

VLADIMIR NAPOLSKICH (Iževsk)

**URALIC NUMERALS: IS THE EVOLUTION
OF NUMERAL SYSTEM RECONSTRUCTABLE?
(Reading new Václav Blažek's book on numerals in Eurasia)**

A new book on the history of numerals in the languages of different language families of Eurasia appeared two years ago (Blažek 1999), a chapter of which is devoted to the Uralic numerals. Its author, Dr. Václav Blažek, is known not only as a researcher of Afro-Asiatic languages which is his main field, but also — and may be even more — as a scholar belonging to the Nostratists' family. The last direction determines his interest in the Uralic languages, too. His inclination to Uralistics, which might be marginal to himself and certainly not so important, is still sometimes very promising: e.g., at least the best of new Aryan etymologies for Finno-Ugrian words suggested during the past two decades belong to him (F.-Mord. **akšterə* 'unfertile' < Aryan **a-kšaitra-* 'uncultivated'; Vog. (Pelym) *šešwē* etc. 'hare' < Aryan **sasa-* 'id.'; F.-Perm. *šikštə* 'wax' < Aryan **šikšta-* 'id.' (Blažek 1990 : 40—43)).

Another V. Blažek's specialization — to the best of my knowledge primary, although not recognized so widely — is mathematics. His new book lies, so to say, at the crossroads of these two fields and is a result of the author's long-term study devoted to historico-etymological analysis of numerals of different language families. As it is clear from the title, the book embraces a great number of languages and language families, namely Afro-Asiatic (pp. 1—79), Kartvelian (pp. 80—88), Uralic (pp. 89—101), "Altaic" (i.e. Turkic, Mongolian, Tungus-Manchu, Korean, Japanese) (pp. 102—140) and Indo-European (pp. 141—324). As examples of "patterns of creating numerals", on pp. 325—330 the numerals of Papuan (Telefol, Kombai, Aghu), Eskimo, Burushaski, Sumerian, Yukaghir, Chukchi, Khoisan (San, Nama) and some Amerindian (Haida, Yuma, Chumash) languages are given with some short comments. The Uralic part of the book is very interesting for Uralists, since, though the subject has been from the beginning of the Uralic comparative linguistics very important and recently here and there newly discussed, the Uralic numerals are for the first time considered on such a wide geographic and historical background.

Unlike the author of a well-known recent monograph on the same subject in Uralistics (Honti 1993) (and this difference might make these two books mutually complementing), the core of V. Blažek's interest lies not only in the simple reconstruction of the development of numerals in the concerned languages, but also in the origin of the reconstructed numerals (mainly the first decade) of the big language families enlisted above. The author's main task seems to be not simply to trace the development of a word, but also give an *e t y m o l o g y* in the original meaning of the term, to show the very way of "creating" the numeral, to find the source proto-form, which later gave rise to the numeral stem. This approach may be rational in some peculiar cases (see also below), but it can hardly lead to appropriate results every time: since

the age of reconstructed proto-languages does not exceed 6 (Indo-European) or 9 (Afro-Asiatic) thousand years and the human language could presumably appear at least 40 or 100 thousand years ago, why should one think that the idea of numerals and consequently the numerals themselves should have appeared only during the last 6—9 millennia? On the other hand, the possibility of borrowing of numerals should also be taken into account: the number of known examples of such borrowings is hardly smaller than the evident internal etymologies for the numerals of the first decade.

V. Blažek's position on this subject is partly revealed in the chapter devoted to IE 'seven': "Studying the systems of numerals in various language families, I am convinced that it is almost always possible to determine an original motivation of all higher numerals beginning with "5". For the case of a missing etymology the following rule can be formulated: If a numeral x in a language A has no hopeful etymology and there is a similar numeral x' in a neighboring language B where x' is analyzable, the question of the borrowing $x < x'$ is quite legitimate" (Blažek 1999 : 251). Actually, there is nothing new in this maxim: when two words of two different languages are phonetically and semantically similar and there is a historical background to suggest a borrowing, the direction the borrowing is determined by more ancient roots of the word in one of these two languages. The question is: why look first for an internal etymology and pay attention to external parallels only in cases when the search of internal etymology is fruitless? Taking into account the elaborateness of, e.g., the current instrumentary of Indo-European comparative linguistics and the amount of compared language materials, can one seriously expect any word to become finally "no internal etymology"?

It is a common mistake of Nostratists' to think that all language contacts producing loan-words had begun after the disintegration of daughter languages of the «Proto-Nostratic» and that all the parallels between, e.g., Indo-European and Turkic must be considered as relics of "Proto-Nostratic" but not as traces of ancient borrowings, thus Tu. **(h)adaak* < "Altaic" **padaak* 'leg, foot' is to be compared with IE **ped- 'id'* but not considered as ancient (Proto-)Aryan loan in Turkic, despite the Turkic word revealing evidently Aryan vocalism ($a < *e$) and Aryan (< IE) suffix **-ka*. This methodological peculiarity is relevant to some of V. Blažek's Uralic etymologies, but it seems to have influenced more seriously the Altaic than the Uralic part of the book.

Resuming the discussion on Uralic numerals, I would like to make a preliminary formal remark: the reconstructions of the Uralic numerals of the first decade on p. 89 should be either commented on or given in two forms: the one preferred (constructed?) by the author and the other taken from a standard vocabulary, which anyway is the UEW. Otherwise it is very hard to understand what is ment under, e.g., **wi(i)t(t)i* 'five' and why the form is given in this way. Further in the text the author makes references to UEW and Sammalahti 1988 while using exclusively the forms from Sammalahti 1988. Though the work of P. Sammalahti is interesting, his very way of transcription differs very much from the one generally accepted in Uralistics, and his reconstructions more often than not differ from those given in UEW. This difference is not only formal and is important in a work devoted to the most ancient levels of reconstruction: either both possibilities of reconstruction should be considered, or the author's preference should be explained.

