The Semantics of Locatives in the Uralic Languages

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1. Introduction

The present paper deals with the semantics of locatives in the Uralic languages. It is based on [11], where we have discussed certain general features of locatives with respect to their semantics, their morphology and their syntax. We shall first present the main claims of that theory and then focus on certain aspects with respect to the Uralic languages. It is helpful to keep in mind that we are mainly discussing the spatial uses of locative expressions. Although many other case functions derive from locative functions, we have decided not to discuss them here. The reasons are twofold: (a) we lack the competence to do so, (b) even the study of the purely spatial usage of locatives offers substantial insights into the structure of language(s) that make this study worthwhile. Additionally, we shall show that a substantial part of non–spatial usages have at least synchronically little to do with a nonstandard semantics; instead, their behaviour can be neatly explained in purely syntactic terms. The data comes mainly from Finnish and Hungarian, but we believe that the facts carry over mutatis mutandis to other Uralic languages. Finally, readers are advised to get hold of [11] for the formal apparatus. Some of the complications have been swept under the rug here in order to be brief.

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2. Semantics

Following Jackendoff, we have proposed in [11] that locatives have the following structure.

(1) [[DP L] M]
a híd al- á
(to) under the bridge

Here, the DP (or NP) a híd is called the **landmark**, L (al-) the **localizer** and M, the suffix -á, the **modalizer**. We call the semantical correlate of a localizer a **configuration**. A configuration takes an object and returns a time dependent spatial region (called **parametrized neighbourhood** in [11]). We call [L DP] a **location phrase** or **LP** for short and the entire constituent a **mode phrase** or **MP**. Modalisers denote **modes**.

In the example above the DP a híd denotes an entity, some specific bridge b, and al- takes that entity and returns a spatial region ℓ, which is a (path–connected) subset of the Euclidean space $\mathbb{R}^3$. (In fact, as we have shown in [11], for certain spatial relations — such as the one expressed by English on — one needs a set of such regions, called **neighbourhood**.) This region may be changing in time (as would be the case with a kocsi 'the car'). It is the region of points under b. Finally, the modalizer á takes that region and returns an adverbial which expresses the fact that the entity that moves (the canonical mover, also called **trajector**) in a given event ε changes location during the time interval of ε so that initially it was not in ℓ but at the end of the interval it is. The notion of a canonical mover is explained as follows. Given an event type τ (say, the type of events of strolling along the beach), and a role ρ (say, the agent) the bearer of ρ in any given ε of type τ is something that moves in ε. Equivalently, by the laws of logic one must be able to deduce that if x is a participant of role ρ in an event ε of type τ, then it moves in ε (see also [17]). To appreciate this definition, look at the contrast between (2) and (3). (In Hungarian nominative is realized by $\varnothing$.)

(2) A madár a híd al-á repült.
the bird.NOM bridge.NOM under-COF flew
The bird flew under the brigde.

(3) *Károly megnézte a madar-at a híd al-á.
Karoly.NOM watch the bird.ACC the bridge.NOM under-COF
**Karl watched the ship to under the bridge.*

In (2) the event type is one of flying, and the bird is the agent, which by necessity is moving in events of flying. However, in an event of watching neither of the participants is necessarily moving, so (3) is ungrammatical. In certain cases where there are two participants which are moving (verbs of cogradient movement such as follow) it turns out that only one of them is a canonical mover. Thus, the above condition is necessary for being a canonical mover but it is not sufficient. We

TABLE 1. Constituents and their Semantic Types

	:	time point	:	ϑ
V	:	events	:	ε
	:	spatial region	:	o
	:	neighbourhood	:	$o \to t$
DP	:	object	:	e
L	:	configuration	:	$e \to (\vartheta \to (o \to t))$
LP	:	parametrized neighbourhood	:	$\vartheta \to (o \to t)$
M	:	modalizer	:	$(\vartheta \to (o \to t)) \to (\varepsilon \to \varepsilon)$
MP	:	event modifier	:	$\varepsilon \to \varepsilon$

TABLE 2. Modes

mode	characterization
static	object remains *in* location
approximative	object moves closer *towards* the location
cofinal	object moves *into* the location
recessive	object moves *away* from the location
coinitial	object moves *out of* the location
transitive	object moves *through* the location

have found no evidence that the choice of mover is language dependent, so we shall not discuss that issue here. The reader is referred to [12] and [11] instead.

