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# On One Verb Ending in Proto-Tungus

## — About *-si —

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In Tungus languages there exists a verb ending -ra which forms the adnominal and predicative forms of verbs. There are also some verbs whose above forms do not end in -ra but in an alternant. In Lamut, a Tungus language, verb stems that end in a vowel phoneme take -ra, whereas those accompanied by various consonant phonemes are followed by -ra or an alternant such as -da, -ta or -a. We also note still another alternant -sa in a group of verbs. Forms that correspond to -sa are also present in other Tungus languages.[1]

This verb ending being a basic one in Tungus, it seems to be a question of considerable importance for the Tungus languages to see with what sort of verbs the alternant -sa in Lamut and its correspondents in other Tungus languages occur and where those forms were derived from. J. Benzing has already taken up this problem and conducted a comparative study of Tungus. He maintains that Lamut -ra was derived from the proto-form *-ra, and that Lamut -sa and its correspondents in other Tungus languages can be traced to the proto-form *-sa.[2] Though he took note of and studied this significant matter perspicaciously, I have different views on certain details which he observed. I shall briefly outline in this article the points on which my views differ from his.

To elucidate my viewpoints, I will use not only instances from Lamut and the other Tungus languages Benzing used, but also instances from Orok, one of the Tungus languages which is no less important.[3]

In Orok verb stems that end in two successive vowel-phonemes take

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1) In the Tungus languages suffixes or endings containing a generally have alternants in which a alternates with ə and further with o (and with ө) owing to vowel harmony, but I want to avoid mentioning all the forms except in special cases.

2) Benzing, 1956, p. 123f.

3) Unless especially mentioned, the data are based on the following sources: Lamut (Even) on Цинциус and Ришес, 1952, 1957, Evenki on Василевич, 1958, Negidal on Мыльникова and Цинциус, 1931, Udehe on Шнейдер, 1936, Orochi on Цинциус, 1949, Goldi (Nanai) on Петрова, 1960, Olcha on Петрова, 1936, Orok on Ikegami, 1959 and on unpublished material in his collections.

this verb ending -*ra* while -*da* and -*ta* are added to verb stems that terminate in a consonant phoneme. In addition, another alternant -*si* is noted in a certain group of verbs. In summary this verb ending has the following alternants: -*ra*∼-*da*∼-*ta*∼-*si*. There also exist fused forms in which verb stems ending in a vowel phoneme are combined with this ending.[4]

In the first place I will show what verb endings in some Tungus languages correspond to the above Lamut ending -*sa*:

Written Lamut -ca, -cэ (after a consonant phoneme), -c (after a vowel phoneme) ‖ Negidal -*si*[5] ‖ Udeha -*hi*[6] ‖ Orok -*si*.

According to K. A. Novikova, the vowels in -ca and -cэ in written Lamut correspond respectively to the so-called reduced (central) a and ə in the Ola dialect which appear in non-initial syllables.[7] a and ə in non-initial syllables in written Lamut are often considered to correspond to those vowels in the Ola dailect. Furthermore, the a and ə may be traced not only to *a and *ə but even to other vowel phonemes such as, for instance, *i (or *I) in proto-Tungus.[8] Orok *i* in non-initial syllables will be traceable to *i (or *I) or *ii (or *II) in proto-Tungus. Udehe -*h*- like -*s*- in Lamut, Negidal and Orok seems to have stemmed from *-*s*-. This ending, therefore, was presumably derived from the proto-form *-*si* (or *-*sI*) and not from *-*sa*.[9]

-си in written Goldi (e.g. пулси- 'ходить, бродить, путешествовать') and -*si* in Olcha (e.g. *puḷsi*- 'ходить, бродить') probably derived from either the above-mentioned *-*si* or the fused form which includes this *-*si*. But in these languages they are verb-stem-forming suffixes. In the latter language, however, the present form *puḷsini*, for instance, has as its counterpart the past form *puḷcini* in addition to *puḷsihəni*. As I will mention later on, in Olcha the ending of

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4) The Orok verb-ending -*si* which alternates as -*ri*∼-*ji*∼-*či*∼-*si* is considered to be another ending composed of *-*si* to be treated later and another ending which probably includes *i.