Most of the external comparisons of Uralic numerals considered in the book do not belong to the author, this part of his study is mainly compilative. However, such a compilation is really useful and deserves detailed comments.

While looking for an internal etymology for the FU **iikte* 'one', the author refers to different words in different Uralic languages having different meanings as 'together', 'alone', 'final', 'back', 'end', 'frontal', 'head', etc. (Blažek 1999 : 90) The idea of genetic connection between the words meaning, e.g., 'only, alone' and 'one' itself looks just natural (the question appears, however, which of the meanings had been original if it is at all possible to determine this), but the problem lies in the

accuracy of comparison: to justify an etymology of this kind, one proto-form should be reconstructed as a starting point of the etymological development, not a series of forms with a series of meanings. In V. Blažek's book this series is further full filled by "Altaic cognates" with meanings 'upper', 'superior', 'top' and, finally, 'to lift up'. Using the full set of the above-mentioned meanings (why not develop voluntariness further in the same way, e.g.: 'to lift up' — 'to climb' — 'mountain' — 'earth' — 'sky', etc.) one shall obligatorily find a phonetically comparable word in some of the countless number of languages and language groups attested as Nostratic. The way is fruitful: there are Altaic cognates also for both reconstructed Samoyed proto-forms for 'one', **oj-/*ǰj-* and **op* (Blažek 1999 : 90). No problem — the shorter the word, the more possibilities for Nostratic reconstruction.

Altaic cognates of the same kind are suggested also for U **kekta* 'two': Tung. **gagda* 'one of a pair' (~ Mo. *gagča/ganča* 'one, single, only'), Old Jap. **kata* 'one, single'. Thus, from the Nostratic point of view not only the words 'upper' and 'alone', but also 'one' and 'two' are considered as comparable. Of more interest are the old parallels from North-Eastern Siberia: Yu. (Omok) *tkit* (? <**kit*) 'two' and Itelmen (Tigil River) *katxan*, etc. 'two' (being apparently not a reflex of Proto-Chukchi-Kamchadal **ŋiče-* 'two' > Itelmen *nt'i-lyin* 'second' (Mudrak 2000 : 104)). Opposing to them from the historical perspective ("alternative attempt" after V. Blažek) seems to be the IE **k^uet* 'pair' (> Slav. **četa*, Osset. *cædæ*; probably also reflected in IE **k^uet-o-r* 'four') which could have been borrowed into U and after receiving the old dual suffix **-k* appeared as **ket-kä* > **kekta* (metathesis after **iukti* 'one') (Blažek 1999 : 91). The suggested IE origin of the U 'two' cannot, however, explain the main problem of this U reconstruction — the broken vowel harmony (F. *kaksi* ~ Hung. *kettó*), which is not discussed by V. Blažek. Could the two different external parallels, the IE (and Yukaghir ?) with palatal vocalism and the Itelmen with the velar help solve the problem?

V. Blažek prefers to reconstruct the FU word for 'three' opposing to the traditional **kolme* — as **kurmi* drawing upon the Hungarian (*három*) and the Vogul (N *χūrəm*) data (without, however, any explanation of **-u-*, which seems to appear only in his version) (Blažek 1999 : 91). Then this **kurmi* is analysed as **kur-mi* with "suffix of abstract nouns" **-mi*, and what is left (**kur-*) is compared with the second segment of Sam. **nä-kur* 'three' (after V. Blažek; **näkǰr/*näkǰr* in Janhunen 1977 : 99), where **nä-* is presumed to be the "demonstrative marker". Unfortunately, this analysis is not acceptable. First, the Sam. **nä-* is in no way the "demonstrative marker", but stem of local postpositions (Janhunen 1977 : 99), and the occurrence of such a stem as first part of a compositum is syntactically impossible. Second, the stem of Sam. **näkǰr* is **näk-* as it can be seen from Selk. (Chulym) *nag-thisarm*, (N by Castrén) *nak sarm*, (N) *nāssar* 'thirty' (Janhunen 1977 : 99; Erdődi 1970 : 149). Therefore, the FU **kolme* has hardly anything in common with the Sam. **näkǰr* and the plausible for a Nostratic perspective comparison with Mo. *gurban* 'three' and further (Blažek 1999 : 91) must be considered as fiction. A spontaneous development **l* > **r* in Ugric dialects might be possible due to Iranian influence and has at least one probable parallel: Hung. *világ* 'light' > (?) *virág* 'flower' (EWU 532).

Looking for the external parallels of FU **neljä* 'four', V. Blažek first cites Chuvan (Matjuškin) *njagon*, (Boensing) *nāgane* 'four', where *-g-* might originate from **-lg-* (Blažek 1999 : 91—92). Regretfully enough, this Chuvan stem has no cognates in other Yukaghir languages and, therefore, the alternative possibility — borrowing from Koryak *ŋ(ə)jaq(-ən)* (Blažek 1999 : 92) looks far more probable. In finding Altaic cognates, the Middle Kor. *nəyh* 'four' is mentioned, but since, except of **n-*, there is nothing in common with the FU numeral here, such a "correspondence" seems to be insufficient also for Nostratics (more interesting could be a separate areal comparison of this Middle Korean numeral with the Gilyak stem **nV-* 'four', also mentioned here by V. Blažek — but in Nostratic context). Therefore a complicate analysis of Manchu-

Tungus and Mongol numerals is suggested to reveal some unrevealable relics of the same root, e.g., in Tung. **nöjün* 'six' < **nöl-ž(u)n* = 'ten (Tung. **žuwan*) minus four (thus, **nöl-*)' (Blažek 1999 : 92). Why should a compound of two pure stems with the meaning 'four-ten' mean 'ten minus four' in a language with normal Ural-Altai syntax remain a mystical enigma — to say nothing about the procedure of the analysis of this kind: its non-scientific character needs in principle no comment for those working outside Nostratics. On the other hand, V. Blažek is certainly right when writing: "besides hypothetical Yukaghir and Altaic cognates, there is a perfect correspondent in the Dravidian numeral **nāl* '4'" (Blažek 1999 : 92). It is not clear, whether he means again a Nostratic perspective or it is a more realistic explanation within the framework of the hypothesis of ancient FU-(quasi-)Dravidian contacts.

