

JOHANNA LAAKSO

## On verbalizing nouns in Uralic

Because verbalizing a noun means “relativization” – it deletes information about the quality of the semantic relationship between the entities involved – denominal verbs can be interpreted in various ways, and denominal verb derivatives fall in several semantic subgroups. This means that vague semantics is an inherent feature of noun-based verbs, not a result of secondary developments; it is often impossible to determine any “original semantic function” for denominal verb suffixes.

This paper presents a short survey of primary denominal verb suffixes in the Uralic language family. The same primary suffixes – notably TA, L and J – appear in most of these languages with very similar characteristics. Thus it is possible that their denominal use, beside the deverbal use, is an ancient feature.

### 1. On the relationship of nouns and verbs in Uralic

The Uralic languages have a rich morphology, including many means of intercategory transformation (cf. Kangasmaa-Minn 1987), i.e. deriving nouns from verbs or verbs from nouns etc. According to a widely established view (see e.g. Janhunen 1982), these characteristics were already present in Proto-Uralic. In fact, practically all derivational suffixes in e.g. Finnish have Uralic origins: Kangasmaa-Minn (1992) calls them “our unobtrusive linguistic inheritance”. It is also worth noticing that at least in Finnish some of the oldest verb stems are not found in underived form; they only appear in derivatives of different ages. In Finnish, the Uralic verbs *souta-* (< \**sūy-ta-*, \**sux-ta-?*)<sup>1</sup> ‘to row’ and *katoa*-<sup>2</sup> (?< \**kaḏ’a-j-ta-*, unless the word is a back-formation) ‘to disappear’ are relatively recent derivatives (they have obviously underived cognates in related languages, starting from Saami); *nouta-* ‘to fetch’ appears to be an older formation (its possible cognate in Saami, *njuw<sup>l</sup>det*,<sup>3</sup> shows the same suffix TA but the cognates in the Ob-Ugrian languages have different suffixes), and *kanta-* ‘to carry’, as a derivative, goes back to the time of the split between Finno-Ugrian and Samoyed (according to the traditional

family tree model): Sammallahti (1988) reconstructs the suffixed form as an innovation in the Finno-Ugrian branch. All these verbs contain the suffix TA, and the same suffix could – in principle – also be present in two other, seemingly underived, verbs of Uralic or Finno-Ugrian stock, Fi. *ahta*- ‘to pack, to hang, to put up a trap’ and *anta*- ‘to give’.

As Kangasmaa-Minn (1987, 1992) has repeatedly pointed out, none of the old Uralic verb suffixes is exclusively denominal or exclusively deverbal. This, together with the formal similarities between noun and verb suffixes (e.g. the suffix J in nouns like Fi. *muisti* ‘memory’ ← *muista*- ‘to remember’ and in verbs like Fi. *muni*- ‘to lay eggs’ ← *muna* ‘egg’; cf. Kangasmaa-Minn 1992: 26–27) is probably one of the reasons why previous generations of Finno-Ugrists have regarded Proto-Uralic as a language with no word classes or, at least, with no distinction between nouns and verbs: in Proto-Uralic, all disyllabic (non-deictic) word stems could have been used freely as nouns or verbs. The “nomen-verba” in present-day Uralic languages (e.g. Fi. *sylke*- ‘to spit; spittle’, Hungarian *fagy* ‘cold, freezing weather; to freeze’) would be petrified remnants from that time.

This view, already often criticized (e.g. Tereščenko 1975, Laakso 1990b, Salminen 1993b), is based on obsolete ideas about the “primitive mind” of proto-speakers and the relative chronology of Proto-Uralic compared with the evolution of human language, and it also includes misinterpretations of the comparative method and data from e.g. Samoyed languages (Tereščenko, Salminen op.cit.). In fact, this view also shows an insufficient understanding of the importance and role of derivation: if there had been no N/V distinction in Proto-Uralic, no denominal verb suffixes would have been needed – at least, no suffixes whose practical or even primary function is only to make verbs out of nouns.<sup>4</sup> However, such suffixes obviously appear in all Uralic languages. This paper presents a short survey of them and claims that they can be an ancient feature in Uralic.

## 2. On verbalizing nouns

### 2.1. Verbers and other denominal verb suffixes

Leena Kytömäki (1992a: 275–280, 1992b: 74–75) – whose ideas have been an important starting point for this paper – presents a very useful

classification of denominal verb suffixes in Finnish, on the basis of their semantic content. Firstly, there are suffixes that express a certain meaning, e.g. NE always expresses translative, “becoming like something” (e.g. *suurene-* ‘to become big(ger)’ ← *suure-* ‘big, great’), and KSU (though not very productive) forms verbs with the meaning “to consider as something” (e.g. *paheksu-* ‘to disapprove’ ← *paha* ‘bad’). According to Kytömäki, the independent semantic content of these suffixes is visible even in verbs formed from nonsense stems: e.g. a speaker of Finnish would interpret *\*paamene-* as denoting some kind of a change from one state to another, even without knowing what kind of state the stem expresses. Secondly, there is a group of verb suffixes that have no semantic content of their own; the meaning of the derived word has to be deduced from the meaning of the stem and from general, pragmatic and contextual factors. The only function that can be ascribed to these suffixes is that of a “verbalizer” or “verber” (Fi. *verbistin*). The third group in Kytömäki’s classification consists of those derivational suffixes that fall between these two classes: they have a semantic content but it is not very clear.

Though verber suffixes have no semantic content peculiar to the suffix and all the verbs formed with it, the individual derivatives, of course, express semantic relations that can be classified and labelled with terms more or less traditional in the research of Finnish and related languages (an excellent survey of these is presented in Kytömäki 1992a). Some examples of Finnish verbs in TA:

- kaunista-* ‘to make beautiful’ (← *kaunis* ‘beautiful’) – “causative”, “resultative”
- sairasta-* ‘to be ill’ (← *sairas* ‘sick’) – “essive”, “essential”, “status derivative”
- pyydystä-* ‘to catch (with a trap)’ (← *pyydys* ‘trap’) – “instrumental”
- vierasta-* ‘to be shy (a child), to shrink from, to consider odd’ (← *vieras* ‘strange(r)’) – “expresses attitude”
- kultaa-* ‘to gild, to cover with gold’ (← *kulta* ‘gold’) – “instructive”
- aitaa-* ‘to make a fence, to surround with a fence’ (← *aita* ‘fence’) – either “instructive” (to provide with a fence) or “instrumental” (to use a fence)
- korkkaa-* ‘to pull a cork, to open a bottle; to close a bottle with a cork’ (← *korkki* ‘cork’)<sup>5</sup> – either “privative” or “instructive/instrumental”
- morjensta-* ‘to say hello’ (← *morjens!* ‘hello!’) – “cite-based”
- sammalta-* ‘to lisp’ (← *sammal* ‘moss’; the verb probably goes back to metaphorical expressions comparing unclear speech or “soft” pronunciation with “moss on the tongue” – see SKES 962) – “lexicalized”, “obscure”, “faded”.

In traditional presentations of the derivation of e.g. Finnish, the verbs formed with verber suffixes have usually been divided into many semantic groups (giving up the formal unity) or subgroups (giving up the functional unity). Another version of the same solution is to use a paraphrase wide or complex enough to include most of the possible meanings; e.g. Korhonen (1981: 337) describes the meaning of Saami *-st-* as expressing “working with, acting as, producing, handling or providing with what the stem denotes”. In the case of a verber, it is practically impossible to find any “primary” or “core” meaning or semantic function in this cluster of meanings; one of the main aims of this paper is to show that this cannot reasonably be done even diachronically.

At least in Finnish, the denominal derivative suffixes for verbs have a clear distribution according to the word class of the stem and its morphological and semantic characteristics. The suffixes with the clearest semantic content have the strictest conditions for suitable bases, and their bases are usually adjectives; verbers can be attached to many types of nouns. The distribution is shown in Fig. 1:

Fig. 1: Verbers and derivational suffixes with a clear semantic content, together with different stem types

<b>Verbers can be used with disyllabic (non-derived) nouns, not with adjectives</b>	<b>Verbers can be used with longer (derived) nouns, sometimes with long or derived adjectives</b>	
<i>aitaa</i> ‘to make a fence’ ← <i>*pahaa</i> ‘?’ ← <i>aita</i> ‘fence’ ← <i>paha</i> ‘bad’ <i>kiveä</i> ‘to cover with stones; to take off stones’ ← <i>*pieneä</i> ‘?’ ← <i>kive</i> ‘stone’ ← <i>piene</i> ‘small’ <i>kukki</i> ‘to bloom; to take off flowers’ ← <i>*luji</i> ‘?’ ← <i>kukka</i> ‘flower’ ← <i>luja</i> ‘firm’ <i>leipo</i> ‘to bake’ ← <i>*paho</i> ‘?’ ← <i>leipä</i> ‘bread’ ← <i>paha</i>	<i>sammalta</i> ‘to lisp’ ← <i>sammal</i> ‘moss’ <i>kellaroi</i> ‘to store in a cellar’ ← <i>kellari</i> ‘cellar’ <i>vasaroi</i> ‘to hammer’ ← <i>vasara</i> ‘hammer’	<i>sairasta</i> ‘to be ill’ ← <i>sairas</i> ‘sick’ <i>*punaisoi</i> ‘to make red’ ← <i>punaise</i> ‘red’ <i>?terävöi</i> ‘to make sharp’ ← <i>terävä</i> ‘sharp’
<b>Derivational suffixes with a clear semantic content can be used with disyllabic (non-derived) adjectives, not with nouns</b>	<b>Derivational suffixes with a clear semantic content cannot be used with long or derived stems (nouns or adjectives)</b>	
<i>*aitene</i> ‘?’ ‘to become a fence’ ← <i>aita</i> <i>*kiventä</i> ‘?’ ‘to petrify’ ← <i>kive</i> <i>*leiveksy</i> ‘?’ ‘to consider something as bread’ ← <i>leipä</i> <i>pahene</i> ‘to become worse’ ← <i>paha</i> <i>pienentä</i> ‘to make small(er)’ ← <i>piene</i> <i>paheksu</i> ‘to disapprove’ ← <i>paha</i>	<i>*vasarene</i> ‘to become a hammer’ ← <i>vasara</i> <i>*kellarinta</i> ‘to change [something] to a cellar’ ← <i>kellari</i> <i>*sammaleksu</i> ‘to consider something as moss’ ← <i>sammal</i>	<i>*reippaane</i> ‘to become brisk’ ← <i>reippaa</i> ‘brisk’ <i>*harmaanta</i> ‘to make grey’ ← <i>harmaa</i> ‘grey’ <i>*teräveksy</i> ‘to consider something as sharp’ ← <i>terävä</i>

Of course, there are cases where verbers are attached to adjectives, e.g. *sairasta-* ‘to be ill’ or *pieni-* ‘to cut in small pieces’. However, these are semantically closer to other verber verbs than to de-adjectival derived verbs: *sairasta-* does not mean ‘to make/become/consider ill’, *pieni-* does not mean ‘to make/become/consider small(er)’. In fact, these adjective-based verber verbs show the same breadth of meaning as noun-based ones, so that even many interpretations for the same verb are possible (as in the case of *korkkaa-* ‘to cork; to uncork’): *uusi-* (← *uute-* ‘new’) means both ‘to begin anew, to recur [of an illness]’ and ‘to repeat, to make anew; to renovate, to substitute with something new’.

The difference between verbers and other kinds of denominal derivational suffixes for verbs can thus be reinterpreted as resulting, at least partially, from certain features of the stem. From this point of view, it is not important to describe the characteristics of different derivational suffixes, because they are secondary in this respect; what is essential is the “way of verbalization” each noun or adjective chooses.

