

## CHUVASH AND HISTORICAL MORPHOLOGY<sup>1</sup>

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The history of suffixes is one of the most difficult fields in historical linguistics. This paper shows an approach of reconstructing the history of the suffix forming ordinal numerals in Chuvash. The present suffix *+měš* is relatively young, but its constituents, *+m*, the possessive suffix *+i* and the *+š*, are very old. In fact, the final *-š* in Chuvash *+měš* is a clear case where Proto-Turkic /š/ was preserved after /n/. The author claims that the Turkic suffix *+nč* goes back to *+nš*, and this is also preserved by Yakut, Dolgan, Tofalar and Tuva. The regional feature enables us to give a chronology both to the historical feature and to the migration of the Chuvash people.

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In the case of the Chuvash language we can dispose of the following categories: 1. Ancient Turkic morphological features which have been preserved by Chuvash, but lost in all other Turkic languages, 2. Chuvash innovations which are peculiar only to Chuvash, 3. Chuvash features which are Ancient Turkic and show the “normal” Chuvash changes, 4. Copies<sup>2</sup> or borrowings from other languages, among them from Turkic or Finno-Ugrian. In the case of Chuvash it is extremely difficult to differentiate among features pertaining to one of the four categories. For instance in Chuvash the possessive suffix third person singular is *+\*i*, while in all other Turkic languages it is after stems with vocalic finals *+si*<sup>3</sup> and with consonantal finals *+i*.

<sup>1</sup> I read the original of this paper at a symposium in Göttingen, 13th–15th, November 1997, organised jointly by the Seminar für Turkologie und Zentralasienkunde of the Georg-August-Universität and the Department of Altaistics of the Attila József University, Szeged, Hungary. I owe sincere thanks to the Humboldt Stiftung for making possible these studies and my stay in Göttingen with a research-prize.

<sup>2</sup> Lars Johanson suggested to use the term “to copy” instead of “to borrow”. No doubt this is more exactly reflecting the situation, since the original which is copied, remains in the language, if we borrow something we take it away. Similarly the term *loan word* can also be replaced with the term *copy*. On the other hand copying is a conscious action while linguistic borrowing is in most cases not. Metaphoric use of terms does not disturb, if we agree in the rules of their use.

<sup>3</sup> Already Grønbech (1936/1979, p. 93) has clearly seen that the suffixes *+i* and *+si* had originally only front vocalic forms. Chuvash has preserved this. We find *ut* ‘horse’, *učě* ‘his horse’ (< *ati*), but *utām* ‘my horse’ (< *atim*).

Theoretically it would be possible that Chuvash preserved an older stage, and +*si* is a secondary development in all other Turkic languages. This is, however, as we shall see later, not the case. All Turkic languages with the exception of Chuvash have the historical phonemic oppositions /z/ : /r/, /š/ : /l/.<sup>4</sup> Some scholars claim that Chuvash is preserving an old feature. This is not the case and the more “simple” Chuvash situation is secondary. On the other hand the nominative and the oblique stem of the personal pronouns first and second persons respectively are in Chuvash \**bi* ‘I’ (> *epě*) : \**bän* (> *man*), \**si* ‘you’ (> *esě*) : \**sän* (> *san*), while in all other Turkic languages we find only \**bän*, \**sän*. The generalisation of the oblique stems is secondary in the non-Chuvash languages, and only Chuvash preserved the old form of the stems pertaining to the nominative case.

In some cases the situation is more complex. In the following I shall try to demonstrate by which procedures and on which arguments can we decide such a question. I selected the Chuvash suffix of the ordinal numerals: +*měš*.

### 1. Synchronic analysis

For understanding the status and function of the suffix of the ordinal numerals first we have to look at the cardinal and collective numerals.

*Cardinal numerals* may have absolute and contextual forms (see Greenberg 1978, pp. 286–287). The first are used in simple counting as “one, two, three” or in reference as “the numeral two” or as predicate “two times two is four”. The contextual forms are used as quantifiers “one chair, two men, three children etc.”. In Hungarian for “two” the absolute form is *kettő*, the contextual form is *két*. There does exist a third category, namely the definite cardinal numerals. E.g. “The (aforementioned) two of the children”, “the three of the Ten Commandments (which refer to God)”. For the contextual Chuvash uses two forms<sup>5</sup>, for the absolute function a third (on the definite forms see below):

Contextual	Absolute
1. pěr, (pěřě)	pěrre
2. ik, ikě	ikkě
3. viś, viśě	viśšě
4. tăvat, tăvată	tăvattă
5. pilěk	pillěk
6. ult, ultă	ulttă

<sup>4</sup> In fact Chuvash has [z] as an allophonic variant of /s/ while in the synchronic system /š/ and // are independent phonemes. See below on the secondary /š/ in Chuvash.

<sup>5</sup> The two forms *ik*, *ikě*, and *viś*, *viśě* respectively are used in free variation. The form *pěřě* is rare and can only be reconstructed, see below.