In the section devoted to Sam. **tettā* 'four', V. Blažek writes: "the attempts to find an internal Sm etymology are [---] unconvincing [---] some ideas had been suggested but the semantical motivation is not clear" (Blažek 1999 : 92–93). This passage contrasts with the normal approach of the author: usually such boring peculiarities as semantical motivation do not play any role when the Nostratic perspective is concerned (see examples above). Proceeding with "on the other hand, Sm '4' could be a borrowing" V. Blažek suggests a hypothesis of Bolgar-Turkic origin of the Samoyed numeral — cf. Chuvash *tāvattā* < **tiüt* < Tu. **dört* 'four' (Blažek 1999 : 93). Since at least one more Samoyed numeral (**jür* 'hundred') is undoubtedly of R-Turkic origin (cited also by V. Blažek), this etymology seems to be very promising and should be introduced into the Uralistic etymological compendium. Thus, in a historically more reliable field (language contacts), the results of the work of such a prominent linguist as V. Blažek are evidently more relevant and productive (see also the examples of his Aryan-FU etymologies above), than in nebular omnicomparativistic constructions.

FU **witte* 'five' is considered to correspond to Sam. **wüt* 'ten', and for the U proto-form the author accepts A. J. Joki's semantical reconstruction 'great number, many' (Blažek 1999 : 93). From the phonetical point of view the comparison FU **witte* 'five' ~ Sam. **wüt* 'ten' is undeniable. However, the semantics leads to the rejection of Uralic etymology by sceptics (see the last generalization in Honti 1993 : 94). Therefore, it deserves a more detailed reconsideration (this should be probably done by V. Blažek, but there is no mention of the problem in his book). The arguments of L. Honti were the following:

1) every numeral beginning with 'four' and 'five' can, in a peculiar situation mean 'great number, many' and therefore A. J. Joki's reconstruction is senseless. This is certainly right. I would only comment on the Finnish example drawn by A. J. Joki and repeated by V. Blažek to demonstrate the alleged preservation of the meaning 'great number, a lot of' in F. *viisi* 'five': *viittä vaivainen vailla* 'dem Armen fehlt viel'. Since the example comes undoubtedly from the Kalevala-metric poetry, the only numeral of the first decade, which could be used there is *viisi*: only this one begins with *v-* and thus fits in the alliteration pattern (cf.: *Kantoi kohtoa kovoä, | vatsantäyttä vaikeata | vuotta seitsemän satoä, | yheksän yrön ikeä*, etc.);

2) to fulfill its function a numeral must mean only one and the same number. This should be discussed together with the next argument:

3) the supposition about the semantic shift 'five' > 'ten' in Proto-Samoyed is incorrect because this would put the conclusion before the starting point. Besides, there is no proof of the original meaning — 'hand' of this root and two 'fives' do not compose a natural pair as body parts to make 'ten'. A numeral must really have only one meaning (I pointed out this rule while speaking about V. Blažek's comparisons of Uralic and Altaic 'one' and 'two' above, too). The problem is that numerals function in a system of counting, and their place in this system is not equivalent. Thus, e.g., in our decimal system the numerals 'ten', 'hundred' and 'thousand' have special meanings representing the b a s i c numbers. These basic numerals are used in the formation

of compound numerals (“two hundreds”), in approximative counting (“hundreds of people”), marking jubilees, etc. Living in the world where the decimal system reigns and — as it can be seen from the V. Blažek’s book — had reigned from the times of reconstructable proto-languages, one can hardly suppose what happens when one numeral system replaces or grows up from another. However, the comparatively late development of the decimal system in the Finno-Ugric languages may be illustrated by foreign (Aryan) origin of the numerals ‘hundred’ (FU **sata*) and ‘thousand’ (FU **sasra*), also — ‘ten’ in Permian (**das* < Aryan) and — what is especially important here — by FU **luka* ‘count, counted’ with derivatives meaning ‘ten’ in Lappish, Cheremis and Vogul (Honti 1993 : 120). The last example actually shows the original meaning ‘main number’ of FU ‘ten’ in most of the languages, where the word had not been borrowed. The same observations may be made about the Samoyed languages: the word for ‘hundred’ (Sam. **jür*) at least is a R-Turkic loan-word for other probable borrowings see above and below). In the same way, as in most of the Proto-Finno-Ugric dialects, the original meaning of the Samoyed word for ‘ten’ might be ‘(main) number’. Since the derivatives of the same Uralic root mean ‘five’ in Finno-Ugric, an earlier existence of a quinary system of counting should be supposed in Proto Uralic i.e., of the system, where the number ‘five’ had been the ‘main number’. In this way the semantical problem can be solved: U **witte* ‘five; main number, basic number of the (quinary) counting system’ > Sam. ‘main number of the decimal system, ten’.

In this case the marginal Altaic parallels Old Jap. *itu* ‘five’ and Old Kor. (Koguryo) **utu/*uč* ‘five’ cited by V. Blažek may be of real interest in looking for the most ancient roots of the Uralic numeral — hardly in classical Nostratic (genetical), but in areal contexts.

Sam. **sämpäläjkâ* ‘five’ is certainly a derivative, and V. Blažek agrees with A. J. Jokki, who saw the meaning of the original stem **sämpâ-* ‘(?) hand’ reflected in Nenets *sampâ* ‘to swing in hands’ (Blažek 1999 : 93). An alternative etymology might be suggested: from Sam. **sumpâ* ‘butt (of an axe, a knife), back (of a fish)’ (Janhunen 1977 : 144) — when the meaning ‘wrist, backside of fist’ is to be supposed here.