The claim that there is no essential difference between verbers and other denominal verb suffixes can probably be supported with diachronic evidence. There are derivational suffixes that cross this border. For example NTA in Finnic and Mordvin has both a clear semantic content (it forms causatives or translatives like Fi. *pienentää* ‘to make small(er)’, Mordvin *k’évendams* ‘to be petrified’) and “verber-like” use (e.g. Mordvin *raškondams* ‘to sit astride (M), to step over (E)’ ← *raška* (M), *raško* (E) ‘branch, fork’ – Hallap 1955: 19; Estonian verbs of the type *narmendama*, *hilbendama*, *tolgendama* etc., all denoting some kind of sloppy or loose hanging or lying); J is a typical verber in Finnic and Saami (see below), but in Mordvin it is classified mainly as a suffix forming transitive verbs (Keresztes 1990: 52; cf. Hallap op.cit. 17).

Semantically, verber verbs thus resemble verbs formed by conversion (zero derivation), as described by Hopper and Thompson (1985). They state (op.cit. 176–177) that conversion is the most natural way of forming verbs and that languages universally use more deverbal noun morphology than denominal verb morphology. From the point of view of Uralic verbers, this claim could be interpreted in two ways: either verbers are the most unnatural and strangest derivational suffixes, or they are just a morphotactically determined alternative for conversion (diachronically,

they can be its preceding stage, as in Estonian). The latter view also implies that there is no compelling need to find any original or primary meaning or semantic function for verbers or to explain their wide or empty semantic content as a result of secondary developments.

## 2.2. Characteristics of verber suffixes

Deviations and irregularities in the meaning of a derivative – compared with an established and expected “primary meaning” – have often been explained as a result of “lexicalization” or other idiosyncratic developments (which, in fact, means giving up all attempts to explain the phenomenon, cf. Laakso 1990a: 10–11). However, it seems that wide or vague semantics is an inherent feature in verber verbs. The phenomenon could be compared with ambiguities in the interpretation of compound words (the fact that e.g. Fi. *korkkaa-* can be used to mean either ‘opening a bottle’ or ‘closing a bottle’ reminds one of cases like Fi. *lasiveitsi*, English *glass knife*, which could mean either ‘a knife made of glass’ or ‘a knife for cutting glass’). However, it is not purely lexical: the same vagueness and vacillation between different possible meanings is also present in the interpretation of syntactic constructions.

From a functional or “holistic” point of view, ambiguities in word-formational semantics as well as the classic syntactic cases like *flying planes can be dangerous* present no problem. They only represent a general flexibility in the semantics of complex constructions, which is essential for the functioning of natural language, in its continuous interplay with pragmatic and extra-linguistic factors. Semantic emptiness can be even desirable, as Räisänen (1987) points out in his study on Finnish verbs in AA (historically: < \*tA): in recent derivatives based on loan words, the type *teippaa-* ‘to fasten with tape’, *koodaa-* ‘to encode’ is more popular than derivational suffixes with a clearer semantic content (e.g. *teipittä-*, *kooditta-* with “instructive” ITTA, which is mostly used in verbs that express “supplying” or “providing” with what the base denotes) – even though the latter has sometimes been recommended by language authorities.

In fact, verbalizing a noun inherently means – beside encoding typical verb features like tense and person – relativization of its meaning. The

functional difference between verbs and nouns could be expressed so that nouns are typically referential while verbs express a relationship (cf. Pajunen 1988). Verb morphology is often used to hide (or demote) information about a participant in the situation described, not only in passive constructions but – maybe even more clearly – in factitive verbs (Fi. *seurakunta rakenn-utt-i kirkon* [parish build-CAUS-PRETSG3 church-ACC] ‘the parish had a church built [by Ø]’) or “object suppressive” constructions employing passive or reflexive elements (Swedish *hunden bit-s*, Russian *собака кусает-ся* [dog bite-PASS/REFL] ‘the dog bites [Ø], i.e. is inclined to bite people in general]’ – cf. Tommola 1993). In the case of denominal verbs, the quality of the relationship between the entities involved is left implicit, to be deduced on the basis of pragmatics, context and general information.

Considering this, the semantic vagueness of verber verbs can be seen as a feature determined by the noun stems. Because the semantic role of a prototypical noun – i.e. its semantic relationship to the other elements of the sentence – can vary more than the syntactic-semantic functions of a prototypical adjective, verbalizing a noun deletes more information than verbalizing an adjective. This deleted information must then be retrieved using contextual and encyclopedic knowledge, which makes the use and interpretation of these verbs very dependent on the context and on extralinguistic reality. This fact can partly explain not only the varying semantics of denominal “verber verbs” but also the gaps in the productivity of e.g. Finnish verbs in TA: nouns like *rastas* ‘thrush’ or *kiuas* ‘sauna stove’ do not form verbs like *\*\*rastasta-* or *\*\*kiuasta-* (as Leino [1989: 93] points out) simply because there is no relevant action that could correspond to such verb. If thrush-hunting or imitating the song of thrushes were an important thing to do in Finnish everyday life and frequently spoken of, it could be completely possible to use the verb *rastastaa* to denote it.

### 2.3. Verbalization in the grammar

The research of derivation in Uralic has often – inevitably enough – taken individual derivational suffixes as its starting point: examined their

use, productivity (together with the various problems of its definitions), their history or synchronic word formation rules for each suffix. Later on, it was observed that “maybe it is only linguists who use suffixes to derive words” (Räisänen 1978; full credit is given to Räisänen in Kytömäki 1992a, foreword) – instead of compositional or operational descriptions of derivation as a process, the relationships between bases and derivatives can better and more realistically be described as analogy networks connecting surface forms, their correlations and groups. This view, of course, is closely linked to the strong Finnish tradition of “concrete” or field morphology (Määttä 1994: 239–). It also implies that derivation and the lexicon are intertwined so that there is no sharp border between “active” formation rules and the lexicon as a “passive” stock of elements.

If there is no sharp border between the grammar and the lexicon, it also means that there is no sharp distinction between lexical morphology, i.e. derivation, and inflectional morphology. Derivation serves the same goals as other morphological means, and the derivational characteristics of a stem (for example, the ability to act as a base for certain kinds of derivatives) are determined basically in the same way as other morpho-syntactic properties (e.g. transitivity or comparability). Here I would like to stress one central corollary: in addition to individual verb suffixes, we should reverse our point of view and examine the “verbalization” as a whole, the system of verb suffixes and its alternatives – conversion and analytic constructions. This, of course, is a tremendous task; in this paper, I can only illustrate some of the central questions.

Kangasmaa-Minn (1988) notes that the ability to form verbs should be considered a morphosyntactic property of adjectives: according to her, Finno-Ugrian languages seldom use adjectives in lative and related cases (e.g. Finnish translative forms in constructions like *tule-e suure-ksi* [come-3SG big-TRANSL] ‘becomes big’), because the adjective in these cases rather takes a translative verb suffix (as in Fi. *suure-ne-e* [big-V<sub>TRANSL</sub>-3SG]). The verbalization of nouns could also be regarded as part of the grammar, considering both its semantically special character and – as I hope to show in this paper – the remarkable stability of certain verber suffixes in Uralic.



### 3. Verbalization of nouns in Uralic diachrony, in the light of two Finnic examples

#### 3.1. Finnish verbs in AA (< TA): from suffix to verb marker?

In Finnish, the use of occasional verber verbs seems to be a more and more frequent phenomenon (Kytömäki – 1992a: 279 – suspects the influence of English conversion verbs), and the ratio of “contracted verbs” (*supistumaverbit*) in AA is increasing (Räisänen 1987; historically, the element AA goes back to the stem vowel A and the verber TA).<sup>6</sup> This is probably promoted by their morphophonological simplicity: indicative forms in the present and past tense and the imperative 2sg are all in the strong grade. New loan verbs and more or less occasional verbalizations of loanwords are almost always adapted to this type (e.g. *seivaa*- ‘to use the save command, to save a computer file’, *revaa*- ‘to rewind a tape (by pressing the button with the text *rew*)’, *buukkaa*- < English *to book*, *tsekkaa*- < English *to check*, *idaa*- ‘to identify oneself, to announce one’s name (in DX listeners’ slang: of a radio station)’).<sup>7</sup>

It seems that verbers are typically used in loan verbs to unify the paradigm morphophonologically and, maybe, to strengthen their “verb-ness”. (TA is not the only suffix to be used in this way. In an earlier stage, (I)TSE was typically attached to verb stems of Germanic origin, e.g. *tuomitse*- ‘to judge’, *valitse*- ‘to choose’, *mainitse*- ‘to mention’, *hallitse*- ‘to rule’; Lehtisalo 1936: 219, cf. Hofstra 1996. The same suffix has also been attached to many Russian loan verbs in Karelian: *dumaiče*- < Rus. *dumat* ‘to think’; cf. Pugh 1996: 174.) It could be argued that in present-day Finnish there is a tendency to develop TA into a morphological verb marker, an obligatory coaffix for the inflectional suffixes of the verb. Though it is not probable that this development could proceed to encompass all verbs at least in the foreseeable future<sup>8</sup>, the increase of verbs in TA, caused by the influx of loan verbs and new derivatives, probably makes this derivational type more “basic” and more and more difficult to identify as a result of a derivational process. Semantically, this means final loss of the (possible) semantic content of TA (if it exists or has ever existed); morphologically, it means coming closer to real conversion.

### 3.2. The rise of conversion in Estonian

While the Finnish verber TA is developing towards the status of a verb marker, Estonian, in some cases, approaches – and reaches – conversion from another direction. In Estonian, sound changes shortening or deleting vowels in non-first syllables have almost or completely worn off some derivational suffixes, so that the original suffix TA (in the third syllable, after a vowel) is only shown by the quantity relations (lengthening of the first syllable to the so-called 3rd grade, typical of word forms where the number of syllables has been reduced), e.g. *külma*- < \**külmä*- < \**külmä-δä*- ‘to freeze’ – the corresponding noun stem *külma*- ‘cold’ is in the 2nd quantity grade. If the first syllable is short, there is no trace of any suffix. Although the sound law (cf. e.g. Kettunen 1962 [1928]: 77–81), which has been established on the basis of (certain forms of) derived nouns with \**δ* in the beginning of the third syllable and also on the basis of gpl. and infinitive forms (e.g. *heleda* [gsg.] ‘bright, light’ < \**heleδä-n*, *kalade* [gpl.] ‘fish’ < \**kala-δen*, *ajada* [inf.] ‘to drive’ < \**aja-δak*), would predict forms like \*\**lubada-n* ‘I allow’, \*\**lisada-b* ‘[s/he] adds’ (cf. Fi. *lupaa*-, *lisää*- < \**lupaδa*-, \**lisäδä*-), verbs of this type have chosen another course of development, which has not only made them similar to underived verbs but also created a genuine conversion or zero-derivational relationship with the corresponding nouns (*luba*- ‘to allow’ – *luba* ‘permission’, *lisa*- ‘to add’ – *lisa* ‘addition’).

Another source of conversational relationships in Estonian has been the partial coincidence of the old suffix J (in many cases: > *i*) with the stem vowel *i*. The group of denominal verbs in *i* (e.g. *koori*- ‘to peel’ ← *koor(e-)* ‘peel, cream’) also attracts new verbalizations of loanwords, and, on the other hand, *i* is the most common stem vowel added to new loan nouns. Thus e.g. the stems of the German loanword *arst* ‘physician’ (: *arsti*-) and its derivative in J (*arsti*- ‘to heal’) are identical. In modern Estonian, *i* seems to be the common verber for more or less recent loanwords (e.g. *vürtsi*- ‘to spice’, *diagnoosi*- ‘to diagnose’<sup>9</sup>). The number of verbs in *i* is also increased by some old verbs in *i* < \**ü* (e.g. *väsi*- ‘to get tired’, cf. Fi. *väsy*-) and by numerous descriptive verbs (e.g. *klähvi*- ‘to bark with a shrill voice’, *limpsi*- ‘to lick’, cf. Rätsep 1956). Like TA in Finnish, Estonian *i* also enjoys the advantage of levelling morpho-

phonological alternations in the paradigm, since verbs in *i* and *u* in Standard Estonian have no syncope (e.g. the infinitive is *arstima* instead of *\*\*arstma*; cf. Kettunen 1962 [1928]: 163–166).

