changed into *uelaismo- through the syncope of the third syllable, and furthermore -s- disappeared before -m- later, as the attested form uelaimes shows. Benediktsson (1960, 234) provides a reasonable hint to the syncope in this process, saying that “in quadrisyllabic forms with a long vowel in the second syllable from the beginning and a short vowel in the final syllable, a short vowel in the second syllable from the end was syncopated, if the syllable was open.” The zero-grade counterparts followed the same pattern of phonological changes: *uala-ismo- > *ualaisumo- > *ualaismo- > Oscan ualaemom and valaimas.

3. Conclusion

We have been dealing with the composite superlative suffixes in Sabellian languages. Through this discussion, the suffix *-ismo- has been reconstructed, and some productivity of this suffix has been revealed. On the other side, *-ismo- which is reconstructed for Latin may have also been used in Sabellian languages. The suffixal variety of this kind probably resulted from the time difference in the formation of the superlative, which depended on the meaning of the adjectival roots.

Bibliography

- Bader, F. (1990): Traitements de laryngales en groupe: allongement compensatoire, assimilation, anaptyxe. In *La reconstruction des laryngales*, 1-47. Paris: Belles Lettres.
- Beekes, R. S. P. (1972): H₂O. *Sprache* 18 (2): 117-31.
- (1974): Some Greek -aRa-Forms. *MSS* 34: 9-20.
- Benediktsson, H. (1960): The vowel syncope in Oscan-Umbrian. *NTS* 19: 157-297.

- Brugmann, K. (1903): Zu den Superlativbildungen des Griechischen und des Lateinischen. *IF* 14: 1-15.
- Buck, C. D. (1928): *A grammar of Oscan and Umbrian*. 2nd ed. Boston: Ginn & Company. Repr., Hildesheim: Georg Olms Verlag, 1995.
- Coleman, R. (1992): Italic. In *Indo-European numerals*, ed. J. Gvozdanović, 389-448. Berlin: Mouton de Gruyter.
- Cowgill, W. (1963): Review, J. Puhvel: *Laryngeals and the Indo-European verb*. *Language* 39 (2): 248-70.
- (1965): Evidence in Greek. In *Evidence for laryngeals*, ed. W. Winter, 142-80. The Hague: Mouton & Co.
 - (1970): Italic and Celtic superlatives and the dialects of Indo-European. In *Indo-European and Indo-Europeans*, ed. G. Cardona, H. M. Hoenigswald, and A. Senn, 113-53. Philadelphia: University of Pennsylvania Press.
- Hamp, E. P. (1982): 'Arm, shoulder.' *JIES* 10 (1-2): 187-89.
- (1983a): Skt. *ātāh*. *Indo-Iranian Journal* 25 (2): 102.
 - (1983b): Indo-European substantives in *-mó- and *-mā-. *KZ* 96 (2): 171-77.
- Jamison, S. (1988): The quantity of the outcome of vocalized laryngeals in Indic. In *Die Laryngaltheorie und die Rekonstruktion des indogermanischen Laut- und Formensystems*, ed. A. Bammesberger, 213-26. Heidelberg: Carl Winter.
- Jasanoff, J. H. (1991): The origin of the Celtic comparative type OIr. *tressa*, NW *trech* 'stronger'. *Sprache* 34 (1): 171-89.
- Joseph, L. S. (1982): The treatment of *CR̥H- and the origin of CaRa- in Celtic. *Ériu* 33: 31-57.
- Kortlandt, F. (1988): On the development of PIE. final syllables in Tocharian. *Tocharian and Indo-European Studies* 2: 80-88.
- Kuryłowicz, J. (1956): *L'apophonie en indo-européen*. Wrocław: Zakład Imienia Ossolońskich Wydawnictwo Polskiej Akademii Nauk.
- Lazarini, M. L. and P. Poccetti (2001): *Il mondo enotrio tra VI e V secolo a.C.: L'iscrizione paleoitalica da Tortora*. Naples: Loffredo Editore.
- Leumann, M. (1977): *Lateinische Laut- und Formenlehre*. 5th ed. Munich: C. H. Beck'sche Verlagsbuchhandlung.
- Lindeman, F. O. (1965): La loi de Sievers et le début du mot en indo-européen. *NTS* 20: 38-108.
- Mayrhofer, M. (1987): Die Vertretung der indogermanischen Laryngale im Lateinischen. *KZ* 100 (1): 86-108.
- Meiser, G. (1986): *Lautgeschichte der umbrischen Sprache*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- (1998): *Historische Laut- und Formenlehre der lateinischen Sprache*. Darmstadt: Wissenschaftliche Buchgesellschaft.

