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A NOTE ON CERTAIN BALTO-SLAVIC ACCUSATIVES

The steady advance of research in Balto-Slavic linguistics seems to be leading to the discovery of more and more similarities in the development of these two language families. One can only agree with V. Mažiulis, who says: На основании того, что славянские языки стоят ближе всего к балтийским, мы не считаем невероятным принятие того, что развитие индоевропейской системы гласных на общеславянской почве до определенной эпохи характеризовалось этапами, аналогичными общебалтийским, иначе говоря, эволюционные этапы общеславянской системы гласных могли быть в общем тождественными с этапами развития общебалтийской системы гласных, видимо, до эпохи ПОБ¹. (ПОБ. = позднеобщебалтийский.)

In this paper I hope to show that it is possible that Old Prussian furnishes a key to the understanding of the development of the *o*- and *ā*-stem accusatives (and possibly the *o*- and *ā*-stem genitive plural) in Balto-Slavic. I propose that in Balto-Slavic the *o*- and *ā*-stem accusative singular (and genitive plural) ended in **-an* (as in Old Prussian) and that the *o*- and *ā*-stem accusative plural ended in **-ans* (as in Old Prussian)².

Slavic Developments

In Slavic **-an* passed to **-un* in closed syllables³. Depending on conditions of sentence sandhi this **-un* had a double development. If the following word began with a vowel **-un* passed to **-ŭ* (as in the Slavic *o*-stem accusative singular, the *o*- and *ā*-stem genitive plural). If the following word began with a consonant the **-un*

¹ В. Мажюлис, Некоторые фонетические аспекты балто-славянской флексии, *Baltistica*, I (1965), 20–21.

² William R. Schmalstieg, Slavic *o*- and *ā*-Stem Accusatives, — *Word*, XXI (to appear).

³ George Y. Shevelov, *A Prehistory of Slavic*, New York, 1965, 332–333.

passed to *-*o* (as in the Slavic *ā*-stem accusative singular)⁴. (Examples of the type Lith. *lūnkas* = Slavic *lyko*, etc. are too uncertain to be considered⁵.) The phenomenon is similar to that observed in modern French where the word *bon* is pronounced as (*bō*) if a word beginning with a consonant follows (e.g. *bon chien*), but as (*bon*) if a word beginning with a vowel follows (e. g. *bon ami*). Different generalizations of sandhi doublets are quite common in the history of various languages. In English the words *off* and *of* are etymologically the same word, which developed differently depending on the stress, although probably no speaker of contemporary English would now recognize these as having a common origin on the basis of the meanings of the two words. Likewise the English word *on* lost the nasal element in unstressed position so that we now have, for example, the doublets *ashore* and *on shore*⁶. Similarly the two English words *maid* and *maiden* owe their separate existence to different generalizations of sandhi doublets.

One further parallelism between Baltic and Slavic, important for this discussion, is the fact that the contrast between front and back vowels was lost after palatalized consonants (i.e. consonants immediately followed by (j))⁷. In Slavic the passage of Proto-Slavic **jau* to **ju* modified this situation somewhat, because it created a *u*, a back vowel which could stand after a palatalized consonant. Thus in principle after unpalatalized (hard) consonants all Slavic vowels were possible, i.e. *ī, i, e, ě, e, a, o, ū, u, o, y*. But after palatalized consonants only the front vowels *ī, i, e, e, ě* (or *a*, although here there is no contrast between *ě* and *a*), the back vowels *u* and *o*. One might well ask how *o* could have come to exist in position after a palatalized consonant, because the Balto-Slavic sequence **jan* passed to *jē* in Slavic. In this case we have to do with an analogical substitution of *o* after a palatalized consonant. The vowel *o* was merely the nasalized counterpart of *u* and for this reason could be substituted in position after a palatalized consonant. In general the Slavic vowels *ū* and *o* could not be substituted after a palatalized consonant because they (or their phonemic predecessors) had been fronted to *ī* and *e* respectively.