7. śič, śičě	śiččě
8. sakăr	sakkăr
9. tăxxăr	tăxxăr
10. vun, vună	vunnă
50. al, ala	alla <sup>6</sup>
80. sakărvun, sakărvună	sakărvunnă

The origin of these two series is a debated question. According to Clauson (1959) the Chuvash numerals with long consonants preserved an old feature. According to Ashmarin (1898) and others, the lengthening was due to the stressed position in the absolute form. Phonetically the opposition is not of short and long consonants but of weak and strong or lenis *vs* fortis pronunciation. In fact we have /sacăr/: /sakăr/ which is realised by the orthography as <sakăr> and <sakkăr>. The /c/ is a weak unvoiced and the /k/ a strong unvoiced guttural stop<sup>7</sup>. In stressed position the fortis pronunciation was preserved. This is important, because we have no “long consonants” in Chuvash. It is another question why is an old strong consonant preserved in intervocalic position in numerals, while in other cases it became a weak one<sup>8</sup>. This is surely due to the fact that numerals in the stressed and unstressed positions have different functions and the differentiation needed a phonemic marker. It is also important that in the Chuvash monosyllabic numerals a second vowel appeared in form of a reduced vowel (*viśě, viśśě*, cf. Turkic *ũč*).

*Collective numerals.* The collective numerals single out a group from a smaller group of people: “we two”, “you three”, “they three” etc. According to Andreev (1957, pp. 117–121) and Pavlov (1965, pp. 181–183) Chuvash language has the following collective numerals:

	We	You	They	
			definite	indefinite
two	iksēměr	iksěr	ikěš, ikěšě, ikkěš(ě)	ikkěn
three	viśsēměr	viśsěr	viśśešě	viśśěn
four	tăvatsămăr	tăvatsăr	tăvattăšě	
five	pilěksēměr	pilěksěr	pillěkěšě	pillěkěn
six	ultsămăr	ultsăr	ulttăšě	

<sup>6</sup> The three forms *al, ală* and *allă* are now only present in the Viryal dialect. In the Anatri dialect and in the literary language the form *allă* has been generalised and is the only one used.

<sup>7</sup> On the weak and strong opposition of consonants see Johanson (1984–1986) where Chuvash is not dealt with.

<sup>8</sup> On the secondary weakening of obstruents see Johanson (1998, p. 98).

seven	śičsēměr	śičsēr	śiččěšě	
eight			sakkārāšě	sakkārān
nine			tāxxārāšě	
ten			vunāšě	
twenty			śirēměš	śirēměn
thirty			vātārāš(ě)	
forty			xerexeš(ě)	
fifty			allāšě	

There is a discussion on the nature of these numerals. Ashmarin (1976, p. 44) did not enumerate them as collective numerals and remarked only that the numerals can have possessive suffixes as the nouns may have, but only plural forms occur with the possessive suffixes. Andreev, Pavlov, and others think that here we have to deal with collective numerals. Levitskaja (1976, p. 51) suggested to call them collective-definitive or collective-selective (*sobiratel'nyj-vydelitel'nyj*) numerals. According to Benzinger (1959, p. 732) the forms *iksēměr* and *iksēr* evolved on analogy to *kiltēměr* 'we came', *kilter* 'you came'. Räsänen (1957, p. 22) suggested to find here two possessive suffixes. Levitskaja (1976, p. 122) accepted the opinion of Räsänen, but remarked in a footnote that there does exist a view that *+sēměr* comes from the plural, i.e. *ikē+sem+ēměr* (= *iki-ler-imiz*<sup>9</sup>). This is the only possible solution, because the *-s-* in *iksēměr* cannot be a possessive suffix which is *+š(ě)* if it is present at all, as we shall see later. The form *iksēměr* 'we two' is in this case 'two' + the marker of the plural (*sem*) + the suffix of the first person plural (+ *ēměr/āmār*). The form for 'you two', *iksēr*, is from *iki+sem+r*, that is 'two'+pl+Px2pl and 'they two', *ikkěšě* is 'two'+Px3s. The model is thus the following: =*iki+ler+imiz*, =*iki+ler+siz*, =*iki+si*. It is important to remark that these forms are definite forms in contrast to the non definite forms with *+än/en*. In Chuvash *ikkěšě* means 'they two', *ikkěn* 'both, two together', e.g. *epir kilte ikkěněx* '(Only) two are at home with us', *ulttānran ikkěněx tārša yultāmār* 'out of six (only) two of us remained'. Ashmarin (1898, p. 184) quotes the following example: *Atāl xerrinčě allā xur, allāšě te xura xur* 'On the bank of the Volga there are fifty geese, all fifty of them are black'. *Allāšě* '(all) fifty of them' corresponds to *elig-i* in most Turkic languages.

Chuvash has a *definite form* 'the first of the already counted units'. This is formed with the possessive suffix which joins in the case of 'one' the longer contextual form, and is *pěri* (*pěř+i*)<sup>10</sup>. Thus we have *ikkëren pěri* 'one of both, the one

<sup>9</sup> In the following I shall denote with the sign of equality the Turkic analytic equivalent of the given Chuvash morphemic structure, a kind of "morphemic translation" into Common, i.e. non Chuvash Turkic.