In her paper on conversion in Estonian, Vare (1993) claims that cases of stem vowel alternation in the relationship between words of different word classes (diachronically, these cases are mostly derivatives in J and W, e.g. *sõdi*- ‘to wage war’ ← *sõda* ‘war’ [*< \*sota-j- ← \*sota*], even *selgu*- ‘to become clear’ ← *selge* ‘clear’) should also be classified, synchronically, as conversion. (The question of quantity alternation as reflecting derivational relationships is completely ignored in Vare’s paper.) Her reasons for this solution are twofold. Firstly, stem vowel alternations also appear in suffixal derivation (e.g. *küür(u-)* ‘hump’ → *küüra-kas* ‘hump-backed’) and inflectional morphology (e.g. *vana* ‘old’ : *vane-m* ‘older’, *karda-n* ‘I fear’ [fear-SG1] : *karde-takse* ‘it is feared’ [fear-PASS]). Secondly – if I have understood her correctly – there is no clear or systematic semantic process that could be abstracted from or ascribed to these vowel changes. Even in cases where this kind of “conversion” produces two verbs with different vowels (e.g. *nõel(a-)* ‘needle’ → *nõelata*<sup>10</sup> ‘to sting’, *nõeluda* ‘to stitch’), this vowel alternation, according to Vare, only signals a difference in meaning without conveying any more precise semantic information.<sup>11</sup> These semantic arguments, though principally true, seem to miss the fact that the semantic relations can be equally vague in suffixal word formation: semantically, these cases do not differ from typical “verber verbs”.

Synchronically, Vare’s analysis is well-founded; diachronically, the rise of conversion in the word-formation system of Estonian could be seen as a new means of denominal verb formation. On one hand, this is a result of general sound changes that have deleted or obscured original suffixes; on the other hand, this defies the general typological development that seems to make Estonian word formation more compact or “economic” – or crippled and artificially maintained? – than e.g. in Finnish (Kasik 1996, Ojutkangas 1996) and testifies to the important role of denominal verb formation. The example of Estonian also deserves attention because it shows us a birth of wide-ranging conversion in a relatively short time; this means that the “nomen-verba” in many Uralic languages can be a fairly recent phenomenon, a result of sound changes deleting original

suffixal elements in the same way as in Estonian (Laakso 1990b; even the existing suffixes may be a result of analogy, secretion and metanalytic restructuration, cf. Laakso 1990a: 145).

#### 4. Verbers in Uralic: a short survey

In the following, I will examine the (mostly) primary denominal verb suffixes in the main branches of the Uralic language family, in order to show the striking formal and functional likeness of the denominal verb formation in Uralic. This survey is, of course, very superficial and mostly relies on a few central works; no independent basic research has been done.

Complex verb suffixes are left outside the scope of this paper, partly in order to save space, partly because they seem to be newer (language-specific) formations. I do not believe that morphological relations inevitably and without exceptions reflect the relative chronology of the elements in question – because of the possibility of correlational derivation and back-formation, the simple form is not inevitably older than the complex one. However, in the light of Finnic verb derivation (Laakso 1989), this seems to be the most probable hypothesis. And, what is even more important: from the point of view of morphology and morphosyntax, the main aim of this research is to discover the deeper principles that can be supposed to regulate either the preservation of original simple elements or – should they have disappeared in some stage of language development – their restoration.

It would be especially interesting to consider the relationship of form and function in the Uralic derivation system (as attempted for Finnic in Laakso 1989), in the light of Kytömäki's classification of verb suffixes. At first sight, it seems that complex suffixes, when denominal, often belong to the class of suffixes with a clear semantic content (e.g. Fi. NTA [ $< M + TA$ ], KSU, Hungarian *-kodik/-kedik/-ködik*), while verbers represent the simplest possible structure, thus iconically reflecting the grade of semantic content or semantic relevance (cf. Bybee 1985). This question also needs a more detailed investigation.

## 4.1. Finnic

The verb suffixes in the Finnic languages present a fairly unified picture (cf. Markianova 1987, Laakso 1989), though somewhat difficult to evaluate because of the differences in the size of materials collected: Finnish, Karelian and Estonian are better known and much more strongly represented in this respect than the most endangered Finnic languages (Vepsian, Ingrian, Votian, Livonian). Two main trends cause areal differences in Finnic verb derivation. On one hand, the general typological developments in Estonian and Livonian have brought these languages closer to the flective type and favouring of analytic constructions, as many original suffixes have worn off. This has very probably “impoverished” their derivational system. On the other hand, the influence of Russian in the eastern Finnic languages like Karelian and Vepsian has probably contributed to the development of derivational subsystems expressing aspect, inchoativity or reflexiveness/passiveness (cf. e.g. Lehtinen 1985, 1990, Koivisto 1990; these phenomena, of course, belong more to the domain of deverbal verb derivation).

In a former paper (Laakso 1989), I have presented a short survey of Finnic verb derivation. It seems that the shortest, non-complex (primary) suffixes have the widest distribution. Interestingly enough, most of these suffixes are also among those classified as “verbers” in Finnish. All or almost all (with the exception of 1–2 languages) Finnic languages use the suffixes J (Fi. *kukki*- ‘to bloom’ ← *kukka* ‘flower’, Estonian *mune*- (< \**muna-j*-) ‘to lay eggs’), (I)TSE (Fi. *haravoitse*- ‘to rake’ ← *harava* ‘rake’, Estonian *häälitse*- ‘to make a sound’ ← *hääl* ‘voice, sound’) and TA (which also appears in numerous complex suffixes like STA and NTA). In addition to these, only transitive NE (< Uralic M) and reflexive-passive-automotive W (*u*, *ü*) have an equally wide distribution.

Among the deverbal derivational suffixes for verbs, only a few have an all-Finnic distribution, and even these have a connection to verbers. The suffix (E)LE (usually called “frequentative”) is related to (I)LE, which is a denominal verber in Finnish (e.g. *pelleile*- ‘to (behave like a) fool/clown’ ← *pelle* ‘clown’, *ruokaile*- ‘to have a meal’ ← *ruoka* ‘food’). Another suffix usually classified as “denominal”, ISE (connected to descriptive stems with an obscure – if any – lexeme status, e.g. Fi. *helise*-

‘to clink’, *inise-* ‘to whine’, the stems of which do not appear independently), is probably of the same origin as the all-Finnic denominal suffix TSE (Lehtisalo 1936: 218–220; Lehtinen 1979: 320). The common deverbal causative suffix TTA (also present in many complex suffixes, e.g. OITTA, UTTA etc.) could also be connected to the general verber TA – this might, in principle, originate from TTA used with consonant stems.<sup>12</sup> All in all, this would mean that in Finnic verb derivation the suffixes with the widest distribution are either verbers or related to them. The only exception would be the suffixes NE and U (or complex suffixes containing U), which, in Kytömäki’s classification, belong to the group of suffixes with the clearest semantic content. Typical verbers in Finnic thus belong to the oldest (according to their distribution) layer of derivational suffixes, which has maintained its role even in those languages that have undergone the greatest typological changes (Estonian and Livonian).

#### 4.2. Saami

The verb derivation in Saami is fairly similar to that of Finnic; this is partly due to numerous Finnic loanwords and loan suffixes in Saami. A short historical survey of Saami derivational suffixes is given by Korhonen (1981: 329–), showing that all those suffixes that can be classified as verbers have cognates or originals in Finnic. Korhonen concentrates on Northern Saami, but the verbers presented there have cognate suffixes also e.g. in Kola Saami (Kert 1987).

The Saami counterpart for Finnic TA is used both for deverbal (causative) and denominal (semantically very various) derivation (as Korhonen puts it, “it expresses acting as or being in or producing what the stem denotes”), e.g. *jiednâdit* ‘to pronounce, to make a sound’ ← *jiednâ* ‘sound, voice’, *dallodit* ‘to keep a farm’ ← *dallo* ‘house, farm’. This group also contains many Finnish loanwords, e.g. *vas'tedit* ‘to answer’ < Fi. *vastaa-*. Another suffix, semantically not very far away and with a shape nearly similar (< Pre-Finnic *\*-te-*)<sup>13</sup>, is obviously considered an original deverbal reflexive (as in Eastern Finnic) or even denominal translativ suffix, but in Saami it is also used to form derivatives which express – according to Korhonen – “providing with what the stem

denotes". Actually, the semantic relationship between these derivatives and their stems is not so easy to express and not even clearly translatable, as Korhonen's own examples show: *njunnadit* 'to take offence' ← *njunne* 'nose', *næl'gadi* 'to eat a little to satisfy one's worst hunger' ← *næl'ge* 'hunger'. (Korhonen, op.cit. 330.) If the original meaning of the suffix *\*te* was clearly reflexive or translatable, this semantic clarity may have been confused by the nearly homophonous verber TA.

Historically, the suffix TA is also somehow connected to the suffix STA which appears in Northern Saami as *-stV-* or *-s't(e)-* : *-st(e)-* (depending on the number of the syllables in the stem). This denominal suffix forms verbs with various meanings, e.g. *duorgâstit* 'to cover with twigs' ← *duor'gâ* 'twig', *suomâstit* 'to speak Finnish' ← *suobmâ* 'Finnish, Finland', *baddastit* 'to use a rope etc. for something' ← *bad'de* 'cord, rope, tether'. This group also includes Finnish loanwords, e.g. *oamâstit* 'to own' < Fi. *omista-*, and the suffix in general could have been adopted from Finnish (Korhonen leaves the question open and only "compares" the suffix with Fi. STA). In any case, Finnish influence obviously explains another denominal suffix, *-štV-*; the verbs in this group are, according to Korhonen, either Finnish loanwords or derivatives created after a Finnish model (e.g. *bāloštit* 'to defend' ← *bälle* 'side', cf. Fi. *puolusta-* ← *puoli*). (Korhonen op.cit. 337, 339.)

The verber J (Korhonen, op.cit. 332, also implicitly refers to its original verber properties in stating that "when denominal, it expresses generally producing, using or acting with what the stem denotes") is also represented in Saami as a typical verber. In Saami, the derivatives in J have been differentiated as three types of so-called contracted verbs – verbs in *aje*, *ije* and *uje*. The verbs in *uje* also reflect the passive-reflexive suffix W, as indicated by their passive or inchoative semantics (e.g. *lok'kut* 'to be read' ← *lokkât* 'to read'). The other two groups of contracted verbs in J are more denominal and verber-like. The verbs in *aje*, when denominal, express state or appearance, e.g. *bod'njat* 'to twist, to turn; to tangle, to become entangled in' ← *bodnje* 'twist (also in a rope), bending, a thing which is askew...'. Denominal verbs in *ije* express, as characterized by Korhonen, "producing or using what the stem denotes" or "beginning or prevailing of a kind of weather indicated by the stem": *ruw'dit* 'to mount with iron' (← *ruow'de* 'iron'), *nân'nit* 'to strengthen' (← *nânos*

‘strong’), *bâl'vit* ‘to become cloudy’ (← *bâl'vâ* ‘cloud’). Most Scandinavian loan verbs are also adapted to the *ije* type, e.g. *smākkīt* ‘to taste’ (cf. Norwegian *smake*), *lōnit* ‘to lend, to borrow’ (cf. Norwegian *låne*). (Korhonen op.cit. 331–333.) This function, acting as a strengthener of verbness in loan verbs, can be compared to that of TA in Finnish loan verbs of the type *teippaa-*, *buukkaa-*, and the contracted verbs in Saami also have the same morphophonological advantage: their paradigm is even freer from gradation than in Finnish contracted verbs, the stem consonants are always in the strong grade.

Denominal verb suffixes in Saami also include the derivational suffix *-âšV*, which, according to Korhonen, is a loan from Finnish (I)TSE. In addition to obvious loans from Finnish, e.g. *dārbâšīt* ‘to need’ < Fi. *tarvitse-*, *māinâšīt* ‘to mention’ < Fi. *mainitse-*, this type also includes verbs probably formed in Saami, e.g. *gāstâšīt* ‘to baptize’ ← *gas'tâ* ‘baptism’, again with no clearer function than “providing or acting with what the stem denotes”. (Korhonen op.cit. 338.)