FU **kutte* and Sam. **mâktut* ‘six’ are considered (Blažek 1999 : 93) as “evidently unrelated” but “formed on the basis of the same semantical pattern”, namely — ‘beyond five’ (or better ‘back of five’): FU **kutte* < U *kuttâ* ‘back’ (UEW 225), Sam. **mâktut* < Sam. **mâkâ* < U **muka* ‘back’ (Janhunen 1977 : 85; Sammalahiti 1988 : 538); **-ut* in Sam. **mâktut* may be interpreted in this case either as a relic of Sam. **wüt* in its archaic meaning ‘five’, or as Sam. **utâ* ‘hand’ (Janhunen 1977 : 30) (this last part of the etymology is not so much probable because of syntactical difficulties). These brilliant comparisons are the best part of the Uralic chapter of V. Blažek’s book and without doubt represent his new impact on the list of classical Uralic etymologies. Besides, there are not so many of etymologies in which the internal word formation in Proto-Finno-Ugric, etc. could be traced, and V. Blažek suggests at least two new of this kind and — ever more astonishing — in such a well-studied sphere as numerals.

F.-Perm. **šecćem* ‘seven’ — contrary to the groundless statements of some Uralists (see, e.g., Honti 1993 : 100) — is not considered by V. Blažek as a parallel to phonetically incomparable Sam. **sejtvâ* (s. below). To those evident phonetical difficulties should be added the fact that this comparison does not apply to the reconstructed Proto-Uralic numeral system either: there is no proof of the existence of any numeral except ‘two’, ‘five’ (see above) and may be ‘ten’ and ‘twenty’ (see below). This set does not allow us to reconstruct a decimal system, where special words for numerals between 5 and 10 would be expected. Moreover, there are serious reasons to suppose that the formation of decimal system took place later, in the period of separate development of Finno-Ugric and Samoyed branches and in the course of their contacts with Indo-European and Turkic languages (see above). Therefore, the idea of a borrowing seems to be more probable, and namely — from some Indo-European source close to the Baltic or Slavic (Blažek 1999 : 93–94). Since V. Blažek cites and criticizes

also my hypothesis about the origin of F.-Perm. **šecćem*, I should make some corrections to the earlier published version. It was suggested in the printed version of my article about the "early Proto-Slavic" form of type **setimǐ* (phonetically **set^čimǐ*) that it might be the source of Finno-Permian 'seven' (Napolskikh 1995 : 125), and one can say that this formulation "entails serious difficulties in phonology and chronology" (Blažek 1999 : 94), though I do not see what the phonological difficulties are — a borrowing from (even early) Proto-Slavic into Finno-Permian really looks as an anachronism. What I actually meant then and what I mean now is an early Indo-European dialect (one of the languages spoken by the bearers of Battle Axe cultures), which most probably has no surviving offsprings, but which belonged to the same linguistic area from which the Baltic (i.e. Balto-Slavic) languages also developed. Therefore, some features and trends of the development of this dialect could be similar to those later revealed in the languages of the Slavic branch of Baltic linguistic continuum. In this peculiar case, I suppose, early or proto- or quasi- or para- (the last one seems to be the best to me, but the terms are conventional) Baltic **setem-*, phonetically **set^čem-* (close to Slav. **setimǐ* or better **sete* < **se(p)tim-* < IE **septm-*) might be the source of F.-Perm. **šecćem* 'seven'. This solution entails no phonetical or chronological difficulties. The only problem is the readiness of a scholar to accept the idea that most of the languages which took part in ancient contacts, had not left living descendants, and, therefore, among the loan-words in, e.g., Uralic languages there may be found those reflecting the forms of disappeared (e.g.) Indo-European languages, and these loan-words together with our knowledge of the development tendencies of the related languages are the only source making it possible to reconstruct some fragments of these otherwise utterly unknown ancient languages.

Speaking about the Proto-Ugric 'seven' V. Blažek prefers to consider the origin of Hungarian and Ostyak words, on the one hand, (Ug. **šäpt(ä)* after him) and of the Vogul word (**sät*) on the other hand, separately: **šäpt(ä)* being of Aryan or Proto-Tocharian origin and **sät* reflecting early Tocharian B **šwat* (Blažek 1999 : 94). This early Tocharian B **šwat* originates from the hypothesis of W. Winter aimed at explaining Toch. B *šukt* 'seven' as developed from IE **septm-* through the next reconstructed stages: **septm-* > **səpətə-* > **šwat* > **šut* and > *šukt* (*/šuk*) by analogy with the following *okt* 'eight'. Being in no way a specialist in Tocharian historical phonology, I can only express my astonishment at seeing such a strange form as Proto-Toch. **səpətə-*, which has no ground in IE proto-form. On the other hand, there is no reason to consider the Vogul word separately from the Hungarian and the Ostyak — at least, these two have hardly more in common with each other than each of them with the Vogul word. I think (see also Napolskikh 1995) that Ug. **šäpt* (my version generalizing the variations of initial consonant in three Ugric languages) should be considered either as a borrowing from Proto-Toch. **šəpt* or as a loan from an Aryan language ("Andronovo-Aryan" after E. Helimski (Хелимский 2000 : 507, 509—510)) — cf. AInd. *sapta-*.

Since — according to the new position of J. Janhunen — the archetype of Sam. **sejtwä* 'seven' may be restored as **sejptä*, my earlier idea about the borrowing of early Proto-Toch. B **šwuktä* > Sam. **sejk(lt)wä* (Napolskikh 1995) cited also in Blažek 1999 : 94 may be successfully put aside, and Proto-Toch. **šəpt(ä)* should be considered as the most probable source of Sam. **sejptä* — after J. Janhunen and V. Blažek.