The accompanying semantic types for the elements can be found in Table 1. (A **spatial region** is a connected subset of $\mathbb{R}^3$.) There are several modes, which we summarize in Table 2. The difference between approximative and cofinal is that aspectually the latter is telic (the object reaches the said location), while the former is not. The same applies to the pair recessive/coinitial. Hungarian has a case called **terminative**, which is always telic, and an allative (cofinal mode). The difference between the two is sometimes hard to draw. Among the configurations we shall be concerned mainly with three: in', at', and on'. We say, $\mathsf{in}'(x)$ is the convex hull of the location of x minus the location of x itself. (Thus, in the car denotes the interior of the car without the solid parts of the car itself.) $\mathsf{at}'(x)$ ($\mathsf{on}'(x)$) is the location that is horizontally (vertically) adjacent to x and close to it. The best cases where the distinctions are seen are with three–dimensional objects that have an interior: a box, a house, a car. For flat horizontal objects (e. g. a plate, a meadow), in' is empty. Likewise, for abstract objects

TABLE 3. Local Cases of Some Uralic Languages

case	Komi	Udm.	Fi.	E. Mord.	Mari	Hung.	Hanti
Ine	-i̯n	-leš	-ssa	-so	-šte	-ban	–
Ill	-e̯	-e/-je	-Vn	-s	-ške	-ba	–
Ela	-i̯ś	-i̯ś	-sta	-sto	–	-ból	–
Ade	–	–	-lla	–	–	-nál	–
All	–	–	-lle	-Vn	–	-hoz	–
Abl	-li̯ś	-leš	-lta	-to	-leč	-tól	-oɣ
Loc	–	–	–	–	–	–	-nə̂
Appr	-lań	-lań	–	–	-škə̂la	–	-pa
Prol/Lat	–	–	–	-va/-v	-š	–	-a
Trans	-ti	-(j)eti	–	–	–	–	-ɣə̂
Term	-e̯ʒ́	-oź	–	–	–	-ig	–
Egr	-śań	-i̯śen	–	–	–	–	–
Pros	-e̯d	–	–	–	–	–	–

that have no location as such, these definitions do not apply. This causes considerable variation in and across languages. We mention also another fact. Although technically speaking each language can approximate every configuration to any degree of precision, there are a handful of localizers (morphologically realized either by adpositions or by cases) that express the basic configurations mentioned above and are therefore used much more frequently. Languages differ substantially in the way they divide the spatial relationships among them. [3] shows that attachment to an object (e. g. a handle on a door) triggers inessive in Finnish, while in English one does not say that the handle is *in* the door.

3. MORPHOLOGY

The Tables 3 show the locative cases of some Uralic languages. There is one omission: Hungarian has three more cases (superessive -on, sublative -ra and delative -ról). Moreover, notice that the illative in Finnish has the form -seen if the word ends in a long vowel. The lative in Mordvin is not productive. (Sources: [13], [4], [7], [8], [2], [9], [6]. Not all possible forms are listed, only some. For the sake of simplicity we ignore vowel harmony and cite only forms with default harmony.) Of course, there are many other realizations of locatives, mainly as PPs (eg (1)). As we shall argue, these cases consist of two parts, one determined by L and the other by M. As we can see, most Uralic languages quite generally distinguish three morphological modes, namely, static,

cofinal and coinitial. There are however also languages with an approximative and some with a transitory mode. The case labels should be taken as purely morphological labels, though with connections to the semantics.

Additionally, LPs can be inflected as well. LPs are expressions denoting (or asking for) spatial regions. Generic examples are Hu. hol 'where', itt 'here' and ott 'there'. The proof that these are not DPs lies in the fact that they cannot be inflected for the cases above but only for mode. Namely, we have

static	hol	itt	ott
cofinal	hova	ide	oda
coinitial	honnan	innen	onnan

The morpheme for static mode is generally ∅. So, words that are morphologically static MPs also are LPs, e. g. a lakásban 'in the flat' can either be an LP denoting some spatial region or an MP denoting an adverb specifying a movement pattern (the latter roughly corresponds to the prolative, which denotes a movement that is confined within the bounds of the landmark). LPs can be either morphologically simple or consist of a DP plus a postposition: a ház fölött 'above the house'.

Also MPs can be realized morphologically in many ways. They can be single words (ide), they can be case marked DPs (a házból 'out of the house') or they can be DPs plus a postposition (a ház mögé 'to behind the house'). The morphological realizations have no bearing on the syntactic or semantic behaviour as far as we can see (see [10] for arguments). Finnish, Syriaenic (Komi) and Hungarian also possess various local postpositions which come in sets of three (cf. Table 5).