5) E.g. *ommosin* 'ему хочется курить, пить.'

6) E.g. *təhimi* 'сижу,' *isənəhimi* 'многократно хожу смотреть.'

7) Новикова, 1960, p. 36, etc.

8) For instance a and ə in the second syllables of the following words in written Lamut appear after two consonant phonemes as in the case of the above-mentioned -ca and -cэ, but correspond to words of other Tungus languages as follows. In the first two words below they are considered to go back to *a and *ə and in the three other words to *i.

L амнга 'рот' ‖ E амнга ditto ‖ U *aŋma* ditto ‖ Ok *aŋma* 'mouth'

L уркэ 'дверь' ‖ E уркэ ditto ‖ U *ukə* ditto ‖ Ok *utə* 'doorway'

L хилтэс 'трут' ‖ E силтыкса (an obsolete word in the Erbogočon dialect) ditto ‖ U *siktihə* ditto ‖ Ok *silčiska* 'tinder'

L нэлкэ 'весной' ‖ E нэлки ditto ‖ U *nəki* ditto

L хӣмкэ- 'кашлять' ‖ E симки- ditto ‖ Ok *siikpi*- 'to cough'

L=written Lamut, E=Evenki, N=Negidal, U=Udehe, Oc=Orochi, Ok=Orok.

9) *вiə*, the present active participle of an Udehe verb *вi*- 'быть' supposedly derived from *birə and not from *bisə.

the past forms of verb stems that end in a vowel phoneme is -*han* and that for those ending in a consonant phoneme is -*cin*.   The presence of *pŭlcini*, as T. I. Petrova observed, indicates that -*си* in written Goldi and -*si* in Olcha were once verb endings as in Orok.[10]

It is also conceivable that the ending -*ra* added to verb stems ending in a vowel phoneme in Tungus derived from the proto-form *\*-ra*.   I will not investigate here the origin of the forms -*da*, -*ta* and -*a* that follow verb stems ending in a consonant phoneme and what kind of inflections the stems had in the parent language.   But how was the above *\*-si* related to the *\*-ra*?  Synchronically speaking, were they just alternants under phonological conditions, or grammatical alternants in the parent language?   Or diachronically is *\*-si* of the same origin as *\*-ra* or do they stem from different origins, and are now together only by suppletion?   In order to find answers to the questions, we must pay attention to the meanings of the correspondents of *\*-si* in Tungus.  I will now cite below several examples from some Tungus languages. -*н* or -*ни* in written Lamut and -*ni* in Udehe are the third person singular endings.  -*m* in Negidal and -*м* in Orochi are the first person singular endings.

### Written Lamut

(1) дэгсэн 'лететь, улететь, вылететь, прилететь'
    нгӑлсан 'держать, нести в руках'
    туксэн 'нести, носить, таскать, тащить, и т.п.'
    уйсэн 'кипеть'
    хулсэн 'идти, скитаться и т.п.'
    бисни 'быть и т.п.'
    эсни 'не делать чего-нибудь' (отрицательный вспомогательный глагол)
(2) ичимсэн 'стремиться увидеть'
    едарсан 'быть горьким'
    нямсан 'быть теплым'
    утунсан 'чесаться, зудиться'

### Negidal

(1) *bisim* '(я) есмь'
    *ösim* '(я) не есмь'
(2) *wāmusim* 'мне хочется убить'

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10) Петрова, 1936, p. 49.  *si* in *bisire*, a Manchu word, probably corresponds to *\*-si* or a fused form consisting of *\*-si* and another ending (including *\*i*).  It is also mentioned in Benzing, 1956, p. 124 f.  The assumption that in Manchu -*su* in *bisu*, -*so* in *oso* and possibly -*su* in *baisu* and *gaisu* derive from *\*-su*, the imperative ending for verbs that take *\*-si* (Ikegami, 1960, p. 125) is conceivable due to the fact that in Orok the imperative form of verbs which take the ending -*si* concerned has ·*su* as its ending.

Udehe (-*hi* before -*ni* in the following verb forms is perhaps a fusion of *\*-si*
        and another ending.)