For the Finno-Volgaic and Permian 'eight' and 'nine' V. Blažek (1999 : 94—95) prefers my (still unpublished) hypothesis about the old artificial constructions reflected in main works (UEW 643; Honti 1993 : 106—111). F.-Volg. **kakteksa(n)* 'eight' and **ükteksä(n)* 'nine' are traditionally analyzed as **kakta-eksän* and **ükte-eksä* where **kakta* 'two' and **ükte* 'one' are put together with **-eksä(n)* and the last one is considered as negation verb stem **e-* + "modal-reflexive conjugational suffix" **-k-* + Px3 Sing suffix **-sä-* + "dual suffix" **-n* with output meaning 'two/one does not exist'. Without saying that such a monstrous form as **e-k-sä(-n)* is not documented

(and can hardly be imagined) in any Finno-Permian language, one should take into account the fact that the negation-verb **e-* is not independent, but appears only as an auxiliary verb, and therefore, 'does not exist, is not' is, e.g., in Finnish not **eksä*, but *ei ole*.

The Permian forms are usually divided as (Zyr. example) *kəkja-mjs* 'eight', *ok-mjs* 'nine'. The part *-mjs* is distinguished after comparing these words with Zyr. (only) dialectal (some) forms for tens as *komjz* 'thirty', *nelamjs* 'forty', *kwajtemjs* 'sixty'. Therefore, the Proto-Permian forms for 'eight' and 'nine' are traditionally reconstructed as **kijkja-mjn(ə)ś* and **ök-mjn(ə)ś*, where **kijk* is 'two' and **ök* 'one' (Honti 1993 : 156—159) to connect them with the "normal" formant **-mjn* in the Permian words for tens (present actually only in Komi-Zyrian, in Votyak recognizable with problems only in *kuamjn* 'thirty') augmented by elativ suffix **-ś*. Phonetically the development **-mjn(ə)ś* > *-mjs* is, however, hardly possible: normally one should expect **-mjš*/**-mjš* or at least **-mjś*. Therefore, it would be more reliable to look for a solution by reconstructing the hypothetical Perm. **mjs* (?) 'ten' (has no parallels in any other language) in addition to another hypothetical Perm. **mjn* 'ten' (with Ugric parallels as Vog. (N) *naliman* 'forty', etc. and Hung. *negyven* 'id.' etc., though these forms can reflect the ancient **wen* or **ŷen* as well as **men*). Certainly, one may reconstruct as many words for 'ten' as one wants, but this cannot help in real understanding the history of numerals in Permian languages.

What I suggested in a personal discussion with V. Blažek and what he accepted and cited in his book is the idea of formation of Finno-Volgaic and Permian 'eight' and 'nine' after one and the same pattern with the old nominal derivation suffix **-as* added to numerals 'two' and 'one' with abessive affix (in Finno-Volgaic languages) **-tVk* (abessive of nouns, > F. *-ttA*, Voty. *-tek* etc.) and (in Permian) **-tVm* (abessive of adjectives and adverbials, > F. *-tOn*, Voty. *-tem* etc.). The F.-Perm. abessive suffixes **-tVk* and **-tVm* when compared, e.g., with the coaffix *-kVtV-l'* of abessive adverbials in Selkup can be traced down to U **-ktV-* and should be thus presented as archetypes **-ktV-k* and **-ktV-m*. Thus, for 'eight' and 'nine' in Finno-Permian dialects there should be reconstructed parallel forms **kakta-kta-k-as(-an)* and **ükte-ktä-k-as* — for early Proto-Finno-Volgaic and **kakta-kta-m-as* and **ükte-ktä-m-as* — for early Proto-Permian, meaning respectively '(existing/something) without two/one'. The following processes of inevitable phonetical simplification of internal consonant clusters in **kakta-kta-m/k-as* and **ükte-ktä-m/k-as* could later lead to historically attested forms. The only difference between early Finno-Volgaic and early Proto-Permian is the use of substantive derivation model (coaffix **-k* in **-ktVk*) in the first and of the adjective model (coaffix **-m* in **-ktVm*) in the last. The formation of numerals 'eight' and 'nine' after the model 'ten without...' on the common Finno-Permian level concords with the evidencies of relatively early appearance of decimal counting system by the Finno-Ugrians (Aryan loan-words 'hundred' and 'thousand' are of common FU origin).

Discussing Ug. **ńalə-* 'eight' V. Blažek (1999 : 95) cites versions existing in the literature and seems to be inclined to support the idea of connection between this numeral and FU **neljä* (> Ug. **ńiljĭ*) 'four' commenting the main problem — different vocalism — as follows: "but the same opposition appears in the numeral 'two' between Finno-Permian and Ugric numerals". Since it is hard to understand how the enigmatic difference between front vocalism in the reflexes of Uralic 'two' in Samoyed and Ugrian and back vocalism in Finno(-Permian) can help in solving the problem of difference in vocalism between Ugrian 'four' and Ugrian (FU) 'eight', this V. Blažek's remark cannot be accepted as a new argument. Other old etymologies: connecting the root with Hu. *nyaláb* 'bundle' ~ Ost. (Vach) *ńula* 'together' or with Ob-Ugrian **ńäl* 'nose' are really (semantically) rather vague. However, V. Blažek's geographically very remote typological parallel from Tzotzil *ni* (*il*) 'nose; in front of' to support the etymology Ug. 'eight' = '(two) before ten', where 'before'

is represented by the grammaticalized word for 'nose', may be supplemented by more relevant Osset. *фысæг* 'first' < *фынз* 'nose' and Voty. *нѣрѣс* 'first' < *нѣр* 'nose'.

The numerals 'nine' in different Ugric and 'eight' and 'nine' in different Samoyed languages, having evident etymologies of the kind 'twice four', '(ten) without two/one', etc., are analyzed in the traditional way (Blažek 1999 : 95–96).

