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THE DEVELOPMENT OF COMMON EAST BALTIC
WORD-FINAL **-an*

In this paper I should like to dispute some of the earlier time-honored views of the development of certain of the final syllables in East Baltic. Below I give some **o-* and **ā-*stem Lithuanian paradigms along with the traditional views of the pre-forms underlying the present day endings.

	<i>*o</i> -stem	<i>*ā</i> -stem
	<i>diēvas</i> 'god'	<i>galvā</i> 'head'
Acc. Sg.	<i>diēv-q</i> < <i>*-an</i> < <i>**on</i> ¹	<i>gālv-q</i> < <i>*ān</i> ²
Instr. Sg.	<i>diev-ù</i> < <i>*-úo</i> < <i>**ō</i> ³	<i>gālv-a</i> < <i>*ān</i> ⁴
Gen. Pl.	<i>diev-ũ</i> < <i>*-uõn</i> < <i>**ōn</i> ⁵	<i>galv-ũ</i> < <i>*uõn</i> < <i>**ōn</i> ⁶
Acc. Pl.	<i>diev-ùs</i> < <i>*-úons</i> < <i>**ōns</i> ⁷	<i>gālv-as</i> < <i>*-as</i> < <i>**āns</i> ⁸

The reasons for positing such forms are to be found chiefly in the Greek cognate **o-* and **ā-*stem endings where we find e. g. the **o-*stem forms (acc. sg.) ἀδελφόν 'brother', (gen. pl.) ἀδελφῶν, (acc. pl. dialect form) ἀδελφόνς and the **ā-*stem forms (acc. sg.) χῶρᾶν 'country', (gen. pl.) χωρῶν, (acc. pl. dialect form) χῶρανς. The instrumental forms are posited chiefly on the basis of inner Baltic evidence.⁹

I am very suspicious, however, of those explanations which rely on a contrast of **/eR/* vs. **/ēR/* (*e* = any vowel, *R* = *i, u, r, l, m, n*) to explain the final syllable development of Baltic.

¹ Chr. S. Stang, *Vergleichende Grammatik der Baltischen Sprachen*, Oslo, Bergen and Tromsø 1966, 182; J. Endzelīns, *Baltu valodu skaņas un formas*, Rīga, 1948, 115.

² Stang, op. cit., 199; Endzelīns, op. cit., 123–124.

³ Stang, op. cit., 182; Endzelīns, op. cit., 115.

⁴ Stang, op. cit., 182; Endzelīns, op. cit., 124.

⁵ Stang, op. cit., 184; Endzelīns, op. cit., 117.

⁶ Stang, op. cit., 200; Endzelīns, op. cit., 125.

⁷ Stang, op. cit., 186; Endzelīns, op. cit., 117.

⁸ Stang, op. cit., 200; Endzelīns, op. cit., 125.

⁹ Stang, op. cit., 182, 189; Endzelīns, op. cit., 115, 124.

In a closed syllable the sequence $*/\bar{e}R/$ was shortened to $*/eR/$ at a very early Baltic (or Balto-Slavic) date¹⁰. A word-final syllable would be either closed or open depending upon whether the following word began with a vowel or a consonant (except, of course, in case the word happens to occur at the end of a sentence). In principle then the word-final sequence $*\bar{e}R$ would pass to $*eR$ (if the following word began with a consonant) or to $*-\bar{e}$ (if the following word began with a vowel). One of these two endings was then generalized.

For the endings mentioned in the first paragraph of this paper, I propose only the first alternative, i. e. that a final vowel was shortened before the word-final $/N/$ (=either $/n/$ or $/m/$). In other words, in Common Baltic (or more probably Common Balto-Slavic) the I. E. sequences $*/\bar{o}N/$, $*/\bar{a}N/$, $*/oN/$, $*/aN/$ all merged as $*/aN/$.