⁴ Schmalstieg, op. cit. Certain prepositions in Slavic show doublet forms, e. g. *protivŭ* vs *protivŏ*, perhaps, *su* vs. *sŏ-* (as a prefix). Possibly Polish *ku* (vs. the usual Slavic **kŭ*) has its origin in an early denasalization of **kŏ*. In these prepositions the *-ŏ* form had its origin in pre-consonantal position (in the sentence), whereas the *-ŭ* form had its origin in pre-vocalic position. The Slavic first singular verbal ending *-ŏ* is probably derived from the same secondary ending **-on* which gave *-ŭ* in the aorist. This is to be discussed in more detail in a forthcoming article.

⁵ Shevelov, op. cit., 325–326.

⁶ For a discussion of the loss of final *-n* in English words see Otto Jespersen, *A Modern English Grammar*, I, London, Copenhagen, 1954 (reprint), 31–35. English *my* and *mine* are examples of two words which now have different syntactic functions, although they were etymologically the same word.

⁷ Schmalstieg, op. cit.

But the *u* which derived from an earlier **jau* was legitimate in this position and once *o* was understood as a nasalized *u*, there was no difficulty about its occurrence after palatalized consonants⁸. Thus the ending *-o* of the *jā*-stem accusative singular can be considered an analogical replacement on the pattern of the *ā*-stems. By the same token *-i* of the *jo*-stem nominative singular and the *jo*- and *jā*-stem genitive plural is analogical. This *-i* is the fronted variant of *-ǔ*, which could not under any circumstances stand after a palatalized consonant. Thus the Balto-Slavic final **-an* developed to *-ǔ* in the *o*-stem accusative singular and the *o*- and *ā*-stem genitive plural, but to *-o* in the *ā*-stem accusative singular.

There is no problem concerning the equation of Old Prussian *-ans* (both the *o*- and *ā*-stem accusative plural) with Slavic *-y* in word final position. Presumably Balto-Slavic **-ans* > **-ons* > **-uns* > *-*ūs* > **-y*. (It is interesting to note that in this group there is no question about the passage of **-an* to **-un* in a closed syllable.)

Baltic Developments

The *o*- and *ā*-stem accusatives singular in Baltic offer no problem, since both endings can be traced back to **-an*.

Likewise the Baltic *ā*-stem accusative plural can be traced back to **-ans*. But the *o*-stem accusative plural presents a problem. I suppose this to be an analogical development, but before I enter upon this discussion I should like to bring in some parallels from the Slavic languages.

If one examines the history of the Slavic languages, one is struck by the numerous analogical innovations in the case endings. Consider, for example, the plural declension of Russian *trud* 'work'. Only the accusative *trudy* reflects a form which can be etymologized as an original *o*-stem ending. The nominative plural *trudy* is analogical to the accusative plural or the *ā*-stem nominative plural. The genitive plural *trudov* is analogical to the *ǔ*-stem genitive plural. The dative plural *trudam*, the instrumental plural *trudami* and the locative plural *trudax* are all analogical innovations from the *ā*-stem nouns. In the plural declension of *gorod* 'city' every case ending is analogical! In general the Polish plural *o*-stem declension seems to reflect the etymological forms slightly better than Russian, but only by virtue of the fact that the dative plural in *-om* is original. The plural declension of Serbo-Croatian *grad* is: nom. *gradovi*, gen. *gradova*, dat., inst. and. loc. *gradovima*, acc. *gradove*. The new plural stem *-ov-* is analogical (from the *ǔ*-stems), but of the endings it is only *-i* of the nominative plural which is original. This is, of course, perfectly obvious, but I felt it necessary to repeat it here in order to make the following analysis more credible. More examples of the analogical substitution of case endings

⁸ Karel Horálek, *Úvod do studia slovanských jazyků*, Prague, 1962, 110.

in paradigms where they did not originally belong are to be found in Manćzak's article on analogy⁹. As Manćzak says: „L'examen de plusieurs milliers de cas de changements analogiques nous conduit à nous demander si l'on n'attache pas trop d'importance à la formule $a:b = c:x$. Dans beaucoup de langues slaves par exemple, les désinences féminines de l'instr. et du loc. plur. *-ami*, *-ach* ont pénétré dans les substantifs masculins et neutres... Bien qu'il ne soit pas du tout exclu que, dans l'avenir, on réussisse à découvrir d'autres régularités dans ce domaine, il faut bien se persuader qu'un nombre considérable de changements analogiques (sinon même la plupart) devront toujours être considérés comme ayant un caractère tout à fait fortuit.“¹⁰