<sup>10</sup> This needs some comments. In Chuvash if the possessive suffix of the third person joins a word which ends in a consonant, the suffix has the form *+ě*: *xěr* 'the girl', *xěřě* 'of the girl' (\**qiz+i*). If it joins a word which ends in a full vowel it is *+i*: *ěne* 'the cow', *ěni* 'of the cow' (\**ěne+i* < *ineg+i*). If the word ends in a reduced vowel, the preceding consonant changes to

of the two'. In contrast to the contextual and the absolute forms, which have the nominal declension, this form has the possessive declension. The locative case is for the absolute form *përre+re*, 'to one' (=bir+de)<sup>11</sup> while for the definite form it is *përinče* 'to the one (of them e.g. who remained in the room)' (=bir+i+nde). However, if the numeral 'one' is a member of a higher decade than it is in the contextual form *širëm pěr* '21' and the locative case is *përte*, e.g. *Esě mišě šulta? – Epě širëm pěrte* 'How old are you? – I am 21 (I am in my twenty first)' (=ben yigirmi birde) and not \**širëm përrere* (Andreev, 1957, p. 110).

In the above examples we could see that the numerals can be used and are in fact used with possessive suffixes for several functions, mainly for expressing definitiveness.

*Ordinal numbers* are always referring to a group of which the given unit is the second, the third etc. These numerals are always in singular in contrast to the collective numerals, as 'the second' is in contrast to 'two of us, these three together'. Ordinal numerals have to be therefore either in some of the possessive (*the fifth of the sons*) or partitive (*pjatyj iz synovjej*) structures or in an attributive determinative function (*the fifth son, pjatyj syn*).

In the Anatri dialect and in the literary language the ordinal suffix is +*měš*. It follows the absolute form as *përreměš, tävattäměš*, but in the Viryal dialect the same ordinal suffix is following the contextual forms in attributive function: *višëměš kun* 'the third day', while the suffix is following the absolute form if it is used e.g. as predicate, as: *Xăš kunče* 'on which day?' *viššëměššěnce* 'on the third' (=üčünčünde). Note that the ordinal number has the local suffix of the possessive declension and once more it denotes definitiveness<sup>12</sup>.

The suffix +*měš* is always front vocalic, only some local dialects and spoken idioms are now gradually introducing the back vocalic form +*măš*.

If the ordinal numeral is an attributive it is not declined, but if it is in a genitive construction, then it takes the suffixes of the possessive declension as e. g. *ikkě-měš mayăn* 'of the second May (i.e. this was not of the first May month but of the second May month of her stay)', but *mayăn ikkeměššěnce* 'on the second of May' (=ikinčinde).

Chuvash has also an other ordinal suffix which is +*m*. This is, however, non productive and used only in certain frozen expressions as: *višěmkun* 'the third day', *višëm šul* 'the third year', *višëm-tăvatăm kun* 'in a few days', *višmine* 'after tomorrow', *tuatmine* 'on the fourth day', further *pilekmine, ultămine, šičmine* 'on the fifth,

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a strong (long) one and the suffix is +*i*: *ată* 'the boot', *atti* 'of the boot' (\**ata+i < etüg+i*). In front of these fact the form *përi* seems to be anomalous. From *pěr* we would expect *përe*, from *përe* *përri* and from *përre* also *përri*. We know, however, a few similar cases, as *ută* 'hay', *uti* 'of the hay' (and not \**utti*), *šută* 'light', *šuti* 'of the light' (and not \**sutti*), *pušă* 'the whip', *puši* 'of the whip' etc. (see Andreev 1957, p. 36). These are secondary, because otherwise we would find \**učě* etc.

<sup>11</sup> The Chuvash form *përrere* is from *birede*, the suffix +*de* remained –*t* after final –*r*, as in *pirte* 'in the linen'. The vowel –*e*– is an inner Chuvash secondary form, see also *širëm pěrte* 'in the twenty-first'.

<sup>12</sup> Already Grønbech (1936/1979, pp. 96–97) has seen that the possessive suffix third person singular, which he called article, is expressing definitiveness.

sixth, seventh day'. In some Viryal dialects, e.g. in the dialect of Puškart and Horačka i.e. Maloe Karačkinno and Bolšoe Karačkinno of the Sundir rayon in the present administrative system, Ashmarin noted the form *višēn kon*, that is instead of *+m*, they use a suffix *+n*. This looks like a sandhi form: *višēmkon > višēnkon*.

It was important to collect and analyse all the recent data, because this has not been hitherto done, and we can move to the historical analysis only if we dispose of all data being at our disposal.

## 2. Historical analysis

The first thing that is clear is that the suffix *+měš* cannot be very old, because it does not follow the vowel harmony. This is not the only relatively recent suffix. The Chuvash suffix of the plural *+sem* has the same peculiarity, it has no back vocalic form in the Anatri dialect and the literary language. In the Viryal dialects the spread of the back vocalic *+sam* variant is more progressive than that of the ordinal suffix. The suffix *-sem* occurred already on the Volga Bulgharian inscriptions (see the 1308 inscription, Hakimzjanov 1986, p. 174, line 4: *ulamaseṃne* 'the ulamas (acc.)', Modern Chuvash *ulamsene*).

The fact that the ordinal suffix *+měš* is relatively recent and had only a front vocalic variant means that the vowel *-ě-* cannot be a connecting vowel. It can go back either to an invariable front vocalic [*i*] or it can go back to an */i/* which had originally front and back allophones but came under the influence of a phonetic feature and was palatalised. This, theoretically, may have been a strongly palatalised consonant or another front vocalic [*i*] which later disappeared. But in both cases the *-ě-* of *+měš* immediately has to go back to an earlier [*i*]. Until now it was the general opinion that every */š/* of the Chuvash language is secondary. The consonant *š* can have three different origins. It can go back to a sequence *-si-*<sup>13</sup>, it can feature in words of foreign origin and it can go back to a few consonant clusters. Such a cluster, that may interest us, is *-nč-*.