#### 4.3. Mordvin

Most of the 30 all-Mordvin suffixes for verb derivation, as presented by Hallap (1955), are deverbal, or their productivity and thus, practically, their functions are very restricted. However, the denominal suffixes also include old TA with many functions: beside deverbal (causative or frequentative) use there are denominal derivatives in TA that could be classified as instructive, essive, or causative: *onkstams* (E)<sup>14</sup> ‘to weigh’ ← *onks* ‘scales’, *šamordoms* (M) ‘to limp’ ← *šamor* ‘lame’, *lezdams* (E) ‘to help; to add’ ← *leze* ‘help, benefit’, *l'emdem* (E) ‘to name’ ← *l'em* ‘name’<sup>15</sup> (Hallap op.cit. 11, 13–14; Lehtisalo 1936: 290). The semantics of these examples thus reminds one strongly of the correspondent suffix in Finnic.

In Mordvin the suffix J, usually classified as a translative verb suffix, also has other functions, as hinted by Hallap’s widely generalizing paraphrase (“passively or actively achieving something or some property”, op.cit. 17): *vařajams* (M) ‘to become full of holes’ ← *vařa* ‘hole’, *alâjams* (M) ‘to lay eggs’ ← *al* ‘egg’ (structurally the exact counterpart of Finnish *muni-* < \**muna*+*j-*!).



Beside suffixal derivation, Mordvin also uses conversion. Its origins should be investigated more closely; at first sight, it seems that these noun-verb-pairs include both possible ancient “nomen-verba” (*kel'me* ‘cold; to freeze, to be frozen’ ~ Fi. *kylmä*-) and quite recent loanwords: *trubams* ‘to blow a trumpet’ ← *truba* ‘trumpet’ (< Russian; Mészáros 1996). The latest example seems to indicate that conversion is gaining a more and more important role in Mordvin derivation, since no general “verb marker” (in the style of TA in Finnish, *i* in Estonian or *ije* in Saami) is used in cases like this.<sup>16</sup>

The connections between conversion and the famous Mordvin feature, the conjugation of nominal predicates (e.g. *mon maziĵan* ‘I am beautiful’ [I beautiful-1SG], *kudosonzol'ineĵ* ‘we were at his house’ [house-LOC-PX3SG-PRET-1PL] – see e.g. Keresztes 1990), also need a closer examination. The conjugation of the predicate noun differs from complete verbalization of nouns in at least one central respect. Unlike ordinary verbalization, predicate conjugation does not delete information about the relationship between the noun and other entities involved since that relationship can be expressed with case suffixes, as in the *kudosonzol'ineĵ* example above. In fact, the use of conjugated predicate nouns in itself – as an alternative for copula – contains information, because it is syntactico-semantically determined: it is restricted to predicative, local and possessive sentences, while other types of sentences use copula (Alhoniemi 1982). However, the conjugation of predicate nouns may have created a passage for conversion verbs into language use.

#### 4.4. Mari

When classifying the verb-forming suffixes in Mari, Galkin (1966) divides them into three classes: 1) deverbal, 2) denominal (or, as he puts it: suffixes that form verbs from other parts of speech), and 3) both deverbal and denominal suffixes. Groups 2 and 3 contain 10 and 13 suffixes, respectively; most of them are not very productive (in fact, many of the suffixes in group 3 are used denominally in only a few exceptional cases), and some are loans from the neighbouring Turkic languages, mainly Chuvash. If complex (exclusively Mari?) and loan suffixes, as

well as those deverbal-denominal suffixes whose denominal use is very restricted and obviously secondary, are left outside this examination, there are only a few suffixes left. These include, beside the old translativ verb suffix M (e.g. in *моштемаш* ‘to become old’ ← *мошмо* ‘old’), the Mari cognates of the Finnic verbers TA and (possibly) L and J.

The Mari verb suffixes *t* and *δ*, according to Galkin, are both descended from original TA; the two different forms alternate in terms of certain phonological conditions.<sup>17</sup> This suffix is no longer considered productive. There are numerous cases of both deverbal (causative) and denominal derivatives in \*TA. Some examples of the latter: *лѸмдаш* ‘to call, to name’ ← *лѸм* ‘name’, *комдышташ* ‘to cover, to put a lid on’ ← *комдыш* ‘lid’, *кумылташ* ‘to express kindness, to do a favour’ ← *кумыл* ‘mood; friendliness, favour’, *йошкарташ* ‘to make red’ ← *йошкар* ‘red’. Galkin explicitly mentions that there are many kinds of meanings – causative, factitive, instrumental, instructive – in relation with the meaning of the stem. (Galkin 1966: 106–109.)

Unlike *t* ~ *δ*, the suffix *l* is very productive. Galkin (op.cit. 129–) calls it “one of the most productive suffixes” in Mari, both deverbal (frequentative-momentane-reflexive) and denominal; he also states that it can be used to form verbs from “almost any noun”. The meanings of Galkin’s denominal examples seem to include all those usually found in verber verbs: *шѸмлаш* ‘to peel’ ← *шѸм* ‘peel’ (“privative”); *пудалаш* ‘to nail’ ← *пуда* ‘nail’ (“instructive/instrumental”); *шѸртньылаш* ‘to gild’ ← *шѸртньѸ* ‘gold’ (“instructive”); *тоялаш* ‘to lean on a stick’ ← *тоя* ‘stick’ (“instructive”); *окшаклаш* ‘to limp’ ← *окшак* ‘lame’ (“essive”) etc. As usual in the case of verber verbs, the semantic classification attempted by Galkin (op.cit. 130), despite its wide and vague formulations (e.g. “to act with what the stem denotes”), cannot account for all the meanings. Some verbs simply do not fit in the semantic classes proposed here: e.g. *вѸрлаш* ‘to faint’ ← *вѸр* ‘blood’, though forcibly classified among the verbs that mean “becoming what the stem denotes”, cannot be considered a translativ verb.

In Meadow Mari, *l* is also used – as an almost obligatory affix – in most Russian loan verbs, after the Russian infinitive ending<sup>18</sup>, e.g. *бритлаш* ‘to shave’ < Russian *брить*, *автоматизироватлаш* ‘to automatize’ < Russian *автоматизировать*. Galkin (1966: 131–)

explains this with the fact that the Russian verbs (infinitive forms) have been interpreted as *nomina actionis*, and thus the Russian loan verbs in *l* could be comparable with denominal derivatives. Pugh (1996), in his study on the assimilation of Russian verbs in Mari, points out that the use of the infinitive as the base for a loan verb (instead of the stem or some other, more frequent form) is rather exceptional and testifies to a “literary” or “learned” tradition; the use of the suffix *l* after the Russian infinitive ending in loan verbs could be a standard created by those who began translating Russian or Church Slavic literature into Mari. However, there is also a dialectal construction (in Eastern Mari) which employs the Russian infinitive form together with the native verb ‘to do’, e.g. *опэа-низовать ышташ* ‘to organize’ (Galkin l.cit.); this construction is obviously borrowed from the Turkic languages (Galkin simply calls it “Turkic”), and it is also found in (Standard) Udmurt. Constructions like this may also have contributed to the use of the infinitive as a base.

The suffix *l* has sometimes been regarded as a loan from Chuvash, where similar-sounding, denominal suffixes (*ла, ле*) are very productive; there are cases where both the noun and its derivative in *l* have exact counterparts in Chuvash. Because of the differences in conjugation – the denominal verbs in *l* belong to the 2nd conjugation in Mari, together with the obvious Chuvash loans, the deverbal ones to the 1st conjugation – Galkin supposes that the suffix *l* in denominal use is of Chuvash origin, while the *l* in deverbal verbs could be an ancient Uralic suffix. (Galkin, l.cit.) However, considering the wide denominal use of *l* in the Finnic and Ugrian languages, it is possible that the native deverbal use – together with obvious Turkic influences – has contributed to the present denominal productivity of the suffix *l* in Mari. One should also note that – according to Galkin (op.cit.) – the other denominal verb suffixes of indisputably Chuvash origin, unlike *l*, are not very productive.

The suffix *j* is not productive in Modern Mari and thus usually not presented in grammars of Mari; however, Galkin (1966: 112–113), trusting Lehtisalo (1936: 69; Lehtisalo only mentions one clear example of denominal *j* in Mari, in a translativ function), considers it an old Finno-Ugrian suffix, originally with a frequentative-continuative (i.e. deverbal) meaning. In some cases, the denominal verbs in *j* in Mari are translativ as in Mordvin (e.g. P B *purajà*, U *purkajà* ‘zerfallen, verwittern, sich

schleissen' ← *pur̥a·*, *purka·* 'mürbe [erde], zerbröckelndes [brot]' – Lehtisalo l.cit.). However, Galkin (l.cit.), despite his explicit statements on translative meaning, has no good examples of this: the verbs he lists in this group are something else rather than translative (*поряиш* 'to flatter' ← *норо* 'good') or otherwise questionable (*путеиш* 'to rot' has no synchronic base). The other group of denominal verbs in *j*, according to Galkin, is factitive: e.g. *йытыраяиш* 'to clean' ← *йытыра* 'clean, tidy'.

Like *l* in Meadow Mari, *j* appears in Hill Mari as a semantically empty suffix in Russian loan verbs: e.g. *ровотайаиш* 'to work' < Russian *работать*, *tumajaš* 'to think' < Russian *думать*. This may partly be explained as an influence of the *j* that appears in some Russian verb forms, e.g. imp.sg2 *dumaj!* (cf. Pugh 1996), but Galkin (l.cit.) believes that these cases also reflect an original suffix.

#### 4.5. Permian

In her rather scanty monograph on Komi verb formation, Marianne Kneisl (1978)<sup>19</sup>, following the example of Ganschow (1965), attempts to distinguish the primary suffixes from secondary ones and to classify the functions of different suffixes. In this respect, her criticism of Kövesi's (1965) earlier work on Permian derivational suffixes is largely justified. However, this aspiration to greater clarity and more explicit description does not always do justice to the semantic width as an inherent feature of denominal verb derivation, and it is not always meaningful to examine primary and secondary suffixes as two separate classes – as Černyh (1982) also points out. At least Kneisl's (1978: 5) view of "primary suffixes" (those which consist of only one consonant) having originally one clear semantic function (which may have been "obscured" by later, secondary functions) is obviously over-simplified – at least in the light of what is presented in this paper.

The verb suffixes in Komi also include some possible verbers. Denominal *d* is used, according to Kneisl (op.cit. 15–), to form translative and resultative but also essive and instructive verbs, and also derivatives with "an obscure function": *ul'd-* 'feucht werden; schmelzen (intr.)' ← *ul'*

‘feucht; roh, nicht gekocht’; *pond-* ‘beginnen, anfangen; wollen, beabsichtigen’ ← *pom, pon* ‘Ende’; *sad-* ‘berußen, mit Ruß besudeln, schwärzen, beschmutzen’ ← *sa* ‘Ruß’; *śižd-* ‘meißeln, den Mühlstein rau, schartig machen’ ← *śiž* ‘Specht; ein Vogel, dessen Fleisch nicht genossen wird’; *ind-* ‘zeigen, weisen, lenken, bestimmen, vorbereiten’ ← *in* ‘Ort, Stelle’. The “secondary” (in Kneisl’s terminology) suffix *ed* forms resultative verbs (e.g. *jięd-* ‘zu Eis machen, in Eis verwandeln’ ← *ji* ‘Eis’) but also verbs that can be called instructive or instrumental: e.g. *kęmęd-* ‘einem die Fußbekleidung anziehen oder anlegen, ihn mit Fußbekleidung versehen’ ← *kęm* ‘Schuhe aus Birkenrinde oder Lindenbast’; *pańęd-* ‘mit dem Löffel zu essen geben; jemandem Beeren zu kosten geben’ ← *pań* ‘Löffel’ (Kneisl op.cit. 52–).