Now it would be fine to say that only forms which cannot be explained as the direct result of phonological development should be explained by analogy. But the fact that we cannot explain analogy rigorously does not make it any less a force in linguistic development. Thus, for example, in historical times analogy seems to have played as great a role in the development of Slavic nominal systems as did phonological changes. In Russian the only endings lost as a result of phonological changes were etymological jers. But the loss of the *o*-stem instrumental plural in *-y*, the locative plural in *-ěxŭ*, the dative plural in *-omŭ* must be ascribed to analogy. Since analogical changes have taken place in those declensional systems where the history can be traced, it seems only likely that analogical changes have taken place in pre-historic times.

I suggest then, that the *o*-stem accusative plural ending of East Baltic is borrowed from the *u*-stems. Presumably such a borrowing took place in order to differentiate more clearly between the *o*-stems which are masculine and the *ā*-stems which are for the most part feminine. Such an answer may not satisfy some who would ask: Why wasn't it necessary to distinguish between the masculine and the feminine in the singular also? On the other hand the question *why an analogical change did not take place* is fruitless. One might as well ask why Russian *gorod* 'city' has an analogical plural in *-a*, whereas Russian *stol* 'table' does not. Or why does English have an analogical plural of *cow* (i.e. *cows* instead of the archaic *kine*), but no analogical plural for *ox* (*oxen* in the standard language)? German plural formations requiring umlaut, e.g. *Wald*/*Wälder* spread beyond their original limits, but in English (also, of course, a Germanic language which had umlaut at its disposal for the formation of plurals) this procedure did not spread at all¹¹.

⁹ W. Mańczak, Tendances générales des changements analogiques, VII, 1958, 298–325, 387–420.

¹⁰ Mańczak, op. cit., 401–402.

¹¹ Winfred P. Lehmann, Historical Linguistics: An Introduction, New York, 1962 190–191.

But someone will surely object that the definite form of the adjective in Lithuanian, e.g. *baltuosius* shows that the original ending must have been **-ōns*. In order to answer this question I must explain my opinion on the nature of the Common East Baltic diphthongs *ie* and *uo*¹². These diphthongs were biphonemic, i.e. the ini-

¹² William R. Schmalstieg, The East Baltic Accusative Plural, — *Lingua*, XVI (to appear). When I wrote the article quoted above I felt that the Latvian *u*-stem accusative plural ending *-us* had to be explained as analogical to the nominative plural where **-ūs* > **-us*. This, of course, could be the case, but the assumption is hardly necessary. Latvian **-n-* before word-final *-s* may have disappeared before the typical Latvian denasalizations took place. (An earlier denasalization of vowels before word-final *-s* is probably attested by Slavic where **-ons* > **-uns* > **-ūs* > *-y* [cf. the acc. plur. *syny* 'sons'], although usually **-on-* in a closed syllable passed to **-Q-*.) I now propose that Common East Baltic **-uns* was denasalized to **-ūs* at a very early period in Latvian. This Latvian **-ūs* (from **-uns*) could then have been shortened to *-us* at the same time that the Latvian **-ūs* (from **-ūs*) was shortened. In principle Common Baltic tautosyllabic **-un-* passed to Latvian *-ū-*, so there seems nothing extraordinary about positing the passage of Common Baltic **-uns* to Latvian **-ūs* and then finally to *-us*. Thus the adoption of the ending **-uns* by the **o*-stem nouns is probably a Common East Baltic phenomenon pre-dating the split of Latvian and Lithuanian. I assume an early denasalization of **-ins* > **-īs* and a shortening to *-is* (as in the Latv. acc. plur. *avis* 'sheep'). I assume that the denasalization of vowels in this position was relatively early, because Common Baltic tautosyllabic **-an-* > Latv. *-uo-*, but in the **ā*-stem accusative plural we find *-as*, which, I believe, reflects an earlier passage of **-ans* **-ās* (not. **-uos*) and then a shortening to *-as*.