Among the deverbal noun formative suffixes we find the OT suffix *-(X)nč* (Erdal 1991, pp. 275–285) which is reflected in Chuvash by *-š-*: OT *sāvinč* > Ch *savāš* 'joy', OT *korkinč* 'fear' > Ch *xāruš* 'fearful', OT *sākinč* > Ch *šuxāš* 'thought'.

The foreign origin of a suffix is possible if and only if more words without and with the given suffix have been borrowed, the speakers of the borrowing language recognised the function of the suffix and then the suffix spread to the genuine words. This is the case e.g. in Halaj. The intrusion of Persian numerals into Halaj has been described by Doerfer (1988, pp. 111–114). The replacement of Turkic words by Persian words is greater in higher numerals than in lower, but in case of giving prices, fixing calendric days and hours it is very common also in the case of the lower numerals. Among these Persian suffixes we find also *-ām* as in *tērtām* 'fourth',

<sup>13</sup> The cluster *si-* may have two origins. It can go back to a cluster */s/*+ short or long */i/* or it can appear in places where */s/* was originally followed by a long *lā* > *lial*. OT *sirt* > Chuv *šārt* 'bristle', OT *sāz* > Chuv *šur* 'mud'.

*bēšām* 'fifth' along with *duyum*, *säyyum*, *häftum* etc. Sometimes the Persian structure is contrasted to the Turkic as *häftu'm-i kīn* 'der siebte Tag', but *kīnī yētisi 'rti* 'es war der siebte Tag'.

According to Galkin (1964), Je. I. Kovedjajeva (1976) and following them according to Adamović (1996) the Chuvash ordinal suffix and thus the final *-š* would be of Cheremis origin. This can be excluded, because none of the Cheremis numerals has been ever borrowed by Chuvash.

Already Ashmarin (1898), later Andreev (1957, pp. 114–116), Benzing (1954, p. 389; 1959, p. 731) and Levitskaja (1976) claimed that *-š-* of *+měš* goes back to the possessive suffix *-si*. Adamović tried to refute this with the reasoning that "...ein 'Possessivsuffix -ěš' [...] es in Wirklichkeit nicht gibt, und wohl auch nicht geben kann, da das urtürkische Possessivsuffix der 3. Person bekanntlich *-si* lautet" (1996, p. 17). Further he mentioned that *-si* is joining only words with vocalic Auslaut and here we have *-m*. None of the two arguments are acceptable. Nobody claimed that the suffix is *-ěš*, it was claimed that the suffix is *-š-*.

Chuvash is the only Turkic language where the possessive suffix *-\*i* is joining both the words ending with consonants and with vowels. In modern Chuvash the OT suffix *-si* has been preserved only in a very few cases as: *amāšě* 'his/her mother', *aššě* 'his/her father', *kerüşě* 'his/her son-in-law', *purta türtěš(ě)* 'the back of the knife', *alā türtěš(ě)* 'the back of the hand' (Ashmarin 1937, vol. XIV, p. 229, Paasonen 1908, p. 177) and as we have seen it is applied after some suffixes used just with numerals. Most of the authors use to cite the famous *Materialy* (1898) of Ashmarin. Ashmarin read thirty years later lectures at the University of Kazan in the academic year 1929/30, and the text of these lectures was published in 1976. Here (1976, p. 43) he is more explicit and says that according to him a double possessive affix is following the numeral with the old ordinal suffix *+m*: *ultt-ām-ě-šě*. This means that according to Ashmarin the *-ě-* of *měš* goes back to the possessive suffix *-i-* (= *alti+m+i+si*).

As I have shown above in Chuvash to the final *-nč* in words as *sevinč*, *kor-kinč*, etc. a final *-š* does correspond. Erdal (1991, p. 275), citing Bang (1930), points to the possibility that the */č/* of Old Turkic *-(X)nč* might be from the formative *-Xš* joining verbs ending in *-n*. The third vowel of e.g. *sevin-Xš* was syncopated and from such *-nš-* developed the form *-nč*<sup>14</sup>, which was later generalised. Following Bang, a similar idea was expressed by Benzing (1954, p. 388), who suggested to have an OT *ikinč* from *\*ikiniš*. Accordingly we now have to consider whether the *-š* of *+měš* is or is not a "preserved" form.

In Chuvash the "normal" representation of Turkic *\*č* is the palatalised *ś* (*kaś* 'late, afternoon' < *käč*). If we find in place of Turkic *-nč-* Chuvash *-š-*, we have two options: *-nč* goes back to *-nš*, Chuvash preserved *ś* of the phase *-nš* and later dropped *-n-* in this position or we have to depart from *-nč* which as a cluster developed into *ś* in Chuvash. In the first case we would now have three different scenarios of the history of PT *\*š* in Chuvash. In many cases it became *l* (the well-known lambdacism,

<sup>14</sup> The change from *nš* to *nč* (*ntš*) is a natural change. The infixation of the oral dental stop *t* between the nasal dental stop *n* and the sibilant *š* for easing the pronunciation is a well known feature in phonetics.

*altmiš* 'sixty' > *utmāl*), in some cases it became *ś* (as in *baš* 'head' > *puś*) and after *-n-* it remained *š*. More precisely:

1. \**š* > *l*,
2. \**š* > \**lč* > *ś*,
3. \**-nš* > *š*.

