## Sibilants in Carian

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Our honorand has a long-standing interest in the "minor" Indo-European languages of Anatolia, to whose understanding he has made so many contributions. Professor Neumann has always exemplified, both in his own work and in his generous reception and facilitation of the work of others, the collaborative and incremental nature of our discipline. In this spirit, and in gratitude for the many personal kindnesses he has shown to me, I offer him what I hope is one more small step in elucidating one of the more difficult puzzles that Carian presents us.

The Carian alphabet has at least three letters that appear to represent sibilants, and probably a fourth. Despite the efforts of a number of scholars (e.g. Schürr 1991-93, 171 f., Adiego 1993b, and Hajnal 1998), there is still no consensus on the approximate phonetic value of these sounds nor on their prehistoric sources. In sorting out this tangle of conflicting claims, I will try to adhere to two basic principles. First, I give priority to synchronic evidence, in the form of alternations between sounds (or lack thereof) and equivalences in other writing systems (notably Egyptian and Greek). I then try to reconcile *presumed* prehistoric developments based on comparison with related languages with *this* evidence (*not* vice-versa!). Second, I apply "Occam's razor" and seek the simplest account consistent with the data.

For letter number 15 (outside Kaunos) the synchronic evidence points clearly to a voiceless palatal (or at least palatalized) sibilant. Ray 1981, 155 cites the equivalence in MY L of the Carian name  $\check{s}$  arkbeom (now read  $\check{s}$  arkbiom) with Egyptian  $\check{S}$  fry (see for the essentials already Kowalski 1975, 90). As per Adiego 1993a, 152 ff., this value is confirmed by additional name equations such as arlis

With the confirmation of the new Carian-Greek Bilingual from Kaunos, I now take for granted the essential validity of the Adiego-Ray-Schürr interpretation of the Carian alphabet (see most recently Adiego 1998a). The system naturally remains open to revision of details. I use what is now the conventional numbering of the Carian letters and of the Carian texts, for which see Schürr 1992 or Adiego 1993a. Based on the equation of the name ταπου with Egyptian T-i'm-w (Adiego 1993a, 146ff. with references), it seems likely that letter 40 (now transliterated τ) is some kind of affricate, [č] or [ts]. The letter is rare in Carian appellatives, but occurs notably as an ending in D 7 from Hylarima and in 39\*\*. The suggestion of Hajnal 1995, 15, note 9 that the ending represents a genitive in \*-ts (cf. already Adiego 1993a, 214) is possible, but anim. nom. plural must also be considered. I will have no more to say about this sound here.

= 'Irš( $\exists$ ) = 'Aρλισσις. The evidence from Egyptian, which distinguishes /s/ and /š/, is unequivocal. We must in view of this reject the proposal of Hajnal 1998, 90 ff. that  $\langle \check{s} \rangle$  is a voiced dental sibilant, based entirely on plausible but quite unprovable parallels with Lycian and Milyan.

A voiceless palatal  $\check{s}$  also makes just as much sense historically. The frequent first element of names  $\check{s}(a)r$ - surely reflects \*ser- 'above, hyper-' (see Adiego 1993a, 278 or Neumann 1994, 21), and we may assume the same palatalization as seen in Lydian serli-/selli- 'supreme'. Furthermore, by the elegant solution of Adiego 1998a, 14 sign 15 having been employed at Kaunos for /t/, the value  $\check{s}$  was displaced there to sign 16, merely a modified variant of 15.² The new Carian-Greek Bilingual shows that as a grammatical ending sign 16 represents animate accusative plural. If we assume the same generalization of animate nominative plural to accusative plural seen in Hieroglyphic Luvian and perhaps also in Lydian (see for the latter Melchert 1991, 137 f.), we may straightforwardly derive the Carian ending: \*-Vnsi > \*-Vnši > Vši > \*-(V)š (the order of the first two changes is indeterminate).³ I therefore take the transliteration of letter 15 (respectively sign 16 in Kaunos) as  $\check{s}$  as accurate and not merely conventional.4