(1)    *āhini* 'рычать, ворчать (о животных)
       *ilihini* 'стоять'
       *tāhini* 'сидеть (о человеке)'
       *tōhini* 'лежать (о животных)'
       *xuihini* 'кипеть'
       *xulihini* 'ходить, ездить, путешествовать, скитаться, разъезжать, расхаживать
       по разным местам'
       *Buktaganahini* 'раскалываться, разламываться (поперек) на много чусков'
       *Bihini* 'быть, жить, существовать, находиться, иметься'
       *əhini* (отриц. глагол, 3-ье л. ед. ч. наст. вр.)
(2)    *wāmuhini* 'желать (иметь потребность, жаждать) убить'
       *səʙʒəŋkəhini* 'интересоваться'
       *əgdəŋgəhini* 'удивляться'


*ilihini*, *tāhini*, *tōhini* and *xuihini* differ in meaning from *ilīni*, *tōini*, *tōini*,
*xuīni* which are also verbs with the same stems in the present indicative.
These verbs mean respectively 'вставать,' 'садиться,' 'ложиться (о животных),'
'кипятить.'[11]

Orochi (-си before -м in the following verb forms is perhaps a fusion of *\*-sı*
        and another ending.)

(1)    бисим∼биһим 'есмь'
       эсим∼эгим 'не . . . делаю'
(2)    хулисим 'хожу'

Orok

(1)    *ilisi* 'to be standing'
       *ŋaalisi* 'to walk with something in hand'
       *puisi* 'to be boiling'
       *pulisi* 'to walk'
       *təəsi* 'to be sitting'
       *miinəsi* 'to continue cutting'
       *əsi* 'not to do' (negative verb)

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11) However, according to Шнейдер, 1936, *tōmoini* and *tōmohini*, which are opposed to
each other, like *ilīni* and *ilhini*, have the same meaning glossed as 'греться у огня,' and
*ulīni* and *ulhini* also have the same meaning 'шить.'

*andusi* 'to make'

*panusi* 'to ask'

(2) ŋənəmusi 'to want to go'

*munalisi* 'to grudge'

*namasi* 'to be warm'

*xuturisi* 'to be itchy'

*təəsi* and *ilisi* are different in meaning from *təərə* with the ending *-ra attached to the same stem and *illee* which is derived from *ilira* but is a fusion of the stem and the ending. These mean 'to sit' and 'to stand' respectively.

The ending in question that forms the imperfective adnominal form and the predicative form acquires still another meaning when viewed in the above examples and the meanings in these five languages seems to cover about the same range of meaning (but not enough data are available on Negidal and Orochi.) Generally speaking, this range of meaning probably goes back unchanged to that of the proto-form. It is to be assumed, therefore, that *-si in proto-Tungus had a certain semantic content besides forming the imperfective adnominal and predicative forms of verbs. It is possible to summarize this content as follows on the basis of the aforementioned Tungus examples. (1) *-si indicates continuation or repetition of the motion or state designated by the verb stem. In other words, it indicates prolongation of the motion or state. (2) It indicates the presence of a feeling or desire to carry out the action designated by the verb stem. It also represents a certain sensation meant by the stem not in terms of an attribute of something or a mere perceptual image but in terms of an act of perception.

Judging from the Tungus examples, when followed by the ending concerned there seems to have been some general difference between a group of verbs with semantic content (1) and those with semantic content (2). It seems that the former group of verbs probably had the ending added to the verb stem, whereas the latter group took it at the end of their adjective stem. If we therefore treat the endings of verbs with semantic content (1) and verbs with (2) together, we should admit two homonymous endings to be exact.

But in some instances the verb ending in question may possibly go beyond the above description of the meanings,[12] and its semantic content could be even wider. It is also difficult to explain within the aforementioned scope

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12) E.g. the negative verb (ə-) in various Tungus languages and *andusi* 'to make' and *panusi* 'to inquire' in Orok.

the meaning of *o-si* 'to become' contrasted to *o-o* 'to do' in Orok.

