

Acta Linguistica Hungarica, Vol. 51 (1–2), pp. 85–94 (2004)

CAN ‘NOTHING’ BE GRAMMATICALISED? COMMENTS ON PERMIAN VOWEL ~ ZERO ALTERNATIONS*

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Abstract

The aim of this paper is to present the most salient characteristics of Permian vowel ~ zero alternations and to analyse them in terms of grammaticalisation. The term ‘grammaticalisation’ will be used here in a non-traditional sense. When we investigate grammaticalisation, it is not merely individual linguistic units (having turned into grammatical ones), but also **relationships** between linguistic units that are to be taken into consideration. If, for instance, a phonological relationship that originally obtained between certain forms and triggered the application of some automatic process turns into a non-automatic alternation that distinguishes linguistic units from one another, this is just as much an instance of grammaticalisation as the well-known cases in which an originally lexical item turns into a grammatical one. This hypothesis will be substantiated in this paper with the help of some considerations concerning Permian vowel ~ zero alternations.

1. Introduction

It is one of the most characteristic features of the morphologies of the Permian languages and Hungarian alike that the second vowel of certain stems may be dropped when the stem is suffixed and two open syllables come to stand in sequence. This phenomenon will be called **vowel ~ zero alternation** here, following Péter Siptár’s and Miklós Törkenczy’s analysis on Hungarian (Siptár–Törkenczy 2000; Törkenczy–Siptár 2000). In Permian, this kind of alternation occurs relatively often in derivation but very rarely in nominal inflection. Examples (K = Komi, U = Udmurt):

- (1) (a) before a derivational suffix:
K *janas* ‘separately’ ~ *jans-əd-* ‘separate’ (verb)
K *lədes* ‘surrogate’ ~ *ləts-al-* ‘replace’

*The author wishes to thank participants of the BUM conference for their comments on his presentation.

- K *geťir* ‘wife’ ~ *getr-al-* ‘get married’
 K *voškov* ‘step’ (noun) ~ *vošl-en* ‘with a step’ (instrumental)
 U *kijed* ‘dung’ ~ *kijd-o* ‘dungy’
 U *gudjri* ‘thunder’ (noun) ~ *gudjr-jal-* ‘thunder’ (verb)
 U *kužim* ‘strength’ ~ *kužm-o* ‘strong’
 U *ćumolo* ‘barn’ ~ *ćumol-t-* ‘erect a barn’

(b) before an inflectional suffix:

- K *ordes* ‘side’ ~ *ords-in* ‘on the side’ (inessive)
 U *joros* ‘vicinity’ ~ *jors-i* ‘to’ (illative)
 (where *jors-* is a postpositional stem)

The quality of the vowel alternating with zero does not play a decisive role in the Permian languages. Any vowel standing in the second syllable may be dropped. In Hungarian, where vowel ~ zero alternation is also rather widespread, most alternations with zero involve one of the mid vowels *ě*, *o*, *ö*:

- (2) *reték* ‘radish’ ~ *retk-ek* (pl); *terem* ‘hall’ ~ *term-ek* (pl)
elsodor ‘sweep away’ ~ *elsodr-ódik* ‘be swept away’; *bagoly* ‘owl’ ~ *bagly-ok* (pl)
füröd- ‘bathe’ ~ *fürd-ik* (3sg), *fürd-és* ‘bathing’; *vödör* ‘bucket’ ~ *vödr-ök* (pl)
vacak ‘something worthless’ ~ *vack-ok* (pl); *bajusz* ‘moustache’ ~ *bajsz-ot* (acc);
őriz ‘guard’ (3sg indef) ~ *örz-i* (3sg def)

The last three examples are exceptional.¹

Both in Permian and in Hungarian (H), a large number of words fail to exhibit vowel ~ zero alternation despite the presence of the phonological circumstances mentioned:

- (3) H *csődör* ‘stallion’ ~ *csődör-ök* (pl), *szurony* ‘bayonet’ ~ *szurony-ok* (pl)
 (and not: **csődrök*, **szurnyok*)
 K *keľid* ‘turn pale’ ~ *keľid-al-* (perf), *miger* ‘body’ ~ *miger-a* ‘corpulent’
 U *podem* ‘beehive’ ~ *podem-al-* ‘make a beehive’, *gurež* ‘hill’ ~ *gurež-ož* ‘as far as the hill’

¹ For a phonological analysis of the Hungarian examples, cf. Vago (1980, 80–1, 116–7); Siptár–Törkenczy (2000, 214).