In the third case *š* has been preserved because it was "protected" by the preceding nasal. As we shall see a similar procedure occurred in Yakut, Dolgan, Tofalar and Tuva.

Now we can move to the problem of the origin of Turkic ordinal suffix. This is, as it is well known, *+(X)nč* in Old Turkic (OT). In most of the modern Turkic languages we find *+(X)nč(X)*, *+m(X)nč(X)*, or *+l(X)nč(X)*. In four languages we do not find the nasal. One of them is Yakut, where the suffix is *-s*, see Yakut *altis* 'sixth', *onus* 'tenth', etc. The same is the situation in Dolgan, which is a language near to or a dialect of Yakut. Yakut final *-s* can go back to *-č*, or *-š* (in a few cases also to *-s* and *-z*). Since *-s* and *-z* can be disregarded here, the Yakut ordinal suffix can go back either to *+(X)nč* or to *+(X)nš*. We shall decide this question later, at present for denoting the two possibilities we shall use the notion *-nč/š*.

In Yakut verbs ending in *-nč* as OT *yanč-* 'to crush, to trample on', *sanč-* 'to pierce', have the following stem variation: *sīs-* (=OT *yanč-*), but the oblique stem is *sinńa-*, *as-* (= OT *sanč-*), but the oblique stem is *anńa-* respectively<sup>15</sup>. This means that in word final position we find *-nč/š* = Yak *-s*, but in intervocalic position *-nń-*, and this points to a palatalised *-ń+č/š* (see Schönig 1991, 1997, p. 130). To this we can add that *-nč/š* became *-s* also before consonants: Yakut *astar-* is the iterative form of *as-* (= OT *sančtur-*).

The Yakut representations have recently been studied by Stachowski (1994). He added to the above a very important chronological remark. In Yakut we find *yahax* 'Unterhaltung, Spiel' from an earlier *yasax*. This form goes back to an even earlier form *abinčak*, but this could not have occurred directly, since *-nč-* is here not in word final but in intervocalic position. Thus we have to suppose that the Turkic form *abinč* 'something which gives pleasure, enjoyment' became first in Middle Yakut *abis* then it was joined by the suffix *+Ak* and the form *\*abisak* became regularly *yasax* > *yahax*.

Stachowski (1994, p. 179) further called the attention to the fact that beside the "normal" ordinal suffix *-s* there does exist a special form with *-nńi* as *altinńi* 'October < the sixth month' in contrast to *altis* 'the sixth'. This means that in Yakut we find the opposition *\*altinči* : *\*altinč* in the form *altinńi* : *altis*. The difference is similar to the difference between the absolute and the contextual forms of the ordinal number. Here the absolute form of the ordinal number has a possessive suffix *\*+i*.

Dolgan follows the Yakut model. Along with *altis* 'sixth', *onus* 'tenth' we find in place of OT *sanč-* Dolgan *as-* which has the oblique stem *anńV-*. To this we can add from the vocabulary (Stachowski 1993, p. 34) *anńi* 'Art Brechstange, ein Fischfanggerät' (< *sančig*).

<sup>15</sup> Anderson (1998, p. 14) quotes also Yakut *mus-* 'to gather' and its oblique stem *munńa-*. In Dolgan we find *mus-* 'sammeln', *munńak*, *munńax* 'Versammlung', *muńuxun-* 'sich versammeln'.

In Tuva we have  $-(X)k(X)$  (*dörtkü* 'fourth'), and in Tofalar  $-(X)šk(X)$  (*dörtüşkü* 'fourth'). I would leave for the time being the question of  $+kü < +ki$  aside<sup>16</sup>, but the  $-š-$  in Tofalar (Karagas) is of great interest. According to Bang (1930, p. 19) and Menges (1968, p. 117) the  $š$  in Tofalar is due to a false separation, from *baški* 'first' (*baš* 'head' + *ki*  $> +ški$ ). Shcherbak (1976) accepted this too. Rassadin, however, pointed out with reason that  $-š-$  in the Tofalar suffix is the same as the Turkic  $-nč$  and as the Yakut  $-s$ . Rassadin (1978, pp. 118–121) argued that the same happened with verbal stems ending in OT in  $-nč$  and in Tofalar in  $-n'čž$ . ( $-ńđž$  in our transcription). If the ending got into absolute final position or it came into preconsonantal position in suffixed forms, the cluster  $-n'čž-$  became  $š$  and the preceding vowel is lengthened and nasalised: OT *sanč-*  $>$  Tofalar *šen'čžar* 'to stick, pierce into'  $>$  *še~eš!* 'bodaj! [butt! imperative]', *še~eškak* 'butting', OT *yanč-*  $>$  *nä~eš* 'soften! (imperative)', *nen'čžar* 'to crush, to soften', *nä~eškan* 'he softened'. The feature is present also in some Tuva words. OT *yanč-* 'to crush, to soften, to beat' appears in Tuva as *šanč-* ( $<$  *sanč-*), its imperative is: *šaš!* the iterative is *šaškila-*. Or OT *korkunč* 'fear' is in Tuva *korguš*, but the adjectival form is *korgunčug*.