I should also like to take this opportunity for thanking Prof. V. Mažiulis for pointing out to me a mistake in the article quoted above. I am certainly wrong in saying that in Latvian the first person singular ending *-uos* reflects a final syllable development. Rather Latv. *-uos* goes back to **-uosi*.

It may also be objected that the adoption of the *u*-stem ending by the *o*-stems is exactly the reverse of the usual development of the Baltic languages, which seem to be transferring *u*-stem nouns to the *o*-stem declension. But there seems to be no great violation of linguistic principles. At certain times languages develop in one direction and at other times in other directions. One can note, for example, the spread of athematic verbs at one time in Lithuanian and their complete loss later, so that now no athematic verbs are left in Lithuanian. In principle the Romance languages have become less inflectional with the passage of time, but the creation of the French future tense (*je ferai* < **facere habeō*) is in direct opposition to the general tendency. Likewise related languages frequently show quite divergent tendencies in their development. One can compare the case of Russian which has retained the first singular verbal athematic ending *-m* in only a pair of verbs to that of Slovenian which has generalized the *-m* ending for all verbs, although only a handful of verbs were athematic in Common Slavic. In Russian the *u*-stem nouns were in principle transferred to the *o*-stem class, but the *u*-stem genitive plural was nevertheless generalized so that the overwhelming majority of original *o*-stem nouns now have an etymological *u*-stem genitive plural ending *-ov*. The attested Russian situation is very similar to that which I propose for East Baltic, viz. the gradual loss of a stem class, i.e. the *u*-stems, but the retention of one case ending in the *o*-stems. In Russian the genitive plural of the *u*-stems was transferred to the *o*-stems; in East Baltic the genitive plural and the accusative plural of the *u*-stems was transferred to the *o*-stems.

In the Samogitian dialect (Zhemaitish) the *o*-stem definite accusative plural form is (*balt*) *-ūs-ius* < **balt-uns-ius*. This seems to reflect directly the *u*-stem ending **-uns-iuns*. In this form the Samogitian retains the expected pre-final reflex of the *u*-stem ending viz. *-ūs-* < **-uns-* instead of introducing the morphological innovation *-uos-* characteristic of the standard Lithuanian pre-final form.

tial element of *ie* was (i) and the second element was /e/; the initial element of *uo* was /u/ and the second element was /a/. Now whatever the second element of these diphthongs was phonetically it was clear that the /e/ after /i/ and the /a/ after /u/ did not contrast with each other. There was no **ia* nor **ue*. Essentially the ending *-us* (dial. *-uns*) is not a shortening of **uos*, but the pre-final *-uos-* is an expansion of *-us*. In the pre-final morpheme there is an additional open vowel, cf. the definite form of the *o*-stem nominative plural in *-ieji* as opposed to the indefinite *-i*. One can note that the pre-final *-i-* is expanded by *-e-* before the addition of the final *-ji*. In principle then the pre-final **-us-* is expanded by *-a-* to *-uos-* before the addition of the final *-ius*. In general there exists a pattern according to which the pre-final morpheme in the definite adjective is not a short vowel if a long vowel or a diphthong from a related morpheme is possible. This is illustrated by the diagram below:

Indefinite Adjective		Definite Adjective
Masc. Nom. Plur.	<i>ger-i</i>	<i>ger-ie-ji</i>
Masc. Acc. Plur.	<i>ger-us</i>	<i>ger-uos-ius</i>

Thus the extra vowel /a/ in the pre-final morpheme *-uos-* is analogical to the vowel /e/ in the pre-final morpheme *-ie-*. A parallel example is the Lithuanian first and second plural verbal morphemes with the reflexive endings *-mės* and *-tės* respectively¹³. The long vowel (or the addition of /e/ to /e/, i.e. *ee = ē*) is analogical. In principle then there is no reason that the accusative plural ending *-us* could not be borrowed from the *u*-stems.