2. Some typological aspects of vowel \sim zero alternations

Vowel \sim zero alternations occur in morphologies of a number of Indo-European languages, too. The following examples will not be analysed in detail; they are only given here to give an impression of the typologically widespread nature of the phenomenon.

- (4) German *München* ‘Munich’ \sim *Münchn-er* ‘inhabitant of Munich’
Atem ‘breath’ \sim *Atm-ung* ‘breathing’

In German, only schwa — that only occurs in noninitial syllables — can alternate with zero.²

- (5) Russian *камень* /ka.miń/ ‘stone’ \sim *ка́мня* /ka.mń+a/ (genitive)
сон /son/ ‘dream’ (noun) \sim *снится* /sn+i.t+śa/ ‘dream’ (verb)

In Russian, only the two mid vowels — *e* and *o* — can be dropped.³ The alternation may also involve the vowel of the initial syllable.

3. On the grammatical function of alternations

3.1. Morphological phenomena

Morphological phenomena can be classified into four groups as follows:

- (i) Free alternation: H *fel-megy* \sim *föl-megy* ‘go up’, Russian *žen-a* ‘wife’ \sim (instrumental) *žen-oj*, *žen-oju*: two or more allomorphs of a morpheme can be freely interchanged.
- (ii) Automatic alternation: K *kiv* ‘language’ \sim *kil-is* ‘his/her language’ (Px3sg): the alternation takes place under well-determined phonological conditions (/l/ \rightarrow [v] / $__\$$).⁴
- (iii) Non-automatic alternation: U *njl* ‘girl’ \sim *njl-j* ‘my girl’ vs. *gurt* ‘village’ \sim *gurt-e* ‘my village’ (Px1sg). The alternation does not have a phonological motivation: it takes place whenever two particular morphemes are concatenated. This means that specific morpholo-

² On the phonological analysis of German schwa, cf. Wiese (1996, 243).

³ On the phonological analysis of the Russian alternation, cf. Zaliznjak (1987, 29–30); Hristova (1994).

⁴ \$ = syllable boundary.

gical information is required with respect to the stems that participate in this kind of alternation.

- (iv) Grammatical alternation: German $i \sim a \sim u$: *sing-en* \sim *sang* \sim *ge-sung-en* ‘sing’ [infinitive – preterite stem – past participle]: non-automatic alternation that signals some difference in grammatical function, i.e., one that serves a morphological purpose. In agglutinative languages, such alternations usually occur very rarely (Honti 1975, 25; Panzer 1995, 71–2).

Applying this four-way classification to the material presented earlier, we have to state that our case must be that of non-automatic alternation. It appears that the other three types do not occur in conjunction with the vowel \sim zero alternations in Permian.

3.2. Doublets

However, there is a host of examples that contradict our hypothesis. In these, along with forms participating in the alternation at hand, the full form (with the stem vowel of the second syllable retained) also occurs. The two versions cannot be freely interchanged as they differ in meaning. Examples:⁵

- (6) KOMI
- (a) *doriš* P ‘edge, margin’ \sim *doriš-aš-ni* P ‘catch up with one’s neighbour in haymaking (by mowing a narrower strip)’
 \sim *dorš-aš-ni* P ‘gather in sy’s eyes (said of tears)’
 (Wichmann–Uotila 1942, 29; Batalova–Krivoščekova–Gantman 1985, 128)
- (b) *žugił* VU ‘sad’ \sim *žugił-aš-ni* VU ‘be sad’
 \sim *žugl-aš-ni* VU ‘hesitate’
 (Fokos-Fuchs 1959, 180)
- (c) *kežed* Lu ‘snow used for cooling in cellar’ \sim *kežed-av-ni* Lu ‘cool with snow’
 \sim *kežd-av-ni* Lu ‘get wet (e.g., matches)’
 (Žilina et al. 1961, 169–70)
- (d) *mížik* VU ‘blow with the fist’ \sim *mížik-av-ni* VU ‘blow (sy’s head) with one’s fist’
 \sim *mížg-av-ni* VU ‘push (down), compress’
 (Sorvačeva 1978, 132)

⁵ Abbreviations: Komi dialects: Lu = Luza, P = Permyak, VU = Lower Vichegda; Udmurt dialects: G = Glazov, Ka = Kazan, S = Sarapul.