The Tofalar, the Tuva and the Yakut features are the same, and we can formulate the statement that OT  $-nč$  is yet preserved on the surface in Tofalar and in Tuva in the form  $-š$ , in Yakut as  $-s$ . The only difference between the Tofalar, Tuva and Yakut on the one side and the Chuvash feature on the other, is in Chuvash  $š$  was fully generalised and the original nasal is not coming to the surface in any of the phonetic positions, even not in verb stems ending in  $-nč$ .

Thus we find the following: Yakut, Dolgan  $-*nčV$ :  $-nń-$ ,  $-*nč$ :  $-s$ , Tofalar, Tuva  $-*nčV$ : *ńđž*,  $-*nč$ :  $-š$ ,  $-*nčC$ :  $-š$ , Chuvash  $-*nč$ :  $-š$  (-).

Cluster	Yakut/Dolgan	Tofalar/Tuva	Chuvash
+Nč#	s (< š)	š	š
+NčC	s (< š)	š	š
+NčV	nń	ńđž	š

Taking into account that the Yakut/Dolgan ordinal suffix  $-s$  and the Tofalar  $-š$  in the Tofalar suffix  $-ški$  are both corresponding to OT  $-nč$ , we have to conclude that the Chuvash  $-š$  in  $+meš$  is also corresponding to OT  $+nč$ . We have, however, to leave open for the moment the question of the origin of the Yakut/Dolgan/Tofalar/Tuva/Chuvash feature.

The following problem is connected with the  $-m$  as a separate suffix and as a part of  $+meš$ . The problem of the nasal consonants in general has been discussed by Doerfer (1967, 1973), Levitskaja (1976), Hovdhaugen (1972) and me (Róna-Tas 1976, 1982). According to Doerfer beside  $*m_1$  which remained  $m$  in all Turkic languages, there was an Ancient Turkic  $*m_2$  which became  $n$  in all Turkic languages

<sup>16</sup> On  $+ki$  in the ordinal numerals see Doerfer (1988, p. 115).

with the exception of Chuvash where it remained *m*. Levitskaja, Hovdhaugen and I argued that the problem of the nasals in Chuvash is a result of dialectal variation, which according to Hovdhaugen may go back to the generalisation of sandhi rules.

The question of the ordinal suffixes *-m* and *-meš* has been mentioned by Doerfer, but only in connection with Pritsak's opinion that *-nči* goes back to *-inti* (see OT *ikinti*), but since Chuvash has *-m* this is, according to Doerfer, unlikely "...es sei denn, man trenne tü. *-n-ti* und tshaw. *-m* überhaupt voneinander, was aber kaum beweisbar ist und was ja auch Pritsak nicht tut" (1967, p. 62). The idea of Benzing that the Chuvash ordinal suffix *-m* would be of Iranian origin is as unlikely as the Cheremis origin suggested by Galkin, Kovedjajeva and Adamović is (see above on the borrowing of suffixes).

From Kumük we can cite *+imči/imji+si* e.g. *seksimjisi* (Benzing 1949, p. 400). In some Chagatai texts e.g. in the *Bāburnāma* we find forms as *ikimčisi*, *üčümčisi*, *törtümčisi*, *bešümčisi*, *altimčisi*, *yetimčisi*, *sekizimčisi*, while in other Chagatai sources we come across *bešinči* or *bešilänči* (cf. Eckmann 1966, p. 109). Forms with *-m-* on place of *-n-* in *\*+nči* as *birimji*, *üčümjü*, *onumju* are quoted from Türkmen, Azeri and Üzbek dialects by Shcherbak (1976, pp. 205–206). From a phonotactic point of view *-mči-* can change into *-nči-*, that is a homorgan nasal can develop on place of a non homorgan before a *č*, but not vice versa. That means that if *-m-* in the *-mči* data is not due to a strong Iranian influence, then the original ordinal suffix was in Ancient Turkic *+mč* and this may have developed from *+\*m(X)š* as it was suggested by Bang and Erdal (see above). This became *+nč* and then with the addition of the possessive suffix *+nč+i > +nči*. The suffix has been in a further step in some Turkic languages de-etymologised and a second possessive suffix was added *+(X)nč+i+si > +nčisi*. A more complex form is *+minči*. This form is present in Halaj as *ičminji* 'third', *altaminji* 'sixth' (Doerfer 1988, p. 115), and similar forms are cited from some Azeri (Caferoğlu and Doerfer 1949, p. 300) and Türkmen dialects (Bazin 1949, p. 313).

It is, however, very unlikely that a so complex suffix as *+minči* is reflecting the original state. Thus what we see is that *-m* is featuring on the surface and then it is disappearing maybe two times: *-\*mč (> +mč+i+si) > +nč > +nč+i > +nči (> +nči+si) > +m+i+nč (+i)*.