As shown by the examples, Tungus languages have verbs with the ending concerned added to the same stem.[13] This is because the meaning of the stem readily combines with the meaning of *-si*. These verbs may have been formed later separately in each language, or each language may have inherited them directly from the parent language.

The verb-stem-forming suffixes, -си in written Goldi and -si in Olcha seem to possess such meanings as (1) and (2) given above, though they are suffixes in opposition to the above-mentioned endings in other Tungus languages.[14] E.g., written Goldi пулси- 'ходить, бродить, путешествовать,' тэси- 'сидеть,' эрдэнгэси- 'удивляться, интересоваться и т.п.,' демуси- 'хотеть есть, быть голодным, недоедать,' Olcha *puḷsi-* 'ходить, бродить,' *tə̄si-* 'сидеть,' əldəŋgəsi- 'интересоваться,' ʒəmsi- 'хотеть есть.' There are a number of instances of words which terminate in -си in written Goldi, -si in Olcha and -hi in Udehe without any ending added to them and which function as adjectives, nouns or adverbs. They were supposedly verbs with meaning (2). E.g., written Goldi гичиси 'холодно, холодный,' хуйгэси 'тяжелый, тяжесть,' Olcha *gitisi* 'холодный,' Udehe *ṇamahi* 'теплый (о всем, кроме жидкостей), тепло.'

Returning to the question of how the aforementioned *-si* was related to *-ra*, both had the same grammatical function of forming imperfective adnominal and predicative forms, but *-si*, in particular, is supposed to have possessed the aforementioned semantic contents. Therefore, it seems that *-si* is a grammatical alternant of *-ra* and not an alternant which is added to certain stems merely due to a phonological condition. It is also possible to assume that *-si* is a suppletive form of *-ra*.

I think it possible to make still another assumption as regards *-si*.

To compare *-ra* and *-si*, we first note the difference between the vowel phonemes *a* and *i*, but in Tungus we find the following instances in which the vowel phoneme of the same suffix or ending could be either *a* or *i* depending on whether the stem-final phoneme is either a vowel or a consonant.

The Orok verb-stem-forming suffix meaning 'to go to do something' alternates as follows in accordance with the phoneme at the end of its stem: *-nda* ~ *-ŋda* ~ *-ni* ~ *-i*. *-nda* is added to stem-final CV, *-ŋda* to VV, *-ni* to *l*

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13) L нгāлсан ‖ Ok *ŋaalisi*. L уйсэн ‖ U *xuihini* ‖ Ok *puisi*. L хулсэн ‖ U *xulihini* ‖ Oc хулисим ‖ Ok *pulisi*. L нямсан ‖ Ok *namasi*. L утунсан ‖ Ok *xuturisi*. U *ilihini* ‖ Ok *ilisi*. U *tə̄hini* ‖ Ok *tə̄si*. -м in L ичимсэн, -*mu* in N *wāmusim*, -*mu* in U *wāmuhini* and -*mu* in Ok *ŋənəmusi* are the same suffix that corresponds to each other, meaning 'wish or desire.' -*na* in U *buktaganahini* and -*na* in Ok *miinəsi* are also the same suffix that corresponds to each other. It means 'repetition,' etc.

14) The description is also found in Аврорин, 1961, pp. 18, 19 and 46.

or ŋ and *-i* to *n*.[15]

Also in Orok the perfective verb-endings *-xan*∼*-čin* alternate depending on whether the stem-final phoneme is a vowel or a consonant, the former followed by *-xan* and the latter by *-čin*.  Verb stems that end in *p*, however, take *-xan* with the syllable *-tu* interposed in between.  *-čin* is added to the irregular verbs, *bi-* 'to be, to exist,' *ə-* 'not to do' (negative verb), *ga-* 'to buy,' *o-* 'to do' and *o-* 'to become,' and another *č* appears at the end of these verb-stems. The verb *bul-* 'to die' becomes *buč-čin*.  *-čin* also appears in the verbs that are followed by the aforementioned ending *-si*.