- (7) UDMURT
- (a) *lapeg* ‘low’ ~ *lapeg-omĭ-nĭ* ‘become low’
 ~ *lapk-omĭ-nĭ* ‘calm down, sit down’
 (Vahrušev et al. 1980, 252)
- (b) *pertem* G ‘different; diverse’ ~ *pertem-a-nĭ* G ‘change’ (transitive)
 ~ *pertm-a-nĭ* G ‘variegate; persuade; change’
 (Wichmann 1987; Vahrušev et al. 1980, 194)
- (c) *pĭrĭč* ‘scoop, chisel’ ~ *pĭrĭč-a-nĭ* S ‘scoop with a chisel’
 ~ *pĭrtč-a-nĭ* (< **pĭrčani*) S ‘scoop out, gouge
 out; copulate’
 (Munkácsi 1896, 561, 563)
- (d) *pĭsĭ* S ‘hole’ ~ *pĭsĭ-jal-* S ‘make a little hole’
 ~ *pĭs-jal-* S ‘thread (a needle)’
 (Munkácsi 1896, 556)
- (e) *šulem* ‘heart’ ~ *šulem-o: žob š.* ‘heartless’ (‘hard-hearted’)
 ~ *šulm-o* ‘courageous’ (‘brave-hearted’)
 (Vahrušev et al. 1980, 194)
- (f) *šures* ‘road, path’ ~ *šures-o* ‘having a road’
 ~ *šurs-o* ‘striped’
 (Wichmann 1987, 240; Vahrušev et al. 1980, 407)
- (g) *todem* Ka ‘knowledge; ~ *todem-o* Ka ‘clever, knowledgeable’
 acquaintance’ ~ *todm-o* Ka ‘known, familiar’
 (Munkácsi 1896, 362)

All these examples share an interesting common feature: the derivative in which vowel ~ zero alternation is not involved (e.g., U *pertemani* ‘change’) is semantically less removed from the base (*pertem* ‘diverse, different’), whereas the derivative that does exhibit the alternation is semantically more opaque (*pertmani* ‘variegate; persuade’). We have to add here that a similar phenomenon can be observed in Hungarian, too (both in cases with some other type of alternation (8a), and in vowel ~ zero cases (8b)):

- (8) (a) *idő* ‘time’: *időtlen* ‘timeless’ ~ *idétlen* ‘born prematurely (obs.); misshapen; untimely’
 (b) *éber* ‘alert’: *éberen* ‘watchfully’ ~ *ébren* ‘awake’
 (Bencédy et al. 1988, 110, 112)

In the Hungarian literature, such cases are referred to as “lexical fission”. Similar cases (again, not of the vowel ~ zero type) can be found in German or in Finnish, too:

- (9) (a) German *Sache* ‘thing; affair, object’: *sachlich* ‘material; objective’ ~ *sächlich* ‘neutral’
 (b) Finnish *yksi* [stem: *yhte-*] ‘one’: *yksinäinen* ‘lonely’ ~ *yhtenäinen* ‘uniform, homogeneous’

The Finnish example differs from the Hungarian or German examples given in that the genitive stem is used productively there (as opposed to *idé-*, *ébr-*, or *säch-*).

4. On the analysis of the doublets

Two issues have to be discussed with respect to the double derivatives seen in the Permian examples above: How did such form pairs come into being? (section 4.1); In what sense can we speak of grammaticalisation in such cases? (section 4.2).

4.1. How did such form pairs come into being?

The historical explanation of these examples is uniform: the original derivative was affected by the “two-open-syllable sound law” and the vowel of the second syllable was regularly dropped in them. When that tendency ceased to be an active phonological process, the transparent phonological relationship characteristic of productive paradigms became opaque. Subsequently, a semantic change occurred in that the meaning of the derivative also became opaque and the word became an independent lexical item.

The other member of the form pairs can be explained in view of the productivity of some derivational suffixes in several historical periods of Permian. The denominal verb forming suffix *-al-* (Kneisl 1978, 61–2)⁶ was attached to the same stem that it had been attached to before (under different circumstances), but now the “two-open-syllable sound law” was no longer active. This is how the doublets came into being.

⁶ This suffix can be added even to the most recent Russian loanwords: K: *student* (← Russian *çmyðéçm*) ‘student’ ~ *student-al-* ‘be a student’: (*me*) *student-al-a* [Vx1sg present] ‘I am a student’, U *pastux* ‘herdsman’ ~ *pastux-al-* ‘work as a herdsman’.

4.2. Is this a case of grammaticalisation?

According to the traditional usage, the term “grammaticalisation” refers to a historical process whereby originally independent lexical items turn into grammatical ones. The question arises whether that term could be used in a wider sense. It must not be overlooked that it is not only lexical items that may become part of the grammatical system, but also **the relationships** that are contracted by those items. Returning to the title of this paper, it is not “nothing” that is grammaticalised here, but rather the alternation with “nothing”.