In a paper published in 1976 I demonstrated that in the Volga Bulgharian inscriptions the ordinal suffixes are in a complementary distribution. After consonantal finals we find *+(X)m* and after vocalic finals we find *+š(i)*. Twenty years later Adamović (1996) came to the same conclusion apparently not knowing my paper. There were however two points which Adamović missed. I stressed that this distribution, as all complementary distributions, is secondary, and that it is also relatively recent. The Volga Bulgharian ordinal for 50 *älüş* 'fiftieth' could have developed only after the final *-g* of *elig* 'fifty' disappeared, otherwise we would have *\*älüm < elig+im*. Volga Bulghar had the distribution *-C(X)m* and *-Vš* and this situation goes back to a form *+minč*. I supposed that the complex suffix *+m+i+nč* changed as follows:

- |                      |   |                     |   |                    |   |                    |
|----------------------|---|---------------------|---|--------------------|---|--------------------|
| 1. <i>-C+(X)minč</i> | > | 2. <i>-C+(X)miš</i> | > | 3. <i>-C+(X)mš</i> | > | 4. <i>-C+(X)m,</i> |
| 1. <i>-V+(X)minč</i> | > | 2. <i>-V+miš</i>    | > | 3. <i>-V+mš</i>    | > | 4. <i>-V+š.</i>    |

This distribution could not last long. Firstly because the finals changed as *pěr* > *pěřě*, *viš* > *višě*, and secondly because analogy demanded a unified structure. If this complementary distribution existed not only in Volga Bulghar but also in the contemporary spoken Middle Chuvash, then it have changed soon. Phase two of the above changes was the nearest applicable morphophonetic unit, thus  $+(X)miš$  was restituted, generalised and this changed later to  $+(X)měš$ . Theoretically it is also possible that the phases 3 and 4 occurred only in Volga Bulghar, and Middle Chuvash preserved phase 2. Chuvash is not the direct continuation of Volga Bulghar, it represents a dialect that was near to, but not identical with the language represented on the Volga Bulghar inscriptions. If phase two was preserved, then we have to explain the front vocalic quality of Chuvash  $+měš$ . The answer could be that this is, historically speaking, the possessive suffix, which was originally only front vocalic, and remained as such in Chuvash as in *ut* 'horse' > *učě* 'of the horse' (< *at+i*), *ival* 'son', *ivalě* 'of the son' (< *ogul+i*).

Now we have to turn back to the non productive Chuvash ordinal suffix  $+m$  and ask what its origin may have been. It may be that this is a preserved very old feature from the Ancient Turkic period, prior to the Old Turkic  $-nč$ . This would mean that from the change  $+*m(X)š > -*mš > *nš > nč$  we can go one step back and suppose a phase  $*m+š$  of which the  $+*m$  was preserved in Chuvash. The other possibility is that the Chuvash  $+m$  may also be a conditioned remnant from the Middle Chuvash  $-m$  that evolved after consonants. This could have happened when the numerals with originally consonant finals got an additional final vowel, as OT *üč* > Middle Chuvash *viš* > Modern Chuvash *višě*. The structure *viš+ěm* was restructured as *višě+m*. This has been, then, generalised in counting and appeared also in numerals with final vowels as in OT *altı* > *ultă* > *ultăm*, OT *yeti* > *sičě* > *sičěm* and has been preserved in some expressions. It can be argued in favour of both hypotheses, but the second solution is more probable, since the generalisation in numeric systems is well known in all languages (see e.g. the initials of Latin *quatuor* 'four' and *quinque* 'five' < *\*pinkwe* or Hungarian *hat* 'six', *hét* 'seven' < *\*ét*).

Summing up: The Chuvash suffix for the ordinal numbers  $+měš$  has a complicated history. It corresponds to OT  $+minč$ . In a similar way as in Yakut/Dolgan and Tofalar/Tuva the final  $*š$  corresponds to OT  $-nč$ . We did not claim, however, that this  $-š$  goes back to  $-nč$ . We have a very important and old isogloss that connects Chuvash with the East Siberian Turkic languages. Chuvash has in addition two more elements, an  $+m$  and an  $+i$ .

Now we can turn to the chronology. The fact that the Chuvash  $+měš$  corresponds to Turkic  $+minč$  and Halaj and some Oghuz dialects have  $+minji$  <  $*minč+i$  that is the same structure as Chuvash plus the possessive suffix of the third person, could have two interpretations. It can be a shared old feature, or it can be a secondary development in both languages. The fact that historically Yakut/Dolgan and Tofalar/Tuva have in place of the OT final  $-nč$  the same  $-š$  as Chuvash may have also the same two interpretations.

Schönig (1997, p. 122) collected a few other common isoglosses between Chuvash and Yakut/Dolgan (Lena Turkic in his terminology). Such are the low vow-

els of the second syllable in OT *olor-* 'to sit down, to sit', Yakut *olor-*, Chuvash *lar-*, low vowels in the suffix *-DWR-* where the other Turkic languages as a rule have high vowels. The loss of the opposition  $\check{c} : y$  or the preservation of the verb *tašiq-* 'go out' (Yakut *tayis-*, Chuvash *tux-*) are less clear. According to Schönig, Lena Turkic and South Siberian Turkic formed not too long ago the North East Turkic area. According to him "[t]he connection between Chuvash and North East Turkic goes back to old areal language contacts". In favour of this claim he mentions the early contacts between the Proto Samoyed and the Oghur/Chuvash group and the shape of the word for 'stirrup'. In fact in the word for 'stirrup' in Tuva/Tofalar (*ezeŋi/ezeŋge*) and in Yakut (*iŋehe*) the first vowel is illabial as in Chuvash *yărăna* < *iräŋä*, while in most other Turkic languages (with the exception of Hakas and Yellow Uighur) it has a labial vowel (*\*üzeygi*). This suggests a situation in which, after the separation of the Oghur and Common Turkic languages, the speakers of the Oghur languages remained for a time in a region in South Central Siberia together with the ancestors of Yakut, Tuva/Tofalar, Hakass and Yellow Uighur.