Letter 17 has long been assigned a value s based on the shape of the sign (= Greek "san"). The rendering of the Carian name n'rskle- by Nrskr in M 7 brought confirmation (see Ray 1981, 158 and for the emendation of the first letter Schürr 1992, 136, as did the consistent rendering of Egyptian Psmtk as psma-°. Of special significance is the use of this letter in the new bilingual to render Greek s in personal names: lusikla- for  $\Lambda uoux \lambda$ °, lusikrata- for  $\Lambda uoux \rho \alpha \tau$ °. Note also the equivalences  $u/uksmu = Ou\alpha\xi\alpha\mu\omega\varsigma/Ou\alpha\xi\alpha\mu\alpha\varsigma$  (Neumann apud Adiego 1993a, 236) and p/biks=  $\Pi u\xi$ - $\omega\delta\alpha\rho\sigma\varsigma$  etc. (Adiego 1994b, 42 f. and 46; 1995, 25 ff.; Schürr 1996b, 151 ff.). All evidence thus points to a synchronic value of a voiceless dental/alveolar sibilant. It is also worth noting that there are no assured examples of alternation between s and either s or s.6

This value also is consistent with the likely prehistoric sources of Carian s. As per Adiego 1993a, 169 (following already Georgiev), we can isolate a Carian demonstrative stem s(a)n- 'this' cognate with Luvian za- < \*ke/o-. See further Melchert 1993a, 79 f. and Hajnal 1998, 86. This comparison suggests that Carian, like Lycian, developed the affricate [ts] (or similar) further to a simple dental sibilant [s]. Support for this assumption comes from the equation of Carian sb 'and' with Milyan sebe (Neumann 1993, 296), a reinforced form of Lycian se 'and', which Adiego 1995, 31 f. has plausibly derived from ke, comparing Venetic ke. Other sources for se are controversial. What has been lacking is an incontrovertible example of Carian se reflecting prehistoric simple e.

Schürr has now provided this desideratum. Already in Schürr 1992, 153 f. he proposes that the ending -s marks dative singular in Carian. In Schürr 1996c, 66 he explicitly interprets MY L šarkbiom: ζidks mδane: as 'Šarkbiom dem Stidk gab-ihn'. Apud Adiego 1998a, 19, Schürr further argues that the Carian portion of 4 Š, which he now reads as šarnais | sb taqbos, means 'to Š. and T.' and forms a "complementary" bilingual with the formulaic Egyptian text 'Isis, give life'. Adiego himself doubts that the two texts are integrated in this fashion, but admits the possibility that

<sup>&</sup>lt;sup>2</sup> I find Adiego's account superior to the more complicated scenario sketched by Hajnal 1998, 99 ff. The alleged use of letter 16 in inscription 38\*\*a from Iasos, where it would stand beside both letters 15 and 14 (t), remains a separate problem. Pugliese Carratelli 1985, 150 reads the letter in question as a. Gusmani 1988, 147 f. correctly indicates that the shape differs from the clear a that is the first preserved letter of the inscription and suggests letter 16 instead. But as the excellent photograph following Pugliese Carratelli's article shows, the letter also bears little resemblance to the shape of letter 16 as attested in Kaunos D 16, 30\*, and 44\* (the Bilingual), where it has a quite long horizontal stroke, or to that in Kaunos 28\* (see Schürr 1996a, 158) or D 15 (Taşyaka). To be sure, Schurr 1996b interprets the shape in 38\*\*a as transitional between what he claims is the oldest form of the letter in Si. 62 F and those of Tasyaka and Kaunos. However, I find his identification of the letter in Si. 62 F anything but certain (see his own sketch of the letter as it actually appears, Schurr 1996b. 150!). Adjego (pers. comm.) reminds me that 38\*\*a uses two quite different forms of r. At present I am quite prepared to entertain that the inscription also uses two forms of a (one in which the upper right stroke is curved instead of straight): cf. the second variant for  $\langle a \rangle$  in the third column of the table in Masson 1978, 10! In any case, I find current evidence quite insufficient for positing another sibilant in Carian (Hajnal 1998, 102).