The primary function of the suffix *t* is, according to Kneisl, resultative.<sup>20</sup> However, there are numerous other functions: in addition to clearly resultative verbs (*kjnt-* ‘abkühlen (tr.), frieren lassen, im Fieber frieren machen’ ← *kjn* ‘erstarrt’), there are instructive (*jęrt-* ‘in die Umzäunung eintreiben, einsperren, einzäunen; bedrücken, einsperren, hineintreiben’ ← *jęr* ‘geflochtener Zaun, Zaun, eingezäunter Platz; Gemüsegarten’) and essive verbs in *t* (*vargilt-* ‘schwankend gehen, hinken’ ← *vargil* ‘schwankend, wankend (gehend); hinkend’). Again, there are also verbs in *t* where the function of the suffix is, according to Kneisl, “verblaßt oder verdunkelt”: *vugirt-* ‘einschlummern’ ← *vugir* ‘Schläfrigkeit’, *vežęrt-* ‘verstehen, begreifen, prüfend betrachten, prüfen, sich über etwas unterrichten, zusehen, sehen’ ← *vežęr* ‘Verstand, Vernunft; Urteilskraft; Gedächtnis’.

The relationship between these Komi suffixes and the Finnic suffixes TA and TTA is indisputable but obscure. Since the suffixal consonants of the Permian languages have largely worn off (single stops have been already deleted at the beginning of the second syllable, as in *ki* ‘hand’ ~ Fi. *käte-*), it is highly probable that the suffixes in present-day Permian languages are largely a result of secondary restructuration. In some way, the suffix *t* is certainly related to Finnic TTA; *d* and *ęd* may be related to the (historically) complex causative suffix NTA (< \**mtA*), which consists of “causative” TA and translative \**mV* (Laakso 1990a: 142).

Beside Russian elements, the native suffix *t* may have contributed to the use of elements containing *t* in Russian loan verbs: *it, ait, eit, uit, nít*

(e.g. *zaimit-* ‘gern zu haben beginnen’ < Russ. *заимить*, *geduit-* ‘das Jahr zubringen’ < Russ. *зодовать*, *kaznit-* ‘bestrafen (mit dem Tode)’ < Russ. *казнить*; Černyh 1981b, Kneisl op.cit. 93–95).<sup>21</sup> In some cases, it appears as a kind of “essive verb suffix” also together with native stems ((*mes*) *añit-* ‘kochen, Speisen zubereiten, die Wirtschaft besorgen’ ← *añ* ‘Mutter des Mannes’; Kneisl op.cit. 96–97), and the derivatives in it based on Russian loan nouns can already be divided in many semantic classes (Černyh 1981b: 29); even if it cannot be considered a general verber, it could perhaps be called a “verber for Russian loan nouns”.

Of the Uralic primary verb suffixes, the position of *j* in Permian is nearly as obscure as in Mari. Kneisl (op.cit.) (Lehtisalo (1936: 69–70) and Černyh (1982: 223–224) take the opposite view, as well as Udmurt grammarians in Grammatika 1962) does not consider *j* a real derivational suffix but a typically Permian “stammbildendes Element”, i.e. a case of stem consonant alternation (as in *śin* ‘eye’, stem – before an affix beginning with a vowel – *śinn-*). Thus, verbs like *arjini* ‘to spend the autumn [Komi], to spend the year [Udmurt]’ (← *ar* ‘autumn [Komi], year [Udmurt]’) could rather be interpreted as cases of conversion. Kneisl’s interpretation, however, is based on Ganschow’s (1977) idea of Komi *j* as a descendant of a hypothetical Finno-Permian stem-forming element *\*aj/\*äj* (> Fi. *A*, as opposed to Finno-Permian *-Ø* > Fi. *-i* : *-e-*), for which there is no evidence outside the Permian group<sup>22</sup>; besides, there is also synchronical foundation for considering *j* an independent suffix (see Černyh l.cit.). In any case, semantically the Permian verbs in *j* are typical “verbalizations” (thus resembling both conversion and verber verbs): their semantic relationships are various and sometimes difficult to describe.

Udmurt shows basically the same verber suffixes as Komi, with the addition of the Udmurt suffix *n* which obviously forms verbs out of nouns (e.g. *joznani* ‘to divide in parts’ ← *joz* ‘part, joint’; Grammatika 1962: 246); this suffix, like the translative verb suffix *n* in Mari, could be a Turkic loan (cf. Galkin 1966: 76–78, Laakso 1990a: 131). The element *d* is used to form verbs out of nouns (e.g. *gudini* ‘to dig’ ← *gu* ‘hole’, *pirjini* ‘to cut in small pieces’ ← *piri* ‘morsel’), and the meaning of these verbs is accordingly described (“to do what is expressed by the stem noun; process intended to bring forth what is expressed by the stem

noun”; op. cit. 244–245). Practically the same definition is applied to *j* in op.cit. 246 (with the exception that the verbs in *j* are all said to be transitive, while some verbs in *d* are intransitive): it forms verbs like *pusjini* ‘to mark’ ← *pus* ‘mark’, *mirkjini* ‘to make blunt, to cut off (a tree top)’ ← *mirk* ‘tree stump, log, blunt’.

In Udmurt, *t* only appears in *et* which forms verbs out of descriptive-onomatopoeic stems (e.g. *žuetini* ‘to whine (of the wind)’ ← *žu-u-u!*). One should also note that Udmurt, unlike Komi, does not use suffixes containing *t* in Russian loan verbs; instead, the Turkic structure with the Russian infinitive form and the native verb ‘to do’ is used (e.g. *kritikovat’ karini* ‘to criticize’). This is especially interesting considering the fact that *t* would be the regular counterpart of both suffixal *nt* and *t* (cf. e.g. *kwińmeti* ‘third’ ~ Komi *kojmed*, Fi. *kolmante-* etc.; adjectives in *-it* < ETA, e.g. *kurit* ~ Komi *kurid* ‘bitter’ – Rédei 1988: 355). The wide use of the suffix *d* in Udmurt must thus be a result of some kind of reanalysis (on the basis of forms with predictable *d*, e.g. after the first syllable, where *\*nt* normally > *d*).

#### 4.6. Ob-Ugrian

In his monograph on verb derivation in Khanty, Ganschow (1965: 50–) in a clear-sighted way points out that it is not meaningful to attempt to classify the semantic functions of primary denominal suffixes. Of the four primary suffixes for deriving denominal verbs, only one, *-m-* (related to Finnic NE, cf. Laakso 1990a) forms semantically clear-cut transitive verbs. The other three suffixes, again the same three J, L and TA, can express “die verschiedensten Verhältnissen zum Nomen”.

The various semantic functions of the denominal verb suffixes are seen also in Ganschow’s examples. According to the traditional classification, causative or resultative derivatives are e.g. Trj *čopi-*, O *sopi-* ym. ‘in Stücke brechen, scheiden’ ← *čop*, *sop* etc. ‘Ende, Stück, Hälfte’, V-Vj. *pəmtə-* ‘heizen, wärmen’ ← *pəm* ‘Dampf, Hitze, Wärme’ (< Komi *pjm*), “instrumental” are e.g. O *sajpi-* ‘mit dem Zugnetz fischen’ ← *sajəp* ‘Zugnetz’, V-Vj. *păkil-* ‘mit Puppen spielen’ ← *păki* ‘Puppe’, Kaz. *ńăļšəptə-* ‘angeln’ ← *ńăļšəp* ‘Angel’, “instructive” are e.g. Š *nemij-*



‘nennen, mit einem Namen versehen’ ← *nem* ‘Name’, O *nemət-* etc. id., and “essential” or “essive” is e.g. V Vj. *majəl-* ‘besuchen, zu Besuch sein’ ← *maj* ‘Gäste’. Some derived verbs need a long paraphrase to explain their meaning: O *jeməl-* etc. ‘die Anstands- oder Taburegeln befolgen, d.h. etwas nicht tun oder sagen, was “beschämend”, verboten ist, “sich schämen”’ ← *jem* etc. ‘Tabu, das nicht Gestattete, etwas, das man wegen sozialer oder religiöser Gebote meiden muß oder wovor man sich hüten muß’; Vj *paŋkəl-* etc. ‘singen, lärmern, nachdem man Fliegenpilze gegessen hat’ ← *paŋk* ‘Fliegenpilz’.

In Mansi, the denominal verb derivation seems very similar to that in Khanty. Szabó (1904: 230–) mentions the same primary suffixes (*t*, *l*, *j*, *m*); in addition, there is a suffix *γ* with only few examples. Szabó’s semantic classification of the derivatives is typical of verber verbs: there are causative or resultative (e.g. *pūrli* ‘to sacrifice food’ ← *pūri* ‘food sacrifice’), instrumental (e.g. *l’ēχti* ‘to nail’ ← *l’ēηχ* ‘nail’), instructive (*āt’akti* ‘to arm, to supply with weapons’ ← *āt’ak* ‘weapon’), essive (*mujli* ‘to visit, to stay as a guest’ ← *muj* ‘guest’) etc. verbs; the semantic definitions are wide and the boundaries of the semantic subgroups are far from clear.

It should also be noted that, at least in Mansi, *t* and *l* also appear as semantically empty suffixes in loan verbs of Tatar (and, sometimes, Komi or Russian) origin (Révay 1995).

#### 4.7. Hungarian

In Hungarian, both L (*l*) and TA (> Hung. *z*) appear as denominal verb suffixes. Normative and reference grammars (e.g. Rácz & Takács 1983: 179) present some semantic functions: instrumental (*fésül* ‘to comb’ ← *fésű* ‘comb’, *gereblyéz* ‘to rake’ ← *gereblye* ‘rake’), instructive (*talpal* ‘to sole (shoes)’ ← *talp* ‘sole’, *foltoz* ‘to patch’ ← *folt* ‘patch’), captative (for the suffix *z*: *bolház* ‘to catch fleas’ ← *bolha* ‘flea’) and “expressing attitude” (for the suffix *l*: *csodál* ‘to wonder’ ← *csoda* ‘wonder’). To these, one could add e.g. essive verbs (*piros-l-ik* ‘to be red’ ← *piros* ‘red’), “cite-based” verbs (*uraz* ‘to say »sir«’ ← *úr* ‘sir, lord, master, Mr, gentleman’), causative or resultative verbs (*apróz* ‘to cut in small pieces’



← *apró* ‘small’, *szól* ‘to speak, to make a sound’ ← *szó* ‘word, sound’) and even other semantic groups (e.g. *boroz* ‘to drink wine’ ← *bor* ‘wine’). Especially the suffix *z* is a highly productive general verber. According to Bartha (1991: 87–91), both old sources and indirect criteria (the lexicalized meaning of such derivatives as *felel* ‘to answer’ ← *fél* ‘side, half’; the existence of obviously ancient derivatives like *hámoz* ‘to peel’, the base of which – the supposed descendant of the Finno-Ugrian noun *\*kama* – does not appear even in the oldest written sources) testify to the antiquity of these suffixes in denominal use.

#### 4.8. Samoyed

The Samoyed languages have sometimes been used as proof for the supposedly original Uralic “nomen-verbum” phenomenon (for the criticism of this view see especially Salminen 1993b) because there are some lexical differences in the determination of word class (verbs are sometimes used to express what most European languages express with adjectives) and instances of noun-to-verb conversion at least in Nenets (Salminen, forthcoming) and Nganasan (Tereščenko 1979: 248–). However, conversion is not the only or even the dominating means of verbalizing nouns; all Samoyed languages use many denominal and deverbal suffixes for verb derivation (Tereščenko 1993a: 338, 1993b: 355; Helimski 1993: 378, Künnap 1993: 387).