In the case of the alternants *-han*∼*-cin* of the ending for the past indicative and the past active particle in Olcha,[16] stems ending in a vowel phoneme take the former and those which end in the consonant phoneme *n* or *l* are followed by the latter.  *-cin* is added to several verbs:  *Bi-* 'быть, существовать, иметься,' *ga-* 'покупать,' *ʒi-* 'приходить,' *o-* 'делаться, становиться.'  With stems that end in the consonant phoneme *p*, *kpin* is formed as a result of metathesis between *p* and the initial phoneme of the suffix.

As for the alternants -хан∼-кин∼-чин of the ending for the past indicative and the active past participle in written Goldi, -хан appears after stems that end in a vowel phoneme and -кин after those that terminate in the consonant phoneme н or л.  -чин is added to several verbs би- 'быть, существовать, га- 'покупать,' ди- 'приходить,' о- 'делаться, становиться.'  After stems that end in the consonant phoneme п, metathesis between п and the initial phoneme of the ending occurs to form кпин.

The Udehe ending for the past indicative and the past active participle has alternants *-ha*∼*-ki*∼*-si*.  When the end of a verb stem is a vowel phoneme, *-ha* appears, and *-ki* is present when it ends in the consonant phoneme *n* or *g*.  With the negative verb *ə-*, the ending becomes *-si*.  When this ending is added to stems which end in the consonant phoneme *p* or *m*, *p* or *m* and the initial phoneme of the ending enter into metathesis to form *kpi* or ŋ*pi* respectively.

The verb ending of the past indicative of Orochi has alternants -ха∼-ки∼ -пи∼-чи, but when the end of the verb-stem is a vowel phoneme or *w*, *-xa* occurs and in the case of п, -пи and -ки appears with other consonant phonemes. But before -ки, н becomes нг and д к.  In certain verbs such as би- 'быть,' э- 'не' (делать чего-либо) and others -чи appears as, for instance, in хулчим 'ходил.'

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15) C stands for a consonant phoneme and V a vowel phoneme.
16) Here I adopt the terminology of Russian scholars.

These verbs are followed by -cи in the present indicative.[17]

As has been mentioned previously, the difference between the vowel phonemes of alternants of the aforementioned suffixes or endings in the above languages depends on whether the suffixes or endings are added to stems that end in a vowel phoneme or a consonant phoneme but it still remains to be further determined if the forms were due to suppletion. The same question applies to the verb endings *-ra and *-si dealt with in this article. It is conceivable, however, that the vowel phonemes in these verb endings and the aforementioned suffixes and endings might alternate morphophonemically. But we must take note that in Orok the ending -ra is different from the above suffixes or endings in that -da and -ta are alternants of -ra which have the vowel phoneme a but are attached to stems ending in the consonant phoneme g, n, l or p. We can, however, infer that *-si, as I shall state now, might have been the shape of the verb ending concerned appearing when this ending was added to verb stems which end in a certain consonant phoneme.

Turning to the difference between the consonant phonemes of *-ra and *-si, it seems that in the parent language, r appears as the initial phoneme of the ending concerned when it is added to stems that end in a vowel phoneme, whereas such is not the case for those ending in some particular voiceless consonant phoneme.

In Orok, as has been mentioned before, the perfective verb ending -xan is generally added to stems that end with a vowel phoneme while -čin is added to those ending in a consonant phoneme. -čin also appears with verbs that take -si. This fact seems to indicate that although the stems of such verbs end in a vowel phoneme, they once ended in a consonant phoneme.

The verb ending -bi-la-xam in Orok indicates that a certain action of the speaker was about to happen in the past or that the speaker, reconsidering it, wishes he had taken such action. In the case of verb stems that take -si, this ending becomes -ppi-la-xam. The occurrence of pp between the stem and the ending makes us wonder if verb stems that take -si

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17)  The aforesaid irregular verbs in Tungus languages or those that take -si (-cи), the ending dealt with in this article, have stems that end in a vowel phoneme. However, when added to such verbs, the above Orok suffix meaning 'to go to do something' and the perfective or past endings in Tungus include the vowel phoneme i. Judging from the fact that generally this ending has a for stems ending in a vowel phoneme and i for those ending in a consonant phoneme, we are led to think that earlier these verb stems ended in a consonant phoneme. I will refer later to the point that at least the stems of verbs that take the ending -si are thought to have ended in a consonant phoneme.

once ended in a certain voiceless consonant phoneme.