For the moment I shall pass over the $*o-$ and $*\bar{a}$ -stem accusative plural and focus my attention on the other cases under discussion (viz. the $*o-$ and $*\bar{a}$ -stem accusative and instrumental singular and the genitive plural), all of which were formally united as $*-aN$ in Common Baltic (and quite probably in Common Balto-Slavic). Furthermore I propose that in Common East Baltic a word-final tautosyllabic $*/aN/$ merged with $*/uN/$. The passage of $*/aN/$ to $*/uN/$ has nothing phonetically unlikely about it, cf. the similar changes which took place in Lithuanian dialects¹¹. Thus the endings in question were all represented by the morpheme alternant $*/uN/$ in case the following word began with a consonant and $*/aN/$ if the following word began with a vowel. Thus, for example, we can imagine that the accusative singular of the noun $*di\bar{e}vas$ 'god' might have had the form $*di\bar{e}vun$ in case the following word began with a consonant but $*di\bar{e}van$ in case the following word began with a vowel. The contrast between $*/aN/$ and $*/uN/$ would have been neutralized, but only in word-final position. Somehow, however, this contrast again became possible in word-final position. It seems to happen frequently that contrasts lost in certain positions can be re-established at morpheme boundaries. Thus, for example, in standard Lithuanian the nasal n was lost before spirants, but was re-established before the future morpheme $-s-$ so that today we find, e. g., the 3rd person future $gi\bar{n}s$ 'he will defend'. Thus the reestablishment of the contrast $*/aN/$ and $*/uN/$ in word-final position, i. e. at morpheme boundaries seems quite possible. Another possibility is that of dialect borrowing. Perhaps it was on-

¹⁰ In this regard one should compare the new explanation of the Baltic dative given by V. Mažiulis, *K baltijskomu i indoeuropejskomu dativu ed. č.*, *Baltistica*, 1967, 29–45. Mažiulis denies the traditional formulation that the Balto-Slavic dative is to be traced back to $*-\bar{o}i$ and gives a convincing alternative explanation. According to Mažiulis (32), „В высшей степени сомнительным является и само допущение что, напр., балто-славянский в середине слова знал и.е. $*-\bar{o}-$ + (постоянно тавтосиллабичный) сонант...“.

¹¹ Z. Zinkevičius, *Lietuvių dialektologija*, Vilnius, 1966, 96–102.

ly in certain dialects that word-final tautosyllabic */aN/ passed to */uN/ and the contrast was re-established when speakers of a dialect which had retained the contrast between */aN/ and */uN/ borrowed the ending */uN/ for certain case endings¹².

One can compare the case of the Lithuanian Samogitian dounininkas dialect which has the prefix *nū-* 'from' a form which cannot really be historically justified on the basis of that dialect. The cognate form in most other dialects seems to derive from Common Baltic **nō-* (cf. standard Lithuanian *nu-*) and should hence be represented by dounininkas **nou-*¹³. The form *nū-* could be the result of an analogical lengthening of *nu-* which arose perfectly naturally in a dialect where **nō-* > **nua-* > *nu* (with loss of the /a/ in final position). An alternative explanation is that it arose in the dūnininkas dialect where Common Baltic */ō/ > */ū/. In either case we have to do with a dialect borrowing. Another possible case of dialect borrowing is furnished by the 2nd singular present tense ending *-i* which derives from an IE **-i*¹⁴. Such a final /i/ should perhaps have passed to /e/ in the dounininkas dialect, but nevertheless we still find the ending *-i*, possibly also a borrowing from another dialect¹⁵.

¹² The passage of word-final */aN/ to */uN/ and subsequent loss of the nasal under the acute intonation may explain the loss of the secondary verbal endings in Baltic. Essentially such a phonemic change would have led to the identification of the secondary ending *-u* < **-uN* < **-aN* < **-oN* with the primary ending *-u* < **-ua* < **-ō*. Further evidence of the automatic nature of the vacillation between *-u* and *-an* is furnished by the Lithuanian prefix *su* (as in *su-eīti* 'to congregate') and *san-* (as in *sán-taka* 'confluence').

¹³ V. Grinaveckis, *Žemaičių tarmių žodžio pradžios vokalizmo dėšnių susiformavimas*, Kalbotyra, IX, 1963, 65–68, explains this unexpected vocalism as a special development of **ō* in all Samogitian dialects in proclitic position. There is no need for this explanation if we assume simple dialect borrowing.

¹⁴ W. R. Schmalstieg, Primitive East Baltic **-uo-*, **-ie-* and the 2nd Sg. Ending, *Lingua*, X, 1961, 369–374.

¹⁵ Similarly *marti* 'daughter-in-law' and the instrumental singular *sūnumi* 'with the sons' show a final *-i* which did not pass to *-e* in the dounininkas dialect. There is, however, another, more plausible explanation. At one point in the history of Lithuanian word-final */ĭ/ merged with word-final */i/. Thus etymologically there was no contrast between */i/ and */ĭ/. Schematically:

Medial position	Final position
/ĭ/	
/i/	/i/ (Neutralization of contrast between /i/ and /ĭ/)

In the dounininkas dialect the original word-final /i/ was phonemically identified with the /i/ of other positions. Or to put it in another way word-final [i] was felt to be an allophone of /ĭ/. Thus final *-i* split from that /i/ which passed to /e/ in the dounininkas dialect. There is, then, no need to posit a shortening of final */ĭ/ separately in the duonininkas dialect and in standard Lithuanian. The shortening of final */ĭ/ may well have taken place before the split into dialects.