Lehtisalo (1936) presents Samoyedic examples of practically all Uralic primary verb suffixes in denominal use: J (e.g. Enets *tirijubido* ‘mit den Fäusten schlagen’ ← *tira* ‘Faust’, Selkup *ūt’egu* ‘Schneehühner fangen’ ← *ū* ‘Schneehuhn’), N (e.g. Nenets *ηṽṽ.ṣṣ* ‘im Wald Holz zu Zeltstangen suchen’ ← *nū* ‘Zeltstange’), L (e.g. Nenets *ńēl’lě* ‘verheiraten’ ← *ńē* ‘Weib’, Selkup *undal-* ‘lausen (jmdn)’ ← *undj* ‘Laus’), \*ć (e.g. Enets *muosiro* ‘zu Fuß gehen’ ← *muā* ‘Schritt’), and, especially, T (e.g. Nganasan *ńimti’ema* ‘nennen’ ← *ńim* ‘Name’, Selkup *ābaktap* ‘zudecken’ ← *ābak* ‘Deckel’, Kamass *konzandel’im* ‘satteln’ ← *konzan* ‘Sattel’). Lehtisalo’s examples – except his own Nenets collections – are mostly based on old and scanty sources and can thus contain some inaccuracies and misinterpretations. However, newer data from (Tundra) Nenets seem

to confirm the hypothesis that at least suffixes in T are used in denominal verb formation in a verber-like way.

Tapani Salminen (private communication) has kindly searched the Tundra Nenets materials available to him for denominal verbs in *-ta* and *-tye*<sup>23</sup> (originally phonologically conditioned variants of the same suffix) and found nearly a hundred verbs. According to Salminen, they can be classified in a few semantically clear-cut groups<sup>24</sup>; on the other hand, these groups are very similar to those found in verber verbs of other Uralic languages. There are e.g. instructive or factitive verbs like *pyada-* ‘to make a shaft (for e.g. an axe)’ ← *pya* ‘wood’, *ngumta-* ‘to fill (e.g. shoes) with hay’ ← *ngum* ‘hay’; instrumental verbs like *søl da-* ‘to pay’ ← *søl* ‘payment’; essive verbs like *serada-* ‘to be a widow’ ← *sera* ‘widow’. Some verbs fall outside these subgroups (e.g. *ngeryoda-* ‘to spend the autumn’ ← *ngeryo* ‘autumn’, *ngawada-* ‘to come to an end’ ← *ngawa* ‘head’), and some have several interpretations (like Fi. *korkkaa-*): *xada-* ← *xa* ‘ear’ means both ‘to make “ears” [handles] for e.g. a dish’ and ‘to mark (reindeers’) ears (with the owner’s mark)’. Some transitive verbs also allow a translative-reflexive interpretation, e.g. *nyumtye-* ‘to name; to be named’ (← *nyum* ‘name’). In some cases, verbs in *-ta* and *-tye* can be formed from the same base, but there are obviously no systematic criteria for determining the different meanings: *syentya-* (← *syeh* ‘shield, case, sheath’) means ‘to make a shield etc. (for something)’, *syentye-* means ‘to cover/be covered (with something)’, while for *syíh* ‘lid’ the meanings of the derivatives in *-ta* and *-tye* are reversed: *syíntyē-* means ‘to cover/be covered (with a lid)’ and *syíntyā-* ‘to make a lid (for something)’.

## 5. Conclusions

### 5.1. The recurring three: TA, L, and J

Not only Finnish (cf. Kangasmaa-Minn 1992) but practically all Uralic languages, however distantly related, show an amazing uniformity in certain denominal verb suffixes and their functions. Especially the suffix TA appears as a general verber in almost all Uralic languages; in many languages its use may have influenced and been influenced by the use of

loan suffixes containing the element *t*, of Russian (cf. e.g. Černyh 1981b, Kneisl 1978: 93–95) or Turkic origin (Hallap 1955: 14, Galkin 1966: 85, 107). More detailed investigations will probably reveal many kinds of changes in the form and function of individual suffixes in individual languages, cases of complicated interplay between various suffixes, derivatives and (sub)groups of derivatives, maybe even deletion and restructuration of suffixes. In a wider perspective, however, the Uralic verbers – TA, and probably also J and L – seem to belong to the most stable elements in the Uralic languages.

On the basis of this survey, no original semantic function can be reconstructed for the supposed Uralic verbers. As for Uralic TA, the only possible original “meaning” would probably be “causativity”.<sup>25</sup> TA appears still (at least in some rudimentary, lexicalized cases) as a deverbal causative suffix in many Uralic languages (e.g. Fi. *nos-ta-* ‘to raise’ ← *nouse-* ‘to rise’, Hung. *fő-z* ‘to cook’), and there are also numerous potentially complex causative suffixes which contain TA, e.g. KTA/PTA, TTA (cf. e.g. Lehtisalo 1936: 322–, Kangasmaa-Minn 1992). Causativity, however, is also an inherent feature in the semantics of prototypical (transitive) verbs and thus present in most verbs. In fact, since verbalizing a noun inevitably brings another, “hidden”, participant into the sentence to interact with the subject, and this interaction often implies some kind of a subject-object-relationship, practically all (denominal) derived verbs can be interpreted as secondary deverbal derivatives, either “causative” (the base represents the object of the underlying sentence) or “reflexive/passive”. Thus, e.g. *morjensta-* would mean “to c a u s e »hello» to be heard/said, to c a u s e somebody to be greeted”, *kultaa-* ‘to gild’ would be “to c a u s e something to be covered with gold”, *sairasta-* ‘to be ill’ would be “to c a u s e somebody [e.g. oneself] to be (considered) ill”, “to make oneself ill”, “to be made (= considered) ill” etc.

Besides, this kind of “secondary” causativity is also expressed with verbers that are not related to deverbal causative suffixes, like J and L (e.g. Fi. *muni-*, Moksha Mordvin *alâjams* ‘to lay eggs’, Mari *шӧртныылаш* ‘to gild’). Thus causativity and verbness of denominal verbs are two aspects of the same phenomenon. The distinction between them depends on the point of view: whether one wants to stress the relationship between the base and the derivative, or the function of the derivative as a whole.

Like TA, J and L have been given a semantic interpretation largely on the basis of their deverbal use. Deverbal verbs in J are usually called “continuative”, “frequentative” or “inchoative”, but their derivational relationships are often obscure. In Finnish, “deverbal” verbs of the type *hyppi-* ‘to jump (continuously)’, *lykki-* ‘to push (continuously, for a longer time)’ have no underived bases, only a correlation with derivatives in TA like *hyppää-* ‘to jump (once)’, *lykkää-* ‘to push (once)’. A similar correlational relationship can be seen in Northern Saami between verbs in *ije* and *o*, e.g. *njui'kit* ‘einmal springen’ – *njui'kot* ‘springen, mehrere Sprünge machen’ (Lehtisalo 1936: 73). In Permian, the deverbal verbs in J are normally only correlated with other derived verbs (especially causatives historically containing the element TA): e.g. Komi *ešjini* ‘hängen bleiben’ – *ešedni* ‘aufhängen, daraufhängen (tr.), herabhängen lassen’ (Černyh 1982: 224), Udmurt *зйръяны* ‘бросать’ – *зйртыны* ‘бросить’<sup>26</sup>.

Verbs in L are most typically called “frequentative”. Practically, the meanings of deverbal verbs in L include a wide semantic spectrum with many kinds of frequentative, momentane, intransitive, imperfective, irresultative, reflexive, diminutive etc. shades, and there are also deverbal verbs in L that can be called even causative or factitive (Hungarian *neve-l* ‘to grow [tr.]’, (arch.) *eme-l* ‘to suckle’ – Bartha 1991: 60, 77). In Permian (where denominal L is not used!), the deverbal use of L is especially wide and entwined with various nuances of aspect or Aktionsart. Thus, it is even more difficult to use the deverbal meanings to determine the semantic features for denominal verbs in L.

## 5.2. Verbers and verbalization as an ancient phenomenon

It seems that practically all Uralic languages use verbers, i.e. denominal verb suffixes with no single clear-cut semantic function. However, it is difficult to make sweeping generalizations as yet because the viewpoint of this paper has hardly been applied in diachronical investigations of derivation in Uralic. As Majtinskaja’s (1966) paper shows, the historical-comparative works on Uralic derivation have often concentrated on either individual derivational suffixes (or suffixes one by one, e.g.

Lehtisalo 1936) or individual semantic functions (e.g. Szinnyei 1922). Sometimes it has even been assumed that all (!) semantic functions represented in present Uralic derivational suffixes go back to one, more or less clear-cut basic function, e.g. “deminutiveness” (Györke 1935: 83–84).

Perhaps this is also the reason why the semantic polyfunctionality of denominal verb suffixes has not been regarded as an inherent feature of verbalization. Instead, polysemy or polyfunctionality of suffixes has been considered an anomaly, an inevitably secondary feature. The varying semantics of denominal verbs has been explained as a result of more recent historical developments (e.g. Kneisl 1978: 5), or it has been regarded as a unique feature in the language investigated, something completely different from what is found in the related languages (e.g. Kert 1978 explicitly stresses the differences between the verb formation in Kildin Saami and related languages) or Russian (L. S. Evdokimova, according to Isanbaev [1980: 312], states that Mari has more verbs “motivated by the content as a whole” – verber verbs? – than Russian).

On the other hand, some diachronical investigations of verbalization in Uralic have given up all attempts to reconstruct the original semantic functions of derivational suffixes. Majtinskaja (1966: 93) assumes that in Proto-Uralic all (!) derivational suffixes only expressed “a relationship between concepts” in general. This idea is obviously connected to the hypothesis of Proto-Uralic as a language with no word classes or no noun-verb distinction; even some quite recent works on the history of derivation state that the polysemanism and polyfunctionalism of present suffixes (e.g. the fact that in Hungarian the derivational suffix *l* forms both verbs and nouns) is a remnant from the original, “more primitive” state (Bartha 1991: 77). This point of view is methodologically more justified than the attempts to relate all present functions of the derivational suffixes to one “primary” meaning. However, it neglects the clear and obviously ancient differences in the function of e.g. de-adjectival (“semantically clear”) and noun-based (“verber”) suffixes and thus fails to account for the special characteristics of denominal verb derivation. Although the more detailed semantic differences in the derivatives can and must be seen as secondary features resulting from the semantics of the stems, there are also deeper distinctions that express themselves in the choice of suffixes.

On the basis of what has been presented here, there is no need to assume any essential structural differences between the verbalization in present-day Uralic languages and in the reconstructed Proto-Uralic: it seems obvious that the present Uralic verber suffixes can already have been used for noun verbalization in Proto-Uralic. Their semantic vagueness is a consequence of the special character of denominal verb formation; thus, it is not “secondary” in the meaning that it could be explained as a result of some clearly traceable diachronical developments.

It is, of course, possible that these denominal suffixes were originally used deverbally – as they still are, in most cases, beside the denominal use – and that their denominal use is a later (Proto- or Pre-Uralic or even later) innovation. This would mean that practically all Uralic verb-forming suffixes of the structure type C(V) – the originally non-complex ones? – were (secondarily?) adopted to the service of denominal verb formation; the only exception would be the semantically clear-cut suffixes already reserved for de-adjectival verb formation, especially the translative M.

In any case, the special semantic character of denominal verb formation has deleted or “neutralized” the semantic features that can be ascribed to the same suffixes in deverbal use. We can call deverbal verbs in TA “causative” or deverbal verbs in L “frequentative”, but the denominal verbs formed with the same suffixes do not have such clear-cut semantic profiles. Because of this neutralization, the semantic features of these derivatives cannot help us reconstruct the history of these denominal suffixes or determine their age. The same neutralization phenomenon also effectively prevents us from relating a denominal verb suffix to a certain deverbal counterpart (instead of another, homophonous one). Thus, it is possible but by no means certain that e.g. Mansi denominal *t* in cases like *sujti* ‘to make a noise’ (← *suj* ‘noise’) would be related to “momentane” deverbal *t* but in cases like *potért-* ‘to speak’ (← *potér* ‘speech’) to “causative” deverbal *t*, as Szabó (1904: 231) presumes.

### 5.3. Theoretical consequences

Word-centred approaches to derivation (attempts to describe the function of derivational suffixes in terms of the meanings of individual derivatives)

and the “referential” view on derivational semantics (the idea that derived words, too, should have one clearly definable meaning), despite their unquestionable achievements, have neglected some essential characteristics of derivation as a system. Methodologically, this could be explained by the fact that both the traditional historical-comparative method and the generative method, in looking for one single invariant, either the “original” or “deep” form to explain the variety of existing forms, have overlooked the function and importance of such subsystems that allow for flexibility and fuzziness or even require it.