In another paper (Róna-Tas 1988, p. 745) I have shown that the Chuvash word for 'pine-tree' *xirä* is ultimately of Proto-Samoyed origin, the same word is also present in a number of Siberian Turkic languages as Soyot *xadi*, Hakas *hazi*, Tuva *xadi*, Tofalar *hadi*, Nizhne Iyus *xayi*. This means that the Oghur people, or with other words the ancestors of the Chuvash/Bulghar people had to live once on a territory where they were in contact both with the Proto Samoyed speakers and with the speaker of the Central Siberian Turkic languages. These facts do not give an absolute certainty, but make it historically very probable that the change *-š* corresponding to OT *nč* is a shared old feature.

At this point we have to make a short stop. Is it certain that we have to do with an *+\*nč* in the ordinal suffix of Yakut/Dolgan, Tofalar and Chuvash as it was supposed by Schönig and Stachowski? As we have seen in the case of the deverbal suffix *-(X)nč* Erdal supposed a more ancient *+(X)nš*. Is it impossible that Yakut/Dolgan and Tofalar had *-/+nš* that changed to *š* and later in Yakut/Dolgan to *-s*? In this case Yakut/Dolgan and Tofalar would, together with Chuvash, have preserved an older stage.

<i>Nš</i>			
Old South Siberian <i>nš</i>			East Old Turkic <i>nč</i>
<i>š</i>			<i>Nč</i>
Yakut/Dolgan <i>s</i>	Tuva/Tofalar <i>š</i>	Chuvash <i>š</i>	All other Turkic languages <i>nč</i>

Would be this hypothesis chronologically acceptable? The exact time of the departure of the Oghur/Bulghar/Chuvash groups from the Turkic homeland in Central South Siberia can only be guessed. But according to what we know about the early Oghur migration, it had to be before the 4th century<sup>17</sup>. That means that this shared feature dates back to the times around the birth of Christ. Since Chuvash *-š* in *+měš* did not take part in the lambdacism (*altmiš* 'sixty' > Chuvash *utmäl*) we have also a terminus *post quem*<sup>18</sup> for this feature. The change *š* > *l* began in the centuries before the birth of Christ, but it did not become generalised<sup>19</sup>. In other words: */š/* became */l/* in some words, it became through */č/* > */š/* in others, and it has been preserved after */n/* at least in two suffixes.

I cannot give a simple answer to the question I have asked at the beginning of the paper, whether the Chuvash ordinal suffix as a whole is preserving an old feature or is it a new one. The answer is that it reflects old elements, but as such it is a new suffix built of old elements. Something which may be true of most of the suffixes. We can summarise the steps of the history of the Turkic ordinal suffix and the history of the Chuvash suffix as follows:

1.  $+(X)m \rightarrow$  Chuv  $+(X)m$  ?
2.  $+(X)m(X)š > +(X)mš >$ 
  - 2.1.  $+(X)mč$
  - 2.2.  $+(X)nš$
- 2.1.  $+(X)mč+i \rightarrow$  Türkmen, Azeri, Üzbek dial  $+(X)mči$ , Chagatai  $+(X)mči+i$   
>  $+(X)mčisi$
- 2.2.1.  $+(X)nš \rightarrow$  Yakut/Dolgan  $+nš > +š > +s$ , Tofalar  $+nš > -š$ , (*+ki*) Tuva  $+ški$
- 2.2.2.  $+(X)nš+i \rightarrow$  Yakut  $+nši$
3.  $+(X)m+i+nš \rightarrow$  Volga Bulghar  $*+minš > +miš >>$  Chuv  $+miš >$  **+měš**
  - $\swarrow$  C $+(X)m$  (> Chuvash  $+m$ )
  - $\searrow$  V $+š$
4.  $+m+i+nč+i \rightarrow$  Halaj, Azeri, Türkmen dialectal  $+minji$
5.  $+(X)nči \rightarrow$  most Turkic languages  $+(X)nč(i)$ .

The historical processes of the morphological feature can be formulated as follows: in the historical deep structure we have to suppose three archimorphemes which became constituents of the ordinal suffix :  $M+\check{S}+Px$  and we can describe the historical phonotactic rules according which the three elements appear and disappear

<sup>17</sup> Around 350 Oghur tribes already appeared on the Kazakh steppe, see Czeglédy 1983; Golden 1992, pp. 92–100. We have new data on the Oghur tribes in Siberia, see Róna-Tas (1996), Róna-Tas (1999).

<sup>18</sup> In other places I tried to give my reasons as to why I am convinced that the change was *š* > *l* and not *l* > *š* which I would not repeat here. In short: it is irrelevant whether we depart from  $l_1 : l_2$  or  $š : l$ , because the opposition disappeared in Chuvash where we have no  $l_2$ . The period when the rotacism has been finished and the lambdacism ceased to work was in the few hundred years before Christ.

<sup>19</sup> The idea of the "incomplete" change in the case of lambdacism is an idea first expressed by Ligeti (1986), pp. 16–17.

on the surface in different times in different languages. It is also important that the possessive suffix of the third person always played a great role by pointing to the definitiveness of the numeral mainly in the absolute function.

The history of the Chuvash ordinal suffix helped us to demonstrate that the history of a suffix is subject to complex and complicated morphophonemic processes. Assimilation, syncopation, simplification, analogical extension and de-etymologisation are at work, parallel to the "normal" phonetic changes.

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