The Orok suffix -*bu* which is added to the verb stem and indicates that the doer of the action is not stated appears followed by the verb ending -*ri*, namely as -*buri* but other alternants, or a fusion of the verb stem and -*bu* also occur, depending on what verb stem it is added to. For the verb stems that take -*si*, this -*bu* appears as its alternant -*pu*.[18] Does this not verify the notion that such verb stems once ended in a voiceless phoneme?

Also in Orok, when the verb-stem-forming suffix -*du*, which indicates a motion returning to the original state, is added to verb stems that take -*si*, the alternant -*tu* appears.[19] This also leads us to assume that this verb stem once ended in a voiceless consonant phoneme. -*tu*, however, may also be considered to have been formed by analogy to the above suffix.[20]

Now we come to the question what sort of phoneme the stem-final voiceless consonant phoneme was and what shape the ending in question took when added to it. I want to introduce two views on this problem.

One is that *-si*, which was considered to be an ending, is actually divisible into two parts; namely *-s*, which is the last phoneme of the stem, and *-i* which is an alternant of the verb ending *-ra* appearing after this stem-final phoneme. K. M. Myl'nikova and V. I. Cincius have already divided two of the above-mentioned Negidal verbs as *bis-i-m* and *wā-mus-i-m*. They cite

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18) I will show below what shape this suffix takes according to different verb stems by means of the verb classes and examples in Ikegami, 1959. The stems to which this suffix is added belong to Set IV (but the stem-final of the verbs of Class 2.3 is not *n* but *m*). In Classes 1.1 and 0.1 there appear fusions consisting of a stem and this suffix. In Classes 1.2, 0.2 (to which belong the verbs that take the ending in question, *-si*), 0.3 and 2 the alternants *-gu-ri*, *-pu-ri*, *-u-ri* and *-bu-ri* appear respectively. Examples: Class 1.1 *ŋannɔuri, moollouri, ŋɔnnuri, sommuri, aundauri, tokpouri, silturi, barguri*, Class 0.1 *bakkauri, palukkauri, sapčikkauri, xɔɔkkɔuri, lokkouri, gajakkuri, bɔlikkuri, gɔjjuri*, Class 1.2 *uuguri, bɔɔguri*, Class 0.2 *gatapuri, ɔlɔpuri, andupuri, moolipuri, allaupuri*, Class 0.3 *dɔpuri*, Class 2 *bujalburi, xɔɔlburi, xaagburi, orogburi, umburi, kɔjɔɔmburi*, irregular verbs *biguri, oguri* 'to do,' *opuri* 'to become,' *bulburi, gaguri*.

19) E.g. *andu-tu-* 'to mend.'

20) Orok -*du* corresponds to certain verb-stem-forming suffixes in other Tungus languages, i.e. L -*pra*~ -*prɔ*, N -*ygi* and U -*gi*, so that it may be considered to stem from the proto-form *-rgu, -tu* might stem from *-rku* [r̥ku], the alternant added to the stem with a voiceless consonant at the end, supposing that this alternant existed, or *d* might have changed into *t* when *-du* already formed then combined for the first time with the verbs which took the ending *-si*, or -*tu* is perhaps due to the formation on the analogy of the suffixes such as abovesaid -*bu*~*pu*. As for Orok -*du* used when added to the stems that end in *n* or *l* and Udehe -*ŋi*, the alternant of the aforementioned -*gi* which is added to stems which end in *n*, they either derive from a stem-final consonant phoneme plus *-rgu* in the parent language (or *-rgi* in the course of change to Udehe) or *-du* and *-gi* already established then were added to those stems for the first time and in the case of -*ŋi* in Udehe *g* probably changed further into *ŋ*. From the former assumption it naturally follows that there was the sequence of a consonant phoneme plus *rg* in the parent language. For instance in Orok, we find, although not often, such a word as *bujalpčini* 'it can be broken.'