Denominal verb derivation is an excellent example of this. The interpretation of verber verbs is inherently extremely dependent on extralinguistic factors, contextual, pragmatic and encyclopedic knowledge, which means that it is practically impossible to define the semantics of every denominal verb derivative using one paraphrase or one set of semantic rules for each suffix. Thus the traditional approaches, anchored to lexical semantics, often either result in the classification and sub-classification of the derivatives in various semantic groups or – what is even worse – try to explain the fuzziness away by calling it “secondary”, a result of various historical developments. However, it seems obvious that noun-based verber verbs by nature defy and have always defied such semantic classifications.

It is especially worth noting that the history of Uralic derivational morphology cannot be described (only) as a directional development from phase A to phase B – e.g. along a universal grammaticalization path that would include (only) reduction of form and either specialization or widening of semantic features.<sup>27</sup> On the contrary, it seems that at least these derivational suffixes either retain or repeatedly recreate their structure and function. Verbalization of nouns is obviously so essential to (Uralic) morphology and morphosyntax that only typological shifts which delete suffixes and cripple suffixal word formation systems as a whole – as in Estonian – may threaten it, and even in these cases a new way of verb formation, conversion, arises.

## Notes

This article is based on a paper presented at the 23rd Days of Linguistics in Helsinki, May 1996.

- <sup>1</sup> On the basis of cognates like Saami *sukkât*, the consonant in the beginning of the (presumable) second syllable in the underived stem has been reconstructed as *\*k* or *\*ɣ*; since the verb stem in Proto-Samoyed is reconstructed as monosyllabic *\*tu-*, Sammallahti (1988) places this verb – together with Finnish monosyllabic stems like *juo-* ‘to drink’ (~ Saami *jukkât!*) – among those originally containing the “laryngeal” *\*x*. The phonological details of the development of this form and its suffixation need not be investigated here.
- <sup>2</sup> Lehtinen (1984: 11–14) assumes that Finnish verbs of the type *katoa-* ‘to disappear’, *vajoa-* ‘to sink’ are related to two verb types: theoretically, they could be formed on the basis of verb stems like *kato-* (< *\*kaδa-j-*), but they also have a correlational relationship with causatives like *kadottaa* ‘to lose’, *vajottaa* ‘to sink [tr.]’. This relationship is similar (also historically) to that between translative verbs in ITA (*levitä* ‘to spread [itr.]’, *lämmittää* ‘to get warmer’ etc.) and denominal (?) causatives in ITTA (*levittää* ‘to spread [tr.]’, *lämmittää* ‘to warm’ etc.), which, according to Lehtinen, can be a result of back-formation. – The assumption that *katoa-* would be a back-formation is also supported by its rather abstract meaning in Finnish; its (underived?) cognates mostly mean ‘to leave’ or ‘to stay behind’.
- <sup>3</sup> The etymology is uncertain because of the different meanings: the Ob-Ugrian and Samoyed cognates of Fi. *noutaa* mean ‘to follow (a trail)’, which suggests an original hunting term, but the Saami word means ‘to knead, to rub, to kill vermin’. See e.g. SSA 2 234.
- <sup>4</sup> Dezső (1996) notes that, in relation to the number of nouns, there are considerably fewer primary verbs in PU and PFU word stocks than in Proto-Indo-European. With due reservations (the status of an etymological dictionary as statistically reliable source material is questionable, not to speak about problems concerning the reliability of the dictionaries themselves), this could point to the substantial role of denominal verb formation in Uralic.
- <sup>5</sup> Morphologically, the relationship between nouns with the stem vowel *i* (as recent loan nouns usually are) and verbs in AA (according to the old verb type in *\*AδA*, originally in verbs derived from *A* stems) is not completely clear; however, this seems to be a psychologically realistic way of creating verbs from nouns in *i* in modern Finnish. See especially Räisänen 1987.
- <sup>6</sup> The term “contracted verb” refers to the sound change that has deleted the consonant (in this case, *\*t* > *\*δ*) between the second (unstressed) and third syllable, thus reducing the number of syllables.
- <sup>7</sup> Verbs in TA are also formed from native stems. My four-year-old son spontaneously formed the verb *nauhaa-* ‘to show (a video tape)’ from *nauha* ‘band, tape’.
- <sup>8</sup> It should especially be noted that AA (< TA) is not used with stems longer than two syllables. Longer stems, except the disyllabic type ending in *n*, *l*, *r*



or *s* (the type *sammalta-*, *sairasta-*), favour other verbers, especially *J* (the type *vasaroi-*, *kellaroi-*).

- 9 This type of verbs in *i* has also been promoted by language authorities as a shorter (more compact) and “more native” alternative for verbs with the French-German suffix *-eeri-*, e.g. *protestima* ‘to protest’ has been preferred to *protesteerima* (Vare 1993: 38–39).
- 10 Historically, of course, *nōelata* goes back to a derivative in *TA*, as still shown by quantity relations (not visible in the orthography) and the infinitive ending *-ta* instead of *-da*.
- 11 From a diachronic point of view, the fact that no clear semantic differences can be ascribed to these stem vowel alternations can partly be explained with the sound changes that have caused many derivatives in *J* (from stems in *a* with an illabial vowel in the first syllable: *-a+j-* > *-o-* > *-u-*) to coincide with derivatives in *W*, thus confusing typical verber verbs with typical reflexive-passive-automotive derivatives.
- 12 Lehtinen (1984), though not explicitly concentrating on causative derivation, shows convincingly that, as a passive marker, *TTA* is older than *TA* (earlier considered primary) and that both are of the same origin as the causative suffix (T)*TA*.
- 13 The difference in the vowel of the suffix (the third syllable) is only visible in derivatives of stems in original *\*A* (> Saami *-e*): if the third syllable has had a short vowel in Proto-Saami (e.g. *\*e* < *\*e*), the second syllable has *a*, otherwise *e* (Korhonen 1981: 99–100).
- 14 E = Erzya Mordvin, M = Moksha Mordvin.
- 15 The last two are exact etymological and structural counterparts of e.g. *Fi. lisää-* ‘to add’ and *nimeä-* ‘to name’.
- 16 According to Pugh (1996: 174), at least Moksha Mordvin uses pure Russian verb stems in loan verbs, with no “general verb marker”.
- 17 For the history of suffixal *t* in Mari cf. Bereczki 1994: 39–40; Bereczki explains the intervocalic *t* in some (deverbal) cases by Chuvash influence.
- 18 The *t* in the Russian infinitive ending is depalatalized, according to Mari phonotactics (Galkin 1966: 131, Pugh 1996).
- 19 There is also an unprinted dissertation on Komi verb formation (Černyh 1981a). According to Hausenberg (1981) it is more thorough and based on a richer material than Kneisl’s book; unfortunately, it was not available to me when writing this paper.
- 20 Kneisl’s argument for this explanation is that the other functions of this suffix can also partly be explained as “resultative”. E.g. the verb *gabjrt-* ‘in der Faust zusammendrücken, fest anpacken mit zusammengedrückter Faust, zusammendrücken’ (from *gabir* ‘Faust’) can be interpreted either as instrumental (“to do something with a fist”) or as resultative (“to make a fist”). Actually, the same interpretation would account for many, maybe even most derived verbs; e.g. Lehtinen (1979: 323–324) points out that Finnish descriptive verbs expressing sounds, of the type *kohise-* ~ *kohaja-* ‘to rush, to murmur’, *supatta-* ‘to whisper’, *höpöttä-* ‘to prattle’, can also be interpreted as causative (“to cause a murmuring/whispering/prattling sound”). “Causing”,

- “causativity”, or “resultativity”, should probably rather be seen as an inherent feature of verbness in general. Translative, reflexive, or passive verbs and verb forms would thus be marked special cases.
- 21 Note that in the Komi derivatives, *t* is not palatalized as in the Russian infinitive forms.
  - 22 The languages usually considered most conservative in reconstructing the unstressed syllables – especially Finnic and, at least to some extent, the Samoyed languages – do not show any traces of an element containing \**j* at the end of underived stems; on the other hand, the Permian languages as a source for reconstructions are not very reliable, because the unstressed syllables have probably largely worn off and/or been recreated.
  - 23 The phonemic transcription of these examples is explained in e.g. Salminen 1993a, (forthcoming).
  - 24 Lehtisalo (1936: 291–292) has also attempted a rough classification of Nenets denominal verbs in T; he presents them in two groups, factitive-instructive (“etw. machen, herstellen”, transitive?) and instrumental-essive (“etw. sein, mit etw. tun”, intransitive?).
  - 25 Bartha (1991: 82, 87) calls the Hungarian suffix *z* “frequentative” or “durative” (*gyakorító*); however, the deverbal cases presented by her are rather obscure. Often there is no base attested in any Hungarian sources (*néz* ‘to look at’ ~ Fi. *näke* ‘to see’; *nyúz* ‘to skin’ with no synchronic base in Hungarian), and thus the function of the suffix in these derivatives is difficult to determine. In fact, it seems that while in Proto-Hungarian almost all primary suffixes could be used to form causative verbs, causative (factitive) verb formation was later reserved for *t*, *at/et* (< \*TTA?), *tat/tet* and *ít* (< \*χt < \*KTA?) (Bartha op.cit. 97–99): e.g. *etet* ‘to feed’, *szabadít* ‘to free’.
  - 26 The example, cited from Galkin 1966: 113, is not the best possible: the first of these two verbs, as can be seen from its stem in *-a-*, contains, beside *J*, also the (historical) suffix *-al-*.
  - 27 As Vincent (1995: 440, fn. 11) puts it, “[t]he larger questions associated with continuity in linguistic systems have never received the same degree of attention than those related to change”.

## References

- Alhoniemi, Alho 1982: Eräitä näkökohtia mordvan nominaalisen predikaatin käytöstä. – In: *Lauseenjäsennyksen perusteet. Seminaari Seilissä 9.–10.9.1982*. Suomen kielitieteellisen yhdistyksen julkaisuja = Publications of the Linguistic Association of Finland, 9. Turku. 47–58.
- D. Bartha, Katalin 1991: Az igeképzés. – In: Erzsébet E. Abaffy, Loránd Benkő, Samu Imre, Endre Rácz [eds.]: *A magyar nyelv történeti nyelvtana. I. A korai ómagyar kor és előzményei*. Budapest. 60–103.
- Bereczki, Gábor 1994: *Grundzüge der tscheremissischen Sprachgeschichte I*. Studia Uralo-Altaica 35. Szeged.