All of this can perhaps be better understood if one accepts Hoenigswald's theory to the effect that all language change is essentially a result of borrowing from one dialect to another¹⁶. The changes which I have just described could well be understood as the result of spread of certain morphemes beyond their original borders. Essentially then the **o-* and **ā-*stem endings in question underwent different generalizations when the distinction between **/aN/* and **/uN/*, still phonemic in non-final position, became phonemic again in final position. The situation can be compared to that of English *of* and *off* which were originally the same word, but which, when split phonemically, came to have different meanings. Another example is furnished by English *my* and *mine*, which were originally automatic doublets, but which now have different functions. In any case the **o-* and **ā-*stem genitive plural and the **o-*stem instrumental singular adopted the variant **/uN/*, whereas the **o-* and *-ā-*stem accusative singular and the **ā-*stem instrumental singular adopted the variant **/aN/*. Why some morphological categories should be united with certain phonemic sequences remains unclear. All that one can say is that if doublet forms do exist in a language one of them is likely to be given one function whereas the other is likely to be given another function.

The **o-* and **a-*stem accusative plural was, of course, originally represented by **-ans*, which passed to **-uns* in word-final position. One can then imagine that there would have existed the following forms with the definite adjective: **o-*stem **ger-ans-juns diev-uns*; **ā-*stem **ger-ans-juns galv-uns*. The former was generalized to **ger-uns-juns diev-uns* and the latter was generalized to **ger-ans-jans galv-ans*.

Thus we reconstruct the Common East Baltic endings in the following way:

	<i>*o-</i> stem	<i>*ā-</i> stem
Acc. Sg.	<i>*diev-an</i>	<i>*galv-an</i>
Inst. Sg.	<i>*diev-un</i>	<i>*galv-an</i>
Gen. Pl.	<i>*diev-un</i>	<i>*galv-un</i>
Acc. Pl.	<i>*diev-uns</i>	<i>*galv-ans</i>

The loss of the nasal consonant (or denasalization) characteristic of the standard Lithuanian **o-* and **a-*stem instrumentals singular and accusatives plural is probably to be connected with the general shortening observed when a word-final vowel originally had the acute intonation, cf. e. g. the passage of **būs* to *bùs*

¹⁶ Henry Hoenigswald, *Language Change and Linguistic Reconstruction*, Chicago 1960, 54–58; Henry Hoenigswald, *Are There Universals of Linguistic Change*, *Universals of Language*, ed. Joseph Greenberg, Cambridge, Mass., and London, 1963, 30–52; see also Jerzy Kuryłowicz, *La nature des procès dits „analogiques“*, in *„Esquisses linguistiques“*, Wrocław–Kraków, 1960.

'will be', etc. The unstressed endings of Lithuanian accent classes 1 and 3 are probably analogical to the stressed forms of accent classes 2 and 4.

I had originally explained the **o*-stem accusative plural as a borrowing from the **u*-stem ending, but now I no longer consider this necessary¹⁷. I do, however, still hold to the basic argument of that explanation, i. e. that the definite adjective ending of the etymological **o*-stem accusative plural is a recent analogical development, which does not reflect the original ending.

But in order to explain this I shall repeat the history of the Common East Baltic vocalism. For Common Baltic it is possible to establish a system such as this:

<i>ĩ</i>	<i>ũ</i>
<i>ě</i>	<i>ō</i>
<i>ǣ</i>	

The next step was the creation of $/\bar{e}/_2$ which was the result of a monophthongization of $*/ei/$ and perhaps $*/ai/$ (under stress) giving:

<i>ĩ</i>	<i>ũ</i>
$\bar{e}_2 < */ei, ai/$	<i>ō</i>
<i>ě</i>	<i>ǣ</i>

The mid-vowels are not paired for length, but this situation was soon changed by the diphthongization of $*/\bar{e}/_2$ which passed to $/ie/$, and $*/\bar{o}/$ which passed to $/ua/$, creating thus the Common East Baltic system:

<i>ĩ</i>	<i>ũ</i>
<i>ě</i>	<i>ǣ</i>

In this system long vowels and diphthongs can be considered a combination of two short vowels. There is, however, no contrast between $/e/$ and $/a/$ after $/i/$ and $/u/$. Thus the diphthongs $/ie/$ and $/ua/$ are possible, but not $*/ia/$ or $*/ue/$; in other words it is possible to write the archiphoneme (or morphophoneme) $/A/$ for both $/e/$ and $/a/$ when the contrast between these two latter phonemes is neutralized. Thus $/ie/$ and $/ua/$ can be written as $/iA/$ and $/uA/$ respectively. An examination of Latvian and Lithuanian paradigms will reveal that frequently a word-final morpheme will appear without $/A/$, whereas a historically non-final allomorph of the same morpheme will contain the $/A/$. One can compare the standard Latvian paradigms given below both in their traditional orthography (T0) and the etymological transcription (ET). The contemporary Latvian definite endings