This idea can be made more explicit by a pattern consisting of several stages. Consider the history of the processes involving Udmurt *śulem* ‘heart’ as an example.

1. **śulem-o* ‘having a heart, -hearted’. Both the stem and the pattern of derivation are productive. The morpheme *śulem* has only one allomorph.
2. As a second step, the two-open-syllable tendency resulted in the loss of the vowel of the second open syllable, hence an automatic $e \sim$ zero alternation. The allomorph *śulem* appeared before consonants and the allomorph *śulm-* before vowels. This regularity applied in all similar cases.
3. Next, the validity of the tendency came to an end.
4. But the productive adjective forming suffix *-o* went on to derive further forms such as *lipet-o* ‘roofed’, *keseg-o* ‘bit by bit’, *sereg-o* ‘angular’ (without $e \sim$ zero alternation in the second syllable). This means that the former automatic $e \sim$ zero alternation that used to be purely phonologically conditioned now turned into a non-automatic one.
5. As a fifth step, semantic change occurred: the original meaning of *śulmo* *‘having a heart, -hearted’ evolved into the new meaning ‘courageous’. The original allomorph *śulm* thus turned into an independent lexical item (Shapiro 1975). Given that the two stems, *śulem* ‘heart’ and *śulm-o* ‘courageous’ are both semantically and morphologically distinct, they have to be considered two distinct morphemes. The item *śulm-* is a **bound stem morpheme** that only exists in the given derivative (a “cranberry morpheme”). This stage is summarised in Table 1.

Table 1

Stage 5 of the development of *śulem* ~ *śulm-*

Morpheme	{ <i>śulem</i> }	{ <i>śulm-</i> }
Allomorph I (nominative singular)	<i>śulem</i>	∅
Allomorph II (stem allomorph in derivative)	<i>śulem-</i>	<i>śulm-</i>

6. The form *śulem-o* ‘having a heart, -hearted’ is derived a second time with the productive suffix. From now on, we have to do with a grammatical alternation. The non-automatic $e \sim \emptyset$ alternation corresponds to a semantic distinction, hence vowel ~ zero alternation now has a distinctive role, it serves to **differentiate lexical meanings**.

- (10) {*śulem*} ‘heart’
 {*śulm*} ‘??’ [\neq ‘heart’]

The foregoing can be summarised as in Table 2.

5. Summary

In my view, the traditional claim that the above cases involve **lexicalisation** cannot be questioned. However, I want to emphasise that such cases of lexicalisation are characterised by the fact that an originally phonological alternation is systematically exploited and given a grammatically distinctive function. In this sense, a special case of grammaticalisation is also involved. It can be clearly demonstrated by these examples that grammaticalisation follows (rather than precedes) lexicalisation (Lehmann 2002). However, the phenomenon is not very widespread: the grammatical system of Permian languages exploits such alternations to a rather limited extent to date.

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Table 2
The development of the morpheme *śulem* ~ *śulm*

	Surface form	Morphological level		Morphonological process	Semantic process	Phonological process
		morphological process	relationship of morphemes			
1.	* <i>śulem-o</i> ‘-hearted’	derivation [stem, suffix: productive]	one morpheme, one allomorph: { <i>śulem</i> }	—	—	—
2.	* <i>śulem-o</i> > * <i>śulmo</i>	—	one morpheme → two allomorphs: { <i>śulem</i> , <i>śulm</i> }	$e \sim \emptyset$ automatic alternation emerges: { <i>śulem</i> } → <i>śulem</i> / $_ \$$ { <i>śulm</i> } → <i>śulm</i> / $_ V$	—	two-open-syllable sound law
3.	—	—	—	—	—	validity of sound law comes to an end
4.	<i>lipet-o</i> ‘roofed’ <i>keseq-o</i> ‘bit by bit’ <i>sereg-o</i> ‘angular’	further derivations [stem, suffix: productive]	—	automatic → non-automatic alternation [phonological distribution lost]	—	—
5.	<i>śulmo</i> ‘-hearted’ > ‘courageous’	—	two morphemes, independent both in meaning and in form: { <i>śulem</i> }, { <i>śulm</i> }	—	semantic change: abstraction	—
6.	<i>śulem-o</i> ‘-hearted’	derivation [stem, suffix: productive]	—	distinctive function of the alternation $e \sim \emptyset$: $e \sim \emptyset = m_1 \sim m_2$ { <i>śulem</i> } ‘heart’ { <i>śulm</i> } ‘??’ [\neq ‘heart’]	—	—

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