- Nishimura, K. (2001): Superlative suffixes in Indo-European and Latin: Relation to ordinal numbers and process of variation. *Kyoto University Linguistic Research* 20: 37-50.
- (2004): Development of the prevocalic * η in Latin. *Glotta* 80: 231-50.
 - (2006): Latin *-issimus*. *Studia Etymologica Cracoviensia*. 11: 105-13. (Orig. pub. 2000. *Kyoto University Linguistic Research* 19: 33-41.)
- Nussbaum, A. J. (1997): The "Saussure Effect" in Latin and Italic. In *Sound law and analogy: Papers in honor of Robert S. P. Beekes on the occasion of his 60th birthday*, ed. A. Lubotsky, 181-203. Amsterdam: Rodopi.
- Pinault, G.-J. (1982): A neglected phonetic law: the reduction of the Indo-European laryngeals in internal syllables before yod. In *Papers from the 5th Internal Conference on Historical Linguistics*, ed. A. Ahlqvist, 265-72. Amsterdam: John Benjamins Publishing Company.
- (1989): Introduction au tokharien. *Actes des sessions de linguistique et de littérature* 7: 3-224.
- Pisani, V. (1964): *Le lingue dell'Italia antica oltre il latino*. Turin: Rosenberg & Sellier.
- Planta, R. von (1893-97): *Grammatik der oskisch-umbrischen Dialekte*. 2 vols. Strasbourg: Karl J. Trübner.
- Pocetti, P. (1979): *Nuovi documenti italici: A complemento del manuale di E. Vetter*. Pisa: Giardini.
- Poultney, J. W. (1959): *The bronze tables of Iguvium*. Oxford: American Philological Association.
- Rix, H. (1992): *Historische Grammatik des Griechischen: Laut- und Formenlehre*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- (ed. 2001): *Lexikon der indogermanischen Verben*. 2nd ed., rev. and enl. Wiesbaden: Dr. Ludwig Reichert Verlag.
 - (2002): *Sabellische Texte: Die Texte des Oskischen, Umbrischen und Südpikenischen*. Heidelberg: Carl Winter.
- Schrijver, P. (1991): *The reflexes of the Proto-Indo-European laryngeals in Latin*. Amsterdam: Rodopi.
- Schulze, W. (1904): *Geschichte lateinischer Eigennamen*. Berlin: Weidmannsche Buchhandlung.
- Sihler, A. L. (1973): Proto-Indo-European * smH - 'pair'. *JIES* 1 (1): 111-13.
- (1995): *New comparative grammar of Greek and Latin*. New York: Oxford University Press.
- Steinbauer, D. (1993): Etruskisch-ostitalische Lehnbeziehungen. In *Oskisch - Umbrisch Texte und Grammatik (Arbeitstagung der Indogermanischen Gesellschaft und der Società Italiana di Glottologia vom 25. bis 28. September 1991 in Freiburg)*, ed Helmut Rix, 287-306. Wiesbaden: Dr. Ludwig Reichert Verlag.

- Stifter, D. (1999): Review, Dagmar Wodtko: *Wörterbuch der keltiberischen Inschriften. Sprache* 41 (1): 56-72.
- Szemerényi, O. J. L. (1989): *An den Quellen des lateinischen Wortschatzes*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Untermann, J. (2000): *Wörterbuch des Oskisch-Umbrischen*. Heidelberg: Carl Winter.
- Vetter, E. (1953): *Handbuch der italischen Dialekte*. Heidelberg: Carl Winter.
- Vine, B. (1993): *Studies in archaic Latin inscriptions*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Wachter, R. (1987): *Altlateinische Inschriften: Sprachliche und epigraphische Untersuchungen zu den Dokumenten bis etwa 150 v. Chr.* Bern: Peter Lang.
- Watkins, C. (1965): Evidence in Italic. In *Evidence for laryngeals*, ed. W. Winter, 181-89. The Hague: Mouton & Co.