¹⁷ W. R. Schmalstieg, The East Baltic accusative plural, *Lingua*, XVI, 1966, 377–382; W. R. Schmalstieg, A Note on Certain Balto-Slavic Accusatives, *Baltistica*, III, 1967, 47–55.

were etymologically in non-final position. Today as a result of the loss of certain final vowels they appear in word-final position.

Etymological **o*-stem (singular)

	Indefinite Endings		Definite Endings	
	TO	ET	TO	ET
Gen.	- <i>a</i>	<i>a</i>	- <i>ā</i>	<i>aA</i>
Acc.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>
Instr.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>

Etymological **ā*-stem (singular)

Nom.	- <i>a</i>	<i>a</i>	- <i>ā</i>	<i>aA</i>
Gen.	- <i>as</i>	<i>as</i>	- <i>ās</i>	<i>aAs</i>
Acc.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>
Inst.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>

Etymological **o*-stem (plural)

Nom.	- <i>i</i>	<i>i</i>	- <i>ie</i>	<i>iA</i>
Gen.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>
Acc.	- <i>us</i>	<i>us</i>	- <i>uos</i>	<i>uAs</i>

Etymological **ā*-stem (plural)

Nom.	- <i>as</i>	<i>as</i>	- <i>ās</i>	<i>aAs</i>
Gen.	- <i>u</i>	<i>u</i>	- <i>uo</i>	<i>uA</i>
Acc.	- <i>as</i>	<i>as</i>	- <i>ās</i>	<i>aAs</i>

Other Baltic forms which have a long vowel or /*uA*/ plus a tautosyllabic nasal are the result of contaminations. Thus for example the Lithuanian dialect **o*-stem, instrumental singular ending (*balt*)*uom* is a contamination of the ending -*um* (from the **u*-stems) with **-uo* (from the definite form of the **o*-stems)¹⁸.

The **ā*-stem definite acc. pl. form *baltosias* reflects an earlier **baltāsias*¹⁹. The penultimate syllable */*ās*/ can be analyzed as */*aAs*/ with the analogically inserted morphophoneme /*A*/ which is characteristic of the pre-final allomorph, just as the **o*-stem acc. pl. penultimate syllable is to be analyzed as /*uAs*/.

Thus, as I have pointed out before, the Lithuanian nom. pl. indefinite adjective ending /*i*/ is to the definite ending /*iAji*/ as the indefinite acc. pl. ending /*us*/ is to /*uAšus*/. In other words the morphophoneme /*A*/ which is etymologically legitimate in the definite nominative plural ending is analogical in the definite accusative plural

¹⁸ Z. Zinkevičius, op. cit., 273.

¹⁹ Ibid., 291.

ending. The etymologically correct **o*-stem definite accusative plural ending is preserved in the Samogitian dialect form */ūšus/*. The standard Lithuanian form */uAšus/* is then an innovation. The development of the **o*-stem instrumental singular is comparable to that of the accusative plural. The definite adjective ending */uAju/* merely contains the morphophoneme */A/* which is found in other pre-final allomorphs of the definite adjective. One can posit an original ending **-aN* likewise for the early Common Slavic **o*- and **ā*-stem accusative singular and genitive plural. The details of this development can be found in my article, „Slavic *o*- and *ā*-stem Accusatives“, Word XXI (1965), pp. 238–243. As I pointed out in this article an etymological **-aN* could give an etymological **-ǔ*, **-o* or **-ǫ*, depending upon the conditions of sentence sandhi. An etymological **-aN* passed to **-uN* in closed syllables. This **-uN* was then generalized in certain endings (i.e. the **o*- and **ā*-stem accusative singular and genitive plural). In later Common Slavic the word final sequence **-aN* > **-a* > **-o* (i.e. in the neuter **o*-stem nominative and accusative singular) and *-uN* > **-ǔ* if the next word began with a vowel (i.e. in the **o*-stem accusative singular and the **o*- and **ā*-stem genitive plural), but to **-ǫ* in case the next word began with a consonant (i.e. the **ā*-stem accusative and instrumental singular, the form in *-ǫjo* being a later development).