See Hajnal 1997, 148, with notes 10-11, who plausibly suggests that  $k\delta u sols$  in text 41\* ( $\xi$  = letter 16) may show an animate *nominative* plural ending and considers derivation from \*V(i)nsi.

I am now willing to concede (contra Melchert 1994, 314 f.) that  $\langle z \rangle$  in Milyan (and Lycian) at least sometimes represents a voiced dental fricative [z], as long advocated by Gusmani and others (see the references, loc. cit., and Hajnal 1998, 93). In the animate accusative plural \*-Vns and the nominative plural \*-Vnsi built upon it, voicing to [nz] is just as likely as epenthesis to [nts]. Lycian, however, shows that voicing here is not preordained, since it has anim. acc. plural -Vs and anim. nom. plural \*-V\(\tilde{V}\)i < \*-Vnhi < -\*Vnsi. We are thus under no obligation to assume voicing for Carian either, pace

Hajnal. Since neither Egyptian nor Greek has a [z] or  $[\check{z}]$ , we obviously cannot prove that voicing did not take place, but I find this a gratuitous assumption in the absence of positive evidence.

<sup>5</sup> It is the direction of the equivalence that is crucial. Since Greek has only one sibilant fricative, its use of σ(σ) to render Carian s, s and s is predictable. It is quite noteworthy that Carian s, not s or s, was chosen to represent Greek /s/.

Contra Adiego 1993a, 195 there is no sound basis for assuming that u-s-o- $\tau$  (sic!) in D 7 and 39\*\* is related to the onomastic element -u-s-o- $\lambda$ -. See the objections raised by Hajnal 1995, 15, note 9.

the Carian means independently 'for Š and T.'. I see no reason why the author could not have had the sophistication to intend that the Egyptian and Carian could be read both independently (the former as a banal wish formula and the latter as dedicatory) and together, as per Schürr.

Adiego protests that in all instances -s can be taken as marking the genitive (possession) rather than dative (recipient). In 4  $\check{S}$  just cited the Carian would mean 'belonging to  $\check{S}$  and T.'. Likewise in the Lion (ntros: pr37idas / orša / nu m $\delta$ ane: uksi urm $\check{s}$ ) Adiego takes the opening phrase as a genitive depending on orša, which he plausibly interprets as referring to the object. However, given the presence of the verb  $m\delta a$ -(ne), it is more likely that one should take ntros pr37idas as the recipient (Schürr, per letter), which has been fronted for prominence, while the subject has been relegated to the end, thus: 'Uksi, (son) of Ur(o)m, has now given it, the orša, to the priest of Apollo, the Branchid'.

It is true that -s also appears to function as a genitive. In the Bilingual, lines 1-2  $i[po\zeta]inis$ -δ rual surely means 'under/in the r. of Hipposthenes', a dating formula equivalent to the Greek ἔπι δημιο[υ]ργοῦ 'Ιπποσθένους: see independently Hajnal 1997, 150 and Melchert 1998, 37. One may also concede that several examples are ambiguous, permitting a reading as either genitive or dative. These points, however, argue for Schürr's proposal, not against it. A shift in function from genitive to dative is trivial: compare within Anatolian Lydian dative-locative plural -av < genitive plural \*-ōm, as well as the use of the genitive to indicate recipient in Tocharian, Sanskrit, and elsewhere. Ambiguous cases such as that in 4 Š cited above form precisely the "conduit" for the shift in meaning. Coexistence of both functions is likewise unproblematic: while Lydian -av for the most part marks dative-locative, in at least one example (śfarda(v)-k artimuλ in 11,9) the synchronic meaning must still be possessive: 'to Artemis of the Sardians' (see Gusmani 1964, 202, with reference to at

least one other likely example). Possessive use of the genitive also continues in Tocharian and Sanskrit alongside the use to mark recipient.