- Bybee, Joan L. 1985: *Morphology*. Typological Studies in Language 9. Amsterdam/Philadelphia.
- Černyh [Черных, В. А.] 1981a: *Глагольное словообразование в коми языке*. Диссертация на соискание ученой степени кандидата филологических наук. Тарту.
- — — 1981b: Заимствованные глагольные суффиксы в коми-зырянском языке. — *Советское финно-угроведение* 17: 26–32.
- — — 1982: [Review of Kneisl 1978.] — *Советское финно-угроведение* 18: 222–227.
- CIFU 8 = *Congressus Octavus Internationalis Fenno-Ugristarum*. Jyväskylä.
- Dezső, László 1996: Primary Verbs from Finno-Ugric Proto-Language to Modern Hungarian: Typological Observations. — *CIFU* 8, Pars V: 23–26.
- Galkin 1966 = Галкин, И. С.: *Историческая грамматика марийского языка. Морфология. Часть II*. Йошкар-Ола.
- Ganschow, Gerhard 1965: *Die Verbalbildung im Ostjakischen*. Ural-Altaische Bibliothek 13. Wiesbaden.
- — — 1977: Zur Frage der Geschichte der syrjänischen *j*-Stämme. — In: Denis Sinor [ed.]: *Studies in Finno-Ugric linguistics in honor of Alo Raun*. Indiana University Uralic and Altaic Series 131. Bloomington. 67–84.
- Grammatika 1962 = П. Н. Перевощиков (отв. ред.) и др.: *Грамматика современного удмуртского языка. Фонетика и морфология*. Ижевск.
- Györke, J. 1935: *Die Wortbildungslehre des Uralischen*. Tartu.
- Hallap, Valmen 1955 = Халлап, В.: *Суффиксы образования глаголов в мордовских языках (общемордовские суффиксы)*. Автореферат диссертации на соискание ученой степени кандидата филологических наук). Таллин.
- Hausenberg, Anu-Reet 1981: [Review of Černyh 1981a.] — *Советское финно-угроведение* 17: 303–305.
- Helinski 1993 = Хелимский, Е. А.: Маторско-тайгийско-карагасский язык. — In: Majtinskaja – Eliseev – Romanova [eds.] 1993: 372–379.
- Hofstra, Tette 1996: Ostseefinnische Verben germanischer Herkunft: Bemerkungen zur Morphologie. — *CIFU* 8, Pars II: 105–108.
- Hopper, Paul & Sandra A. Thompson 1985: The iconicity of the universal categories 'noun' and 'verb'. — In: John Haiman [ed.]: *Iconicity in syntax*. Typological studies in language 6. Amsterdam/Philadelphia.
- Isanbaev 1980 = Исанбаев, Н. И.: [Review of] Л. С. Евдокимова, Словопроизводственная модель глагола (на сопоставительном материале русского и марийского языков). — *Советское финно-угроведение* 16: 310–313.
- Itämerensuomalaiset kielikontaktit = Läänemeresoome keelekontaktid*. Itämerensuomalainen symposium 7. kansainvälisessä fennougristikongressissa Debrecenissä 27.8.–1.9.1990. Toim. Sari Vaula. Kotimaisten kielten tutkimuskeskuksen julkaisuja 61. Helsinki.
- Janhunen, Juha 1982: On the structure of Proto-Uralic. — *FUF* XLIV: 23–42.

- Kangasmaa-Minn, Eeva 1956 = Eeva K. Minn: *Derivation*. Studies in Cheremis, 4. International Journal of American Linguistics, 22: 2. Indiana University Publications, Slavic and East European Series, 1. Bloomington.
- — — — 1982: Derivaatiokielioppia I: verbijohdokset. – *Sananjalka* 24: 43–63.
- — — — 1987: Functional derivation in Finno-Ugric. – In: *Papers on derivation in Uralic. Szegeder und Turkuur Beiträge zur uralischen Derivation*. Studia Uralo-Altaica 28. Szeged. 5–27.
- — — — 1988: Suomalais-ugrilainen komplementti. [Paper presented at a Finnish-Soviet symposium of Finnic studies in Turku, 30th August 1988.]
- — — — 1992: Pienimuotoinen kieliperimämme. – *Sananjalka* 34: 21–31.
- — — — 1994: Derivaatio kielellisenä prosessina. – *Sananjalka* 36: 37–43.
- Kasik, Reet 1996: Suomen ja viron vertailevaa sananmuodostustypologiaa. [Paper presented at the meeting of the Finno-Ugrian Society in Helsinki, May 1996.]
- Keresztes, László 1990: *Chrestomathia Morduinica*. Budapest.
- Kert 1987 = Керт, Г. М.: О глагольных словообразовательных суффиксах в кильдинском диалекте саамского языка. – *Советское финно-угроведение* 23: 93–100.
- Kettunen, Lauri 1962: *Eestin kielen äännehistoria*. 3rd ed. [2nd ed. 1928.] Suomalaisen Kirjallisuuden Seuran Toimituksia 156. Helsinki.
- Kneisl, Marianne 1978: *Die Verbalbildung im Syrjänischen*. Veröffentlichungen des Finnisch-Ugrischen Seminars an der Universität München. Serie C: Miscellanea 9. München.
- Koivisto, Vesa 1990: Venäjän vaikutuksesta itäisten itämerensuomalaisten kielten refleksiiviverbeihin. – In: *Itämerensuomalaiset kielikontaktit* 20–27.
- Korhonen, Mikko 1981: *Johdatus lapin kielen historiaan*. Suomalaisen Kirjallisuuden Seuran Toimituksia 370. Helsinki.
- Kövesi, Magda A. 1965: *A permi nyelvek ősi képzői*. Budapest.
- Künnap 1993 = Кюннап, А.: Камасинский язык. – In: Majtinskaja – Eliseev – Romanova [eds.] 1993: 380–388.
- Kytömäki, Leena 1992a: *Suomen verbiderivaation kuvaaminen 1600-luvulta nykypäiviin*. Turun yliopiston suomalaisen ja yleisen kielitieteen laitoksen julkaisuja 40. Turku.
- — — — 1992b: Suomen verbinjohto ja sen kuvausongelmat. – *Sananjalka* 34: 69–75.
- Laakso, Johanna 1989: Muodon ja funktion suhteesta itämerensuomen verbinjohtimistossa. – *Virittäjä* 93: 50–69.
- — — — 1990a: *Translatiivinen verbinjohdin NE itämerensuomalaisissa kielissä*. Mémoires de la Société Finno-Ougrienne 204. Helsinki.
- — — — 1990b: Reflections on the problem of Uralic N/V word stems. – In: László Jakab & László Keresztes & Antal Kiss & Sándor Maticsák [ed.]: *Congressus septimus internationalis fenno-ugristarum* 3A: 153–157. Debrecen.
- Lehtinen, Tapani 1979: *Itämerensuomen verbien historiallista johto-oppia. Suomen avajaa, karkajaa -tyyppiset verbit ja niiden vastineet lähisukukielissä*. Mémoires de la Société Finno-Ougrienne 169. Helsinki.

- — — — 1984: *Itämerensuomen passiivin alkuperästä*. Suomi 129. Helsinki.
- — — — 1985: Venäjän verbisemantiikkaa itämerensuomessa: karjalan ja vepsän inkoatiiviverbit. — *Sananjalka* 27: 63–83.
- — — — 1990: Venäjän aspektien heijastumia vepsän verbijärjestelmässä. — In: *Itämerensuomalaiset kielikontaktit*. 59–68.
- Lehtisalo, T. 1936: *Über die primären ururalischen Ableitungssuffixe*. Suomalais-Ugrilaisen Seuran Toimituksia 72. Helsinki.
- Leino, Pentti 1989 [1983]: Kielen rakenne. — In: Seija Aalto & Auli Hakulinen & Klaus Laalo & Pentti Leino & Anneli Lieko [eds.]: *Kielestä kiinni*. Tietolipas 113. Helsinki. 82–107. [First published in *ÄOL:n vuosikirja* 1983.]
- Määttä, Urho 1994: *Funktionaalinen selittäminen morfologiassa. Metateoriaa ja huomioita suomen ja sen sukukielten tutkimusperinteestä*. Opera fennistica & linguistica 7. Tampere.
- Majtinskaja 1966 = Майтинская, Клара Е.: К вопросу о закономерностях развития древнеуральских словообразующих суффиксов. — *Acta Linguistica Academiae Scientiarum Hungaricae* 16 (1–2): 81–95.
- Majtinskaja – Eliseev – Romanova [eds.] 1993 = Майтинская, К. Е. – Елисеев, Ю. С. – Романова, О. И. [отв. ред.]: *Языки мира: Уральские языки*. Москва.
- Markianova, L. F. 1987: О некоторых типологических особенностях глаголообразования в прибалтийско-финских языках северной группы. — *XVII Всесоюзная финно-угорская конференция. I. Языкознание. Тезисы докладов*. Устинов. 147–149.
- Mészáros, Edit 1995 = Эдит Месарош: О некоторых особенностях эрзя-мордовского отыменного глаголообразования. — *CIFU* 8, Pars III: 158–161.
- A. Molnár, Ferenc 1984: Zu einigen Fragen der finnisch-ugrischen Nomenverba, mit besonderer Rücksicht auf das Ungarische. — *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös nominatae. Sectio linguistica*. XV. Budapest.
- Ojutkangas, Krista 1996: Rõnsyilyä ja ekonomiaa: suomen ja viron verbiderivaation vertailua. [Paper presented at the 23rd Days of Linguistics in Helsinki, May 1996.]
- Pajunen, Anneli 1988: *Verbien leksikaalinen kuvaus*. Publications of the Department of General Linguistics, University of Helsinki, 18. Helsinki.
- Pugh, Stephan 1996 = Стефан Пуг: Ассимиляция русских глаголов в марийском языке: вопросы морфологии и словообразования. — *CIFU* 8, Pars III: 170–175.
- Rácz, Endre & Takács, Etel 1983: *Kis magyar nyelvtan*. 6. kiadás. Budapest.
- Räisänen, Alpo 1978: Kantasanan ja johdoksen suhteesta. — *Virittäjä* 82: 321–344.
- — — — 1987: Miten uudet aa, ää -loppuiset supistumaverbit tulevat nyky-suomeen? — *Virittäjä* 91: 491–502.
- Rätsep, Huno 1956: *i*-sufiksiliistest verbidest eesti keeles. — *Emakeele Seltsi Aastaraamat* II: 74–89.
- Rédei, Károly 1988: Geschichte der permischen Sprachen. — In: Sinor [ed.] 1988: 351–394.

- Révay, Valéria 1995: The affixes of the loanverbs and the onomatopoetic verbs in Vogul. [Summary.] – *CIFU* 8, Pars II: 99–100.
- Salminen, Tapani 1993a: On identifying basic vowel distinctions in Tundra Nenets. – *FUF* 51: 177–187.
- — — 1993b: Word classes in Nenets (and a few words about their Uralic parallels). – In: *Festschrift für Raija Bartens zum 25.10.1993*. Mémoires de la Société Finno-Ougrienne 215. Helsinki. 257–264.
- — — (forthcoming): Tundra Nenets. – To appear in: *The Uralic languages*, edited by Daniel Abondolo. London. [Hypertext version: <http://www.helsinki.fi/~tasalmin/sketch.html>]
- Sammallahti, Pekka 1988: Historical phonology of the Uralic languages with special reference to Samoyed, Ugric, and Permic. – In: Sinor [ed.] 1988: 478–554.
- Shields, Kenneth C. 1992: *A History of Indo-European Verb Morphology*. Amsterdam Studies in the theory and history of linguistic science. Series IV: Current issues in linguistic theory 88. Amsterdam.
- Sinor, Denis [ed.] 1988: *The Uralic languages. Description, history and foreign influences*. Leiden/New York/København/Köln.
- SKES = *Suomen kielen etymologinen sanakirja*. 1–7. Lexica Societatis Fenno-Ugricae XII. Helsinki 1955–1981.
- Szabó, Dezső 1904: A vogul szóképzés. – *Nyelvtudományi Közlemények* 34: 55–74, 217–234, 417–457.
- Szinnyei, József 1922: *Finnisch-ugrische Sprachwissenschaft*. 2. Ausgabe. Berlin – Leipzig.
- Tereščenko [Терещенко, Н. М.] 1975: К вопросу о Nomenverba в свете данных самодийских языков. – *Вопросы финно-угроведения*, вып. VI: 200–207. Саранск.
- — — 1979: *Нганасанский язык*. Ленинград.
- — — 1993a: Ненецкий язык. – In: Majtinskaja – Eliseev – Romanova [eds.] 1993: 326–343.
- — — 1993b: Нганасанский язык. – In: Majtinskaja – Eliseev – Romanova [eds.] 1993: 349–356.
- Tommola, Hannu 1993: Ambipersonainen suppressiivi: diateesista suomessa ja virossa. – In: Valma Yli-Vakkuri [ed.]: *Studia comparativa linguarum orbis Maris Baltici I. Tutkimuksia syntaksin ja pragmasyntaksin alalta*. Turun yliopiston suomalaisen ja yleisen kielitieteen laitoksen julkaisuja 43. Turku. 41–96.
- Vare, Silvi 1993: Konversioonist eesti keele sõnamoodustuses. – *Virittäjä* 97: 34–50.
- Vincent, Nigel 1995: Exaptation and grammaticalization. – In: Henning Andersen [ed.]: *Historical linguistics 1993. Selected papers from the 11th International Conference on Historical Linguistics*. Amsterdam Studies in the theory and history of linguistic science. Series IV: Current issues in linguistic theory, 124. Amsterdam/Philadelphia. 433–445.