Likewise it seems that the genitives plural in *-ų* of the *o*- and *ā*-stems could well be borrowed from the *u*-stems. This development, of course, may be characteristic of Lithuanian alone, of the entire Balto-Slavic group. Perhaps the reason for this was the fact that the etymological endings in question were identical with the *o*- and *ā*-stem accusative singular endings. The introduction of the *u*-stem genitive plural ending destroyed this homonymy. Similarly in Russian the *ŭ*-stem genitive plural ending was introduced into the etymological *o*-stem declension, possibly in order to abolish the homonymy between the genitive plural and the nominative-accusative singular.

In proposing this hypothesis I realize that I am suggesting that two more cases in the *o*-stem plural declension are East Baltic analogical innovations, viz. the genitive and the accusative plural. Since it is generally admitted that the ending *-uose* is the result of analogical developments, the addition of two other cases (genitive and accusative) to the list of analogical cases in the *o*-stem plural declension raises

¹³ J. Kuryłowicz, *L'accentuation des langues indoeuropéennes*, Wrocław, Kraków, 1958, 208.

the total number to three, a number lower than that attested for Russian where (excluding the vocative) there are five *o*-stem plural case endings which are the result of analogical developments. But the Baltic languages are separated from Indo-European by as many years as are the Slavic languages. It can be granted that the phonological history of Baltic seems to have proceeded at a slower pace than that of Slavic. But this does not necessarily mean that the morphological (or analogical) developments were fewer in number. It is not difficult to find morphological changes which show the Baltic languages to be less conservative than the Slavic languages. Thus the Indo-European sigmatic aorist has been lost completely from Baltic, but modern Bulgarian retains remnants of it in aorists in *-x*. In other words the Baltic languages could have undergone as many analogical changes as did the Slavic languages. In fact one would rather be surprised if there were no analogical changes in Baltic, because such changes are so well attested in other languages.

Questions For Further Study

There are other possibilities, however. Perhaps an Indo-European **-on* (or **-an*) passed to Balto-Slavic **-un* under certain conditions (no longer recoverable by methods of historical comparison) whereas under other conditions it passed to Slavic **-on* and Baltic **-an*. This might explain such doublets as Lith. *su* vs. *sq*-, Slavic *sŭ* vs. *sŏ*. Different analogical developments may have then given us the contemporary distribution of Baltic *-u* (or *-u*) and *-q* on the one hand and Slavic *-u* and *-ŏ* on the other hand. One might suspect differences in intonation, stress or sentence sandhi to be responsible for such developments. But if differences in stress and intonation did give rise to qualitative or quantitative differences in the vowels, it would have to be shown that these differences in stress (or intonation) were lost at the time the qualitative (or quantitative) differences became phonemic. In any case recently considerable doubt has been thrown on the existence of phonemic intonation in unstressed syllables.

A further question arises: Were the *o*- and *ā*-stem nouns originally distinguished from each other in the singular and plural accusative and the genitive plural? Or did a distinction which was originally known only in the nominative case gradually spread to other cases, perhaps never reaching the singular and plural accusative and the genitive plural in Balto-Slavic? Perhaps such *ā*-stem accusative endings as Gk. *-ēn*, Skt. *-ām*, Lat. *-ām*, etc. are analogical innovations of these languages. It has always been admitted that the genitives plural of the *o*- and *ā*-stem nouns probably had a similar origin¹⁴. But it is only on the basis of Indo-Iranian and Greek that

¹⁴ K. Brugmann, *Kurze vergleichende Grammatik der indogermanischen Sprachen*, Berlin, Leipzig, 1933, 394–395.

one seems forced to posit a genitive plural in **-ōm* rather than **-om*¹⁵. Perhaps the long vowels of the Greek ending *-ōn* and Skt. *-ām* are not Indo-European inheritances. According to Prokosch the Gothic genitives plural can be more easily explained if we accept **-om* (with a short *o*) as the Indo-European ending¹⁶.