I thus see no reason to deny that the ending -s marks the recipient at least in those cases where it cooccurs with  $m\delta a$ -(ne) and variants meaning 'give' (or similar). The use to mark possession, however, betrays its origin as a genitive, and that is its significance for our problem of defining the sibilants. As opposed to s, which inflects in Carian (anim. acc. sg. -s(u)n), there is no evidence that -s is anything but an ending.

This fact argues that it should be identified with the Lycian genitive singular in -a/ehe, which does not agree in gender and case with its possessed noun and which continues a PIE \*-e/oso seen e.g. in Germanic (Gothic -is, Old English -æs, etc.): see Bader 1991, 139 f. and in detail Adiego 1994a. We thus have in genitive-dative -s our desired example of Carian s from prehistoric simple \*s.10

Identification of -s as a dative singular ending seems to contradict the notion that forms such as ntro (34\*) and  $trqu\delta e$  (38\*a) are dative singulars (for the former see Melchert, 1993a, 80, and for the latter Adiego, 1994b, 38 and 54). I must now follow Schürr in seriously doubting the existence of the datives ending in a vowel. In Melchert 1993a I offered a tentative coherent analysis of text 34\*, the "New York bronze bowl": srquq srqqq srquq srqqq srqq srqqq srqq srqq

I termed pídl an apposition to the direct object snn orkn, but it can hardly be a true apposition, since it is separated from the direct object by ntro. If pídl means 'gift' or the like and is coreferential with snn orkn, which I still think it is, it would be more accurate to say that it is epexegetic, an add-on phrase further defining the direct object. If that is true for pídl, then the same can be true for ntro. As per Schürr 1998, 158, it is more likely that ntro is a derivative of the name for Apollo than the direct reflex of the divine name in Carian. One may thus interpret 34\* as: 'Šrquq, (son) of Q., dedicated this bowl – the priest of Apollo as a gift'. Given the specification of

For the interpretation of ntro- and pr37ida- see Schürr 1998, 158 and further below. I must make clear that only the interpretation of ntros pr37idas as the recipient in the dative and mδa-ne as the verb are due to Schürr, who interprets the rest of the text quite differently from me. Hajnal 1997, 154 gives essentially the same syntactic analysis as mine, expect for -ne. I will soon discuss elsewhere the problem of mδa(ne) and similar forms, but I am at last convinced that these are verbs, as per Schürr and others.

<sup>&</sup>lt;sup>8</sup> See Neumann apud Adiego 1994c, 250, note 6!

In addition to the other instances cited see also ntokris dúśολέ múdonś-xi 'of/for N., (son) of D., the m.' in M27. As Schürr points out (per letter), it is quite ad hoc to assume that just in this case Carian preserved a nominative singular \*-s.

The Lycian endings -ahe and ihe represent merely a trivial analogy from -ehe reflecting o-stem \*-e/oso, as per Adiego 1994a, 18. I must reject the derivation of Lycian -e/ahe from a recharacterized genitive \*-o/ās-os by Hajnal 1998, 84, note 11, et aliter.

Once again I must emphasize that this is my own syntactic interpretation. Schürr himself takes ntro pidl quite differently.

the giver as a priest of Apollo, the recipient would hardly need to be named explicitly. The context of  $trqu\delta e$  is far too obscure to assure any particular morphosyntactic analysis (the inscription is incomplete at beginning and end). In sum, I see nothing that stands in the way of Schürr's synchronic dative singular ending -s. 12

Confirmation that Carian s continues prehistoric simple \*s, combined with the synchronic evidence for [s], supports the idea cited above that Carian, like Lycian, also simplified prehistoric \*ts < \*k to simple s. This lends credence to the claim of Hajnal 1998, 86 ff. that Carian s also reflects \*-ns- and \*-nts. 13