The so-called "Finno-Volgaic" **küme(ne)* 'ten' is more correctly (also from the historical point of view) attested in Blažek 1999 : 96 as "Finno-Mordvinian" and the old comparison with Yu. **kümmne* 'ten' is supported. The Itelmen parallel (South Itelmen *kumthuk* 'ten' ~ *koomnak* 'five') after J. Ankeria is also added here, though it looks worse than other interesting Itelmen parallels cited by V. Blažek. The old hypotheses by T. Sköld (later repeated by B. Čop and only after him cited by V. Blažek) — about the connection of F.-Mord. **küme(ne)* with IE **-k̑m̑* allegedly 'five' in **-deḱm̑* 'ten', artificially analyzed as 'two-five', and by K. Bouda — about the Yu. **kümmne* being a borrowing from Eskimo (Alaska Eskimo *qoln* 'ten', etc.), are rightfully declined by V. Blažek. The question arises, whether K. Bouda's phantasies should always be mentioned in a serious work. Certainly, he seems to have compared every two freely taken language groups of the world. But his "method" is similar to many recent trends in Nostratics and can only demonstrate the well-known fact that (a scholar who welcomes such, [i.e. used in these Nostratic and in K. Bouda's works — V.N.] assumptions and is equipped with comprehensive lexical sources would be able to posit and "prove" any set of phonetic correspondences between any two languages, related or unrelated" (Хелимский 2000 : 479).

Further on, V. Blažek supports the internal Uralic etymology for **küme(ne)* suggested by K. Majtinskaja: from U **ku* 'question [and relative — V.N.] particle' + **мэнэ* 'quantity, many' (also used in the formation of 'tens' in Permian and Ugric languages — see above about Permian 'eight' and 'nine'). This etymology was rejected in Honti 1993 : 119 pass. with almost the same arguments as were discussed above concerning FU **witte* 'five' and others: "der Bedeutungswandel 'viel' → 'zehn' ist kaum akzeptabel, da in Zahlwortsystem die strenge Sukzessivität, der unveränderlich bestimmte Platz der einzelnen Glieder entscheidend ist". This statement brilliantly demonstrates two basic points implicitly underlaid in L. Honti's approach to the study: first, that there is no need to substantiate general typological statements about any semantic development as possible or not with any examples (it is known) and, second, that the numeral system and — better to say — the very language itself must be "unveränderlich" (certainly, otherwise its investigation would be too complicate). Unlike to L. Honti, V. Blažek tries to find real facts in different languages to illustrate his statements; in this case he writes "the semantical development 'quantity/many' → ('number') → 'ten' is plausible, cf. Semitic **šášar* 'ten' vs. Egyptian **ššš* 'many, numerous, multitude'" referring also to probably same origin of Even **mian* 'ten' (from the same Eurasiatic or "Nostratic" stem presented in Altaic **mania-/manai-* 'many' and the well-known origin of word for 'ten' from the root 'count' in some Finno-Ugric languages (see below)).

The component **мэнэ* is supposed by V. Blažek to be present also in Mord. *kom(e)š* 'twenty' considered by him as a derivative from U **koje-мэнэ-šэ* — a variation of U **koje-šэ/-čэ* > FU **kušэ* 'twenty'. Thus, V. Blažek accepts F. Kovács's theory of derivation of FU **kušэ* 'twenty' from U **koje-* 'man' (though without reference) (Kovács 1960). When the Mord. *kom(e)š* is concerned, he should take into account that, as it was shown by K. Rédei (1965), the Mordvinian form may be derived directly from U **koje-šэ/-čэ*. All these problems are discussed in Honti 1993; it seems that V. Blažek had not paid deserved attention to this very important compilation in his studies on Uralic numerals.

The FU **luka* 'ten' is considered in the book traditionally as a derivation from FU **luke-* 'to count' (Blažek 1999 : 97). I would add that here we actually deal with a later parallel (hardly common, i.e. coming from a common (FU) proto-language)

innovation in Lappish, Cheremis and Vogul demonstrating one of possible ways of the development of decimal counting system. Old interesting comparisons of FU **luka* with Itelmen (again Itelmen !) *lūx-* 'number, count' on the one hand, and with IE **leǵ-* 'to count, to read' are mentioned by V. Blažek without any further comments.

Nothing new is said in Blažek 1999 : 97 about the well-known Aryan origin of Hung. *tíz* and Perm. **das* 'ten' and Tungus origin of Mator *žuen* 'ten'. For the puzzling Ost. **jōŋ* 'ten', in addition to probable Tungus sources (the best, though differing in vocalism, seems to be Evenki *žāŋnā* 'ten objects', especially mentioned by V. Blažek), a possibility of unattested Turkic source **ön* (instead of normal **on*) 'ten' is suggested, but since the form with front vocalism is hardly possible in Turkic and, anyway, **j-* and **-ŋ* in Ostyak stay unexplained, this suggestion must be undoubtedly rejected.

As a summary to the Uralic chapter, V. Blažek gives a table marking external parallels to the Uralic numerals mentioned in the text. Is the Itelmen parallel to FU **luka* (see above) omitted or is it a misprint? The reconstructions of Proto-Uralic numerals are given in the table in the following forms:

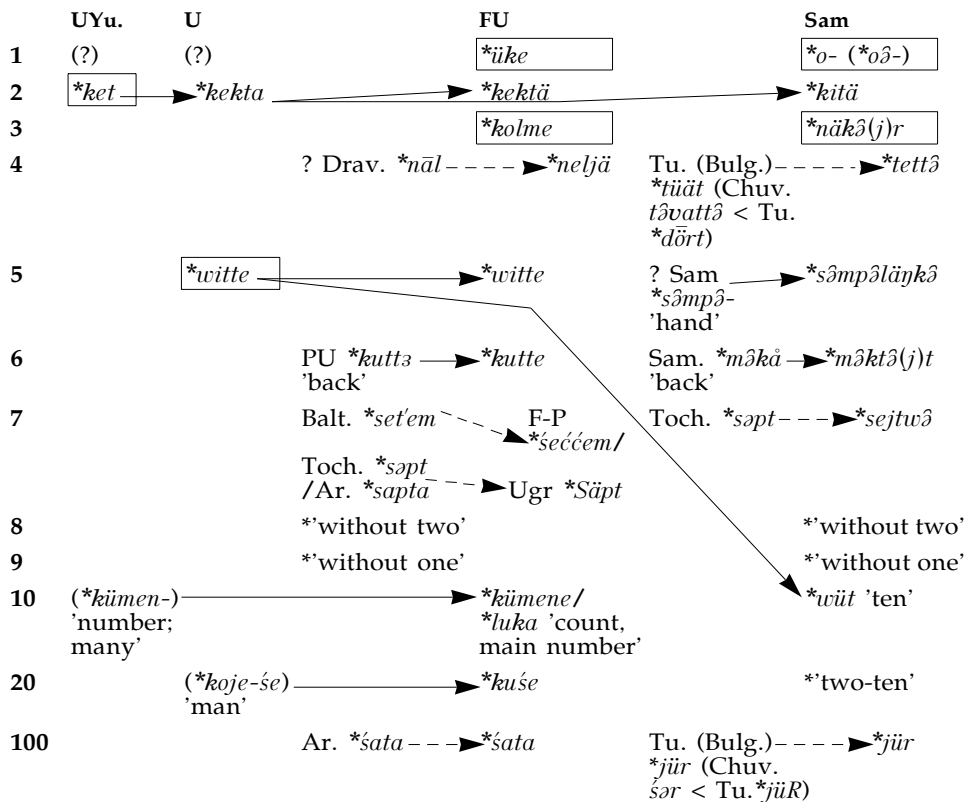
Uralic reconstruction by V. Blažek	my comments
1 <i>*iik-</i>	actually — only FU <i>*ükte</i>
<i>*op-</i>	only Sam
<i>*oj-</i>	only Sam
2 <i>*ket-/ *kat-</i>	actually < U <i>*kekta</i> , probably from more ancient <i>*ket-</i> with good Yukaghir cognate
<i>*koj-</i>	no real traces in Uralic
3 <i>*gur-</i> [sic!]	artificial false construction, a hybrid of FU <i>*kolme</i> and Sam. <i>*näkōr</i> ; actually there is no possibility of reconstructing the Proto-Uralic word for 'three'
4 <i>*nel-/ *ñal-</i>	actually only FU <i>*neljä</i> with good perspective of Proto-Dravidian origin
5 <i>*wi(t)t-</i>	U <i>*witte</i> (> 'ten' in Samoyed)
10 <i>*kümen-</i>	F.-Mord. <i>*küme(ne)</i> with good Yukaghir parallel < Proto-Uralo-Yukaghir <i>*kümen-</i> 'number, quantity; (?) ten'

As it can be seen, most of these V. Blažek's Proto-Uralic reconstructions are too optimistic, not to say simply bad. Therefore his conclusion: "the internal evidence and external parallels allow us to reconstruct the proto-Uralic numeral system consisting of the numerals 1—5. Although there are no evident Proto-Samoyed cognates to FU **neljä* '4', the probable foreign origin of the Proto-Samoyed (< Turkic) and the external evidence justify projecting this numeral onto the proto-Uralic level [---] Among various denotations of the numeral '10', the Finno-Mordvinian **kümeni* seems to be the most archaic, given proto-Yukaghir **küme-* '10'. The counting system with the firmly established numerals 1—5 and 10 looks perhaps as illogical to Europeans, but it is well-known, e.g., in Bantu languages. It does not mean the numerals 6—9 did not exist in proto-Uralic: they could be formed (and were formed) through the existing numerals 1—5 and 10 and elementary arithmetic operations" (Blažek 1999 : 98) can in no way be accepted. Despite his optimism, it should be said that there is no possibility to reconstruct more than **kekta* 'two', **witte* 'five' and (only thank to the Yukaghir parallel) **küme(ne)* 'ten' / '(great) number, quantity' for Proto-Uralic. Also, a word for 'one' should be typologically presupposed, though we cannot guess what phonetic shape it had had.

As far as external parallels are concerned, one can regretfully say, that V. Blažek did not give any estimation of different parallels enlisted in his book, and, therefore, his conclusion: "this cognate set reflects the East (North) Nostratic level, approximately corresponding to J. H. Greenberg's Eurasiatic. The material correspondences among

numerals indicate closer relationship among Uralic, Yukaghir and Altaic (including Korean and Japanese) within East / North Nostratic" (Blažek 1999 : 98) is also groundless. Actually, only the above mentioned Yukaghir, Dravidian and some Indo-European and Itelmen (often treated separately from other Chukchi-Kamchadal languages) parallels deserve serious attention. All the Altaic parallels, except the really ancient Northern-Eurasian (may be called also "Nostratic") stem **none* 'many' and the Turkic words suggested as sources for borrowings into Proto-Samoyed, are certainly of no real value. Thus, the reference to J. H. Greenberg may be regarded as rightful: V. Blažek's attempt to find a set of numerals reflecting (the East (North) Nostratic level, is as well-grounded as J. H. Greenberg's omnicomparativistic phantasies.

In summary, V. Blažek's analysis of the Uralic numerals seems to be opposite to L. Honti's: the first is too optimistic and overambitious and therefore facing a danger not to be accepted seriously by most of the Uralists, the second — too conservative and essentially compilative and, therefore, forming an illusion of final knowledge (i.e. end of science). Being sure there are a lot of unsolved problems which are to be and can be solved, but not ready to accept the superficial Nostratic approach, I dare to suggest a step towards a bit more deep and historically and culturally relevant analysis of the Uralic numerals taking into consideration the possibility of reconstructing the evolution of the counting system (following in general the way presented in Kovács 1960) and using the etymologies verified by the methods of traditional Uralistics and those recently suggested by V. Blažek, which fit in the established phonetical correspondences, and also the typological parallels from the very useful and stimulative book by V. Blažek. My hypothesis is shown in the table below, where I tried to show probable counting systems which can be suggested for Proto-Uralo-Yukaghir, Proto-Uralic and Proto-Finno-Ugric and Proto-Samoyed, based on the reconstructed numerals and examples of counting systems from different languages.