*За-mus-чаn* 'ему захотелось есть' a verb with meaning (2) as an example. In this form there actually is *s* in stem-final position, namely after *mu* and before the imperfective verb-ending -ча.[21]

The other view treats *-si* as an ending added to stems ending in a certain voiceless consonant phoneme. In this case it seems natural to suppose that the stem-final consonant phoneme was *s*, and that one *s* in the combination of the stem-final *s* and *-si* has probably been lost in the course of time. But some of the stems that took this *-si* might have ended in another voiceless consonant phoneme, such as *t* (which later dropped off).

As mentioned above, there is the question of how to cut *-si*, whether to treat it as the stem-final *s* plus the ending *-i* or a stem-final voiceless consonant phoneme now lost plus *-si*. These two different ways of cutting *-si* are both compatible, depending on what voiceless consonant phoneme comes at the end of the verb stem. Anyhow from such a standpoint, probably *-i* or *-si* was synchronically an alternant of the verb ending *-ra* in the parent language, which appeared under phonological condition where the stem-final phoneme was *s* or another voiceless consonant phoneme.

*s* or another voiceless consonant phoneme placed at the end of a verb stem might have been root final of a few verbs, but in many cases they presumably served as a verb-stem-forming suffix. In accordance with the present assumption I would consider this suffix to have the aforesaid meanings the ending *-si* is supposed to possess in the assumption I introduced in the first place. It is also possible to assume that verbs with meanings (1) and (2) had different stem-final consonant phonemes, each of which was a different suffix. As *s* was present at the end of a stem in such an example as *замusчап* 'ему захотелось есть' in Negidal, it may be supposed that at least verbs with meaning (2) had earlier *s* at the end of their stems, which has been retained to this day, and that *s* was the suffix which conveyed meaning (2). In the second view it is considered that the suffix has been lost, but the meaning it had was retained by the verb form.[22]

The second view also makes it possible to explain verbs whose meanings we cannot very well classify into the aforesaid meanings. If we take as an instance *o-si* 'to become' contrasted to *o-o* 'to do' (presumably derived from

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21) Мыльникова и Цинциус, 1931, pp. 177, 178. The term imperfective is based on 'imperfectum' employed in the original article.

22) The initial phoneme of *-ppi-la-xam* in Orok possibly derived from the stem-final and the second phoneme from the initial of *-bi*, but considering the possibility of reciprocal assimilation between them, it is likely that earlier the stem-final was *s* or rather a voiceless stop phoneme. On the other hand, it seems that the Orok *-ppi-la-xam* is generally added to verb stems that take *-si* and convey meaning (1). Putting the two together, we may presume that these verb stems had a voiceless stop as their final phoneme.

*o-ro*) in Orok, it is probable that a suffix for forming an intransitive verb stem which consisted of one consonant phoneme (e.g. *t*) may have been added to the stem of the verb *o-si* in pre-Orok at the latest, and that its consonant phoneme might have been lost.[23]

A review of these two assumptions seems to indicate that the latter enables us to account for more facts than the former. It is still difficult today to elucidate sufficiently the above problem within Tungus. However, if corresponding linguistic facts have been discovered in other languages which are possibly related to Tungus, comparative study will help solve the problem, and at the same time may confirm a genetic relationship between the languages.[24]

(Translated into English from the original article written in Japanese.)

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23) *d* (д) is found in the endings which the corresponding verbs contain in L ōдни, U *odoini* (both forms are in the third person singular of the present indicative) meaning 'делаться.' The fact that *d* (д) appears in initial position when these endings are added to verb stems that end in a consonant phoneme also contributes to the assumption that earlier these verb stems ended in a consonant phoneme.

24) If we refer to Japanese for instance, comparison of Tungus with Japanese is far less accurate as compared with a similar study conducted among Tungus languages. However, if we could verify that the element with *r* in Japanese verb endings, the ending *si* in the Japanese *siku*-type adjectives and their correlation correspond to the aforesaid Tungus endings *-ra* and *-si* (or *-s* as assumed as the verb suffix which conveys the meaning (2) at least) and their correlation, such a comparative study would help solve the above question in Tungus and would also offer a strong evidence of a relationship between Tungus and Japanese.

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