There can be no doubt that letter 25 (now conventionally  $\hat{s}$ ) represents a further voiceless sibilant: note the equivalence of  $\hat{s}aru\hat{s}o\lambda$ - and  $\Sigma\alpha\rho\omega\sigma\omega\lambda\lambda\sigma\varsigma$  (Ray 1981, 161, following Meier-Brügger). The alternation of  $\hat{s}$  and  $\hat{s}$  in the Carian rendering of Egyptian Psmtk (usually  $psma\hat{s}k$ - but at least once  $psma\hat{s}k$ -) suggests a second sibilant with a palatal(ized) quality. Adiego 1993b offers as further support the observed alternation  $\hat{s}ias/\hat{s}as$  (a word referring to the tomb), and Schürr 1998, 146 has added the further example of  $k\delta u\hat{s}o-/k\delta u\hat{s}io$ -. The first word has no etymology, and Schürr's suggestion for the second is merely one possibility, but the importance of a following yod that could have conditioned palatalization remains. Finally, Adiego 1993b and 1998b, 71 also notes that on occasion Carian  $\hat{s}$  is rendered by Greek "sampi":

OαTαTιος (gen.) beside Oαοσασοις. This suggests something other than an ordinary dental [s].

Diachronic confirmation of a palatal(ized) value for  $\pm$  would be forthcoming if we could demonstrate independently that the possessive suffix  $\pm$  reflects the well-known Anatolian suffix  $\pm$ -asso- in its form  $\pm$ -assī with "i-mutation". We do have solid evidence for "i-mutation" elsewhere in Carian. As per Schürr 1996d, 96, ted 'father' and en 'mother' with their e-vocalism must represent  $\pm$  tedi and  $\pm$  with umlaut like Lycian tedi and  $\pm$  in, while Carian names in  $\pm$  likewise match CLuvian -alli- and Milyan -eli- (vs. those in  $\pm$ -o $\pm$ - CLuvian -alla-). Adiego 1998a, 15 f. has also made a strong case for Carian  $\pm$  and  $\pm$  as fronted  $\pm$  including the ethnic suffix - $\pm$  inspecifically from  $\pm$ -wVnī (= CLuvian -wanni-).

Further confirmation that the productive possessive suffix  $\dot{s}$  reflects "i-mutation" and palatalization may be available in the contrasting result in -p/biks- cited earlier. As per Melchert 1993b, 176 contra Starke 1990, 103 ff., there ist no neuter s-stem \* $p\bar{t}has$ - in Luvian, only a base noun \* $p\bar{t}ha$ - 'splendor; might' and a derived adjective \* $p\bar{t}hassa$ - 'luminous; mighty' (> noun 'lightning'). The onomastic element in Lycian and Carian may thus well represent a cognate of \* $p\bar{t}hassa$ - without i-mutation, an archaism preserved in names. Carian s would once again reflect unpalatalized \*-s(s)-.

There is one apparent problem with the otherwise attractive idea that possessive  $-\dot{s}$  continues specifically \*-assī-: the apparent anaptyctic -u- in the animate accusative singular form  $p\delta axm \dot{s}u\tilde{n}$  (D 10) and probably [...]- $\dot{s}un$  (Bilingual, line 13). How one solves this depends on whether we restore the patronymics in the Bilingual as  $l\dot{u}siklas[n]$  and  $l\dot{u}sikratas[n]$  (so Frei-Marek 1997, 35 with hesitation and Hajnal 1998, 100 f.) or assume that the forms are complete as is, with final -s (for recognition of both possibilities see Adiego 1998a, 18). In the latter case, they would represent genitives in -s < \*-Vso as described above. I then see no solution for anim. acc. sg. - $\dot{s}un$  except to assume (with Adiego 1994a, 18, Schürr 1991-93, 171, Hajnal 1998, 83¹⁰) that this represents an accusativus genitivi, i.e. a new secondary inflection of - $\dot{s}$ , which despite its origin as an inflected adjective in \*-assī-, had previously been reduced to an uninflected ending.¹⁵ This may be the correct solution, despite my earlier vehement protests to the contrary.