	UYu. (one) two many	U (one) two five twenty	FU one ten hundred	Sam one ten hundred
Basic numerals				
Coun- ting	1 2 2+1 2+2...	1 2 2+1 2+2 5 5+1 ... 2×5... 2×5+5... 20...	1 2 3 4 5 6 7 10-2 10-1 10... 100...	1 2 3 4 5 6 7 10-2 10-1 10... 100...

Typological parallels

	to UYu.	to U	to FU and Sam	
	Aghu (Trans-New Guinean fam.)	Eskimo (Alaska)	Sumerian (counting of days: 1, 3)	Sumerian (5, 20)
	1 <i>fasike</i>	[1—4 varia]	1 <i>be</i>	1 <i>aš</i>
	2 <i>okuomu</i>	5 '*hand'	2 '1+1'	2 <i>diš</i>
	3 <i>okuomasike</i>	7 '+ 2'	3 <i>PEŠ</i>	3 <i>min</i>
	4 'little finger'	8 '+ 3'	(? '*next')	4 <i>eš</i>
	5 'palm'	10 '*upper side'	4 '3+1'	5 <i>i</i>
	6 'palm + 1'	11 '10+1'	5 '3+1+1'	6 '5+1'
	7 'palm + 2'	15 '*in front of'	6 '3+3'	7 '5+2'
	10 '2 palms'	16 '15+1'	7 '3+3+1' ...	8 '5+3'
		19 '20 not'		9 '5+4'
		20 'man'		10 <i>u</i> ('*many')
				20 '2×10'
	Jawony (Pama-Nyungan fam.)	Haida (Na-Dene fam.)		
	1 <i>Anṭiřiñ</i>	1 <i>sgoā'nsi~ñ</i>		
	2 <i>ṭatkuřaŋ</i>	2 <i>stiñ</i>		
	3 '2+1'	3 <i>lgu'nul</i>		
	4 '2+2'	4 '2×2'		
	5 '2+2+1'	5 <i>lē'il</i>		
		6 '3×2'...		
		10 '5×2'		
	San (Khoi-San fam.)	Yukaghir (Kolyma)		
	1 <i>/wi</i>	1 <i>irkiei</i>		
	2 <i>/ám</i>	2 <i>ataxloi</i>		
	3 <i>ng!ona</i>	3 <i>yaloí</i>		
	4 '2×2'	4 '3+1'		
	5 'hand'	5 'hand'		
		6 '2(3'		
		7 '2 above'		
		8 '2×(3+1)'		
		9 '10 without 1'		
		10 <i>kunel</i>		

The Sumerian example shows that there might co-exist two (or more) counting systems, one being the main and the other used for special purposes. Examples of this kind may be found in many other, also just normal European languages (as counting by dozens, using vigintimal system in official written Danish, etc.).

The development of the Uralic counting systems reconstructed here is, to my mind, connected not only with the chronology of the proto-language stages (more ancient = more archaic system), but also (if not mainly) with the step-by-step inclusion of the Uralic-speaking population into the Eurasiatic cultural area. At least the appearance of the decimal system was undoubtedly inspired by the Uralic-Indo-European (and Uralic-Turkic) contacts.

Abbreviations

AInd. — Ancient Indian, **F.** — Finnish, **F.-Mord.** — Finno-Mordvinian, **F.-Perm.** — Finno-Permian, **F.-Volg.** — Finno-Volgaic, **fam.** — language family, **FU** — Proto-Finno-Ugrian, **Hung.** — Hungarian, **IE** — Proto-Indo-European, **Jap.** — Japanese, **Kor.** — Korean, **Mo.** — Proto-Mongolian, **Mord.** — Mordvinian, **N** — northern, **Osset.** — Ossetian, **Ost.** — Ostyak, **Perm.** — Proto-Permian, **Sam.** — Proto-Samoyed, **Selk.** — Selkup, **Slav.** — Proto-Slavic, **Toch.** — Tocharian, **Tu.** — Proto-Turkic, **Tung.** — Proto-Tungus, **U** — Proto-Uralic, **Ug.** — (Proto- / common) Ugrian, **UYu.** — Proto-Uralo-Yukaghir, **Vog.** — Vogul, **Voty.** — Votyak, **Yu.** — Yukaghir, **Zyr.** — Zyrian.

L I T E R A T U R E

- Blažek, V. 1990, New Fenno-Ugric-Indo-Iranian Lexical Parallels. — Uralo-Indogermanica. Part II, Moscow.
- 1999. Numerals. Comparative-Etymological Analyses of Numeral Systems and Their Implications (Saharan, Nubian, Egyptian, Berber, Kartvelian, Uralic, Altaic and Indo-European languages), Brno, Spisy Masarykovy univerzity v Brně. Filozofická fakulta, 322.
- Erdődi, J. 1970, Selkupisches Wörterverzeichnis. Tas-Dialekt, Bloomington (UAS 103).
- Etymologisches Wörterbuch des Ungarischen, Budapest 1992–1994 (= EWU).
- Honti, L. 1993, Die Grundzahlwörter der uralischen Sprachen, Budapest.
- Jahunen, J. 1977, Samojedischer Wortschatz. Gemeinsamojedische Etymologien, Helsinki (Castrenianum in toimitteita 17).
- Kovács, F. 1960, Some Remarks on Uralic Numerals. — ALHung. 10, 117–129.
- Napolskikh, V. V. 1995, Uralic 'seven'. — JSFOu 86, 119–128.
- Rédei, K. 1965, Szófejtések. — NyK 67, 117–129, 324–338.
- Sammalhti, P. 1988, Historical Phonology of the Uralic Languages. — The Uralic Languages. Description, History and Foreign Influences, Leiden—New York—København—Köln, 478–554.
- Мудрак О. 2000, Этимологический словарь чукотско-камчатских языков, Москва.
- Хелимский Е. А. 2000, Компаративистика, уралистика. Лекции и статьи, Москва.