In Hittite, as is well known, there is no distinction between the Indo-European *o*- and *ā*-stems. This may well reflect the Indo-European situation and the distinction between the *o*- and *ā*-stems may well be a later development. If so, then the Hittite *a*-stem (= Indo-European *o*-stem) accusative singular and genitive plural in *-an* would correspond well to the posited *o*- and *ā*-stem endings for the same case¹⁷.

It may well be that the close relationship between the *o*- and *ā*-stems (as is evidenced by adjectives in which the root can belong to either stem depending upon syntactic agreement and by nouns such as Old Church Slavic *rabŭ* 'slave' vs. *raba*) may reflect an original identity in some declensional forms.

Conclusion

The Old Prussian case endings for the accusative singular and plural and the genitive plural represent at least the common Balto-Slavic forms and possibly (although this hypothesis needs further study) the original Indo-European endings of the *o*- and *ā*-stem nouns.

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¹⁵ Carl D. Buck, *Comparative Grammar of Greek and Latin*, Chicago, 1933, 182. Old Prussian genitive plural endings in *-on* or *-un* (e. g. *grecon*, *grecon* 'sins') have no probative value. These are merely renderings of phonemic (an) in position before a nasal or following a velar, see William R. Schmalstieg, *The Phonemes of the Old Prussian Enchiridion*, *Word*, XX (1964), 217–218.

¹⁶ E. Prokosch, *A Comparative Germanic Grammar*, Philadelphia, 1939, 240.

¹⁷ I assume that Edhar Sturtevant is right in saying that Hittite *-an* in the *o*-stem accusative singular derives from Indo-European **-om*; see his „A Comparative Grammar of the Hittite Language“, revised edition, New Haven, London, 1951, 85. In the „Vergleichende Laut- und Formenlehre des Hethitischen“, Heidelberg, 1956, 99, Heniz Kronasser suggests, however, that the Hittite *o*-stem accusative is from an original **ā*-stem (which was lost, of course, in Hittite as a separate stem class). Such an assumption is necessary for Kronasser because he posits Indo-European **-om* > Hittite *-un*. But if we accept Sturtevant's view of the phonological changes involved, there is no reason why the Hittite *o*-stem accusative singular and genitive plural endings in *-an* cannot be equated with the corresponding forms in Old Prussian.

PASTABA APIE KELIS BALTŲ-SLAVŲ GALININKUS

Reziumė

Aptariami baltų-slavų *o-* ir *ā-*kamienų galininkai. Teigiama, kad šių kamienų galininkai turėjo bendras formas: vienaskaitoje *-an*, o daugiskaitoje *-ans*. Slavų prokalbėje **-an* žodžio gale virto į **-ǫn*. Prieš sekančio žodžio pirminį priebalsį **-ǫn* > *-Ń*; prieš sekančio žodžio pirminį balsį **-ǫn* > *-ǫ*. Galūnė *-Ń* virto *ā-*kamieno galūne; galūnė *-ǫ* virto *o-*kamieno galūne. Bet iš pradžių jie buvo tik sandhi dubletai. Slavų prokalbėje **-ans* > *-y*. Baltų kalbose vienaskaitos galūnė **-an* bendra *o* ir *ā-*kamienams. Prūsų kalboje daugiskaitos galūnė *-ans* bendra *o* ir *ā-*kamienams. Rytinių baltų *o-*kamieno daugiskaitos galininkas yra naujadaras, kilęs iš *u-*kamieno daugiskaitos galininko, kuris turi tą pačią galūnę. Įvardžiutinio būdvardžio galininko morfema *-uos-*, fonologiška (*uas*), yra analogiška transformacija vardininko morfemos *-ie-* pavyzdžiu. Apskritai, įvardžiutiniuose būdvardžiuose priešpaskutinė morfema visada turi ilgą balsį ar dvibalsį (jeigu fonetiškai galima). *-uos-* yra tik morfemos alternantas (морфемный алтернант), reikalingas priešpaskutinėje žodžio padėtyje. Galimas daiktas, kad prūsų kalboje šie galininkai turi labai senas galūnes (plg., pvz., hetitų kalbos vienaskaitos *a-*kamieno galininką), o kitose indoeuropiečių kalbose randame naujadarus.