Much more speculatively, I think we should consider the possibility that Carian, like Lydian, likewise turned genitive plural \*-ōm into a dative-locative. By the new reading of Frei-Marek 1998, 2, the first word of the Bilingual reads kbidn. Contra Adiego 1998a, 12, the preservation of the first -i- vowel (vs. adjectival ethnicon kbdùn-) and the lack of any case ending (if the -n- is taken as part of the suffix) argue decisively that we are dealing with the name of the city. Since a plurale tantum for the city-name would be perfectly in order (cf. with Hajnal 1997, 149, Lycian Xbide-, which probably is plurale tantum), I find it plausible that kbidn may be simply 'in Kaunos'. Only further investigation will decide whether any other examples of final -n- in Carian lend themselves to such an interpretation.

Whether the former became s directly with the loss of \*n or via \*nts with epenthesis cannot be determined. Hajnal 1998, 89 f. correctly rejects Schürr's direct comparison (1991-93, 171 f.) of Carian iβ(a)rsi- with Lycian iprehi (which in turn matches CLuvian im(ma)rašša/i 'of the open country'). Schürr rejects derivation of the place-name Imbros from \*imr- 'open country'. I am not persuaded, but if he is right, this only clinches the argument against his equation of Carian ethnicon iβrsi- and the Luvo-Lycian word meaning 'of the open country'. In addition to Hajnal's derivation of -si- from \*-(i)ko- seen in CLuvian -izza- (+ \*-iyo-), one should also consider comparison with Lycian -ze/i-, which likewise forms ethnica and reflects another case of affricate [ts], in this case from \*-tyo- (see Gusmani 1961). If the Aramaic KBYDŠY of the Létôon Trilingual represented Carian -s- (see Adiego 1995, 18 ff.), it would confuse the picture. I am far from persuaded, however, that the Aramaic of a Lycian inscription reflects Carian. Compare now Schürr 1996b, 152, note 4, who considers Lydian a possible source instead. I believe we must give more weight in this case to the direct Egyptian and Greek renderings of assured Carian names.

For the notion of i-mutation see Starke 1990, 54 ff. For its possible appearance in Carian see Schürr 1996d, 96.

The quality of the anaptyctic vowel would then be due to the following nasal, which in pre-Carian could conceivably even have still been \*-m (cf. Melchert 1994, 181).

However, if what stood in the Bilingual were patronymics ending in -sn (NB with -s-!), these could continue directly \*-assom without -i-mutation, just like Lycian patronymics in  $-ah\bar{n}$  (a derivation I continue to insist upon for the reasons given in Melchert 1994, 324 f.). The quality of the final nasal, and hence the preceding anaptyctic vowel, in -sun would then be analogical to that in -sn < \*-assom. In any case, I do not see -sun as a serious obstacle to the otherwise attractive analysis of -s as a second palatal sibilant beside -s. A three-way contrast of /s/, /f/, and /g/ (or similar) would be typologically unremarkable. Distributing the values /f/ and /g/ between the letters s and s (cf. Adiego 1998a, 9) is probably beyond our capability. 16

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I utterly fail to understand the reasoning of Adiego 1993a, 278 or that of Hajnal 1998, 93 according to which the developments of \*-asso/i- in Lycian and Milyan argue for a voiced [z] value for Carian s. If, as discussed above (note 4), <z> in Lycian and Milyan is used for [z], then Milyan -ase/i- is surely not voiced. Furthermore a voiced [z] makes a bizarre intermediate stage for the change from Proto-Lycian voiceless \*s to Lycian voiceless h. Finally, voicing of a geminate \*-ss- seems unlikely a priori. Once again, it is impossible to disprove voicing in Carian, but I see not a shred of positive evidence for such a change.