I did not discuss the **o*-stem instrumental singular in the above mentioned article. But I presume that this prehistoric Slavic ending must have shown the doublet forms **-o* and **-ǔ* from an original **-aN* or **-uN*. These endings in **-o* and **-ǔ* were reinforced by the addition of **-mǐ* from the **ǔ*-stems. (One can compare the similar aforementioned contamination of the **o*- and **u*-stems in Lithuanian dialects). The Old Church Slavic ending *-omb* derives from **-o* plus **mǐ* and the Old Russian ending *-ǫmb* from **-ǔ* plus **mǐ*.

The Baltic and Slavic families give evidence for the etymological formal identity of certain of the endings, although the evidence is different in each family. Thus Slavic gives direct evidence for the identity of the **o*-stem accusative singular and the **o* and **ā*-stem genitives plural, the common ending of which is *-ǫ* in Old Church Slavic. Slavic also gives direct evidence for the original identity of the **o* and **ā*-stem accusatives plural, the common ending of which is *-y* < **-uNs* < **-oNs* < **-aNs*. Both Baltic and Slavic give evidence of the common ending of the **ā*-stem accusative and instrumental singular which is *-ǫ* in Old Church Slavic, and which can be reconstructed as **-an* in Baltic. Baltic, however, gives evidence of the original identity of the **o*- and **ā*-stem accusatives singular, both of which end in *-a* in Lithuanian. Baltic also gives evidence of the original identity of the **o*- and **ā*-stem genitives

plural, both of which end in *-u* in Lithuanian. Thus in principle the following endings can be reconstructed for Balto-Slavic:

	<i>*o</i> -stem	<i>*ā</i> -stem
Acc. Sg.	<i>-aN</i>	<i>-aN</i>
Instr. Sg.	<i>-aN</i>	<i>-aN</i>
Gen. Pl.	<i>aN</i>	<i>-aN</i>
Acc. Pl.	<i>-aN_s</i>	<i>-aN_S</i>

It is the dissyllabic endings of Balto-Slavic, viz, the dative plural and the instrumental plural which are the easiest to etymologize. The shortening of the Balto-Slavic long diphthongs led to the identification of many of the **o*- and **ā*-stem endings, if indeed they were etymologically separate at earlier stages. The close relationship between the **o*- and **a*-stems could, however, lead one to suppose that they never were distinct in all of the oblique cases, and that the differences arose later in order to sharpen the distinction between the etymological *o*- and *ā*-stems.

The chief difference between the theories which I propose and the traditional explanations is that the traditional explanations presuppose a considerable amount of phonological complexity. I have minimized the phonological complexity, essentially limiting it to a single change in East Baltic, viz. the passage of word-final **/aN/* to **/uN/*, but I have compensated for this by positing a considerable amount of morphological complexity and randomness in my theoretical constructs. I doubt if any real proof can be furnished either for the traditional theories or those which I propose. On the other hand the history of known languages is so full of morphological developments similar to what I have proposed that it seems just as probable to posit complex morphological developments as complex phonological developments. One might object that the traditional theories are easier to follow than the ones that I have proposed. All that one can answer to this is that language change does not necessarily proceed in a fashion to make it easier for later generations to discover what has happened in the past.

Addendum

I should like to take this opportunity to thank Professor Kazlauskas for certain improvements in this article. In a personal letter to me he has objected that it seems unlikely to him that a word-final **-an* would become **-un* in those dialects in which word medial *an* does not become *un*. In principle this is a reasonable objection, because on the whole it seems preferable to posit the same phonological developments in word-final position as in word-medial position. In fact I am very much against all of the complicated ad hoc laws of phonological development devised to take care of the various Indo-European noun inflections. I would consider it more

plausible to transfer the complications from the phonological plain to the morphological plane. Most of the surprises in the history of the inflectional endings of recorded languages are the result of analogical rather than phonological developments. It may seem unlikely to posit a passage of word-final **-an(s) > *-un(s)*. On the other hand this seems more likely to me than the traditional explanations which require one to date the shortening of long diphthongs after the East Baltic diphthongization of **/ō/ > /ua/*. My choice of positing a special development of word final **-an(s)* depends chiefly on the fact that I see no better alternative. The shortening of long diphthongs is certainly a very early development dating before the split into East and West Baltic and perhaps even dating back to Common Balto-Slavic times. The only other reasonable alternative which I see is to suppose that the attested forms of the genitive plural of all stems, the accusative plural and instrumental singular of the **o*-stems are somehow borrowed from some other stem category such as the **u*-stems. As of now I see no reasonable solutions (other than those two mentioned above) to this problem. If somebody were to suggest a better solution (and by a better solution I mean one which did not require one to place the shortening of long diphthongs at a late date), I would possibly accept it.

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