4. Syntax: Selection

The choice of L and M in the construction V+MP depends (apart from the meaning to be expressed) on the choice of the DP and the choice of V. In general, the DP can influence the choice of L, but not that of M to our knowledge, while V can influence the choice of either M alone or of both M and L. We examine the cooccurrence restrictions between L and DP first.

In order to define a certain spatial region various objects can be taken as landmarks. The same region can be next to the house, under the car, in front the shop and so on. However, given the landmark and the object to be located, there is often a specific way to spell out the localizer even if its generic definition does not really apply or another one would be more appropriate. The choice between in and on in English and German, and, correspondingly, between inessive and adessive (illative

and allative, elative and ablative) is often determined by the landmark DP. As mentioned above, peculiar (or nonexistent) shape or location of objects results in idiosyncrasies, for example with horizontal, flat objects. We have Mari nârâštâ 'in the meadow' and Udmurt busi̯oi̯n (idem, both inessive) next to Hu. a mezőkön (idem, superessive) and Fi. niittyllä (idem, adessive). (Notice that Finnish unlike Hungarian does not distinguish vertical contact from horizontal contact morphologically.) Hungarian has a kertben ('in the garden', inessive) but not *a kerten (superessive), a várban/*a váron 'on the castle'. Also, a hajón 'on the ship' is the neutral way of saying that you are on the ship, regardless of whether you are in a cabin of that ship or on deck. If only the configuration mattered, a hajón would in some cases be inappropriate, and a hajóban mandatory. The latter is marked, though. Further, with abstract nouns matters get pretty complex. Other localizers are barely possible. Notice the fate of place names in Finnish and Hungarian (Hu. Pécsett, Kolozsvárott (-t(t) is an old locative from which the modern accusative probably derives, see below), Budapesten, Szegeden but Berlinben and Győrben). The choice between superessive and inessive is often idiosyncratic (Hu. a lakodalomban/az esküvőn 'at the wedding'). In sum, the choice of localizers is not completely random but at the same time largely unpredictable.

Now we turn to the determination of M and L by the verb. We will start with the complex V+MP. V can select either both L and M or just the mode. In the first instance, we have what is typically described as case government (or case selection). Finnish näyttää 'to resemble' selects ablative (or allative) case (see [7]), Hungarian szavazni 'to vote for' selects sublative (see [9]). Mode selection is exemplified by the Finnish verb jäädä 'to stay'. This verb can either be used with the allative or with illative (hän jäi laivalle/autoon, 'he stayed on the ship/in the car'). Also, it is compatible with any PP that is in cofinal mode. But no other mode is compatible. This suggests simply that this verb selects cofinal mode. A similar example is Hungarian bújni 'to hide'. Contra [5] we have argued in [11] that the lack of a truly directional meaning is not a consequence of an anyway abstract meaning of Finnish locatives. Rather, the meaning of locatives in Finnish is as concrete as in any other language. What is responsible for cancelling the directional meaning with jäädä is simply the fact that this verb selects the cofinal mode, as we shall see in the next section.

5. A Sign Based Analysis

The basic principle that seems to be operative in all the languages we have looked at is the following: an element which is determined by its environment is semantically empty. In [10] we have implemented this as follows. Language is a partial algebra of signs, a sign being a triple $\langle E, C, M\rangle$ consisting of its **exponent** E, its **category** C and its **meaning** M. C is a term formed from attribute value matrices (AVMs) using directional slashes. If an AVM contains a pair $[\textsc{case} : \alpha]$ we say that the AVM has **case** α. Cases are sequences of exponents (sequences of morphemes, to simplify). The combination of two signs may either proceed as in standard categorial grammar (or Montague grammar) by cancellation with accompanying function application:

$$\begin{array}{lll} \langle E, C/C', M\rangle \bullet \langle E', C', M'\rangle & := & \langle E^\frown E', C, M(M')\rangle \\ \langle E, C, M\rangle \bullet \langle E', C\backslash C', M'\rangle & := & \langle E^\frown E', C', M'(M)\rangle \end{array}$$

(Here, $^\frown$ denotes concatenation.) Or it might be a purely formal merge that stacks the exponent of one sign to the stack of case values of the other.

$$\begin{array}{lll} \langle E, C/D, M\rangle \circledR \langle E', C', M'\rangle & := & \langle E, C'^*, M\rangle \\ \langle E', C', M'\rangle \circledR \langle E, D\backslash C, M\rangle & := & \langle E, C'^*, M\rangle \end{array}$$

Here C'^* results from C' by adding E' to the case–sequence of the target category of C'. (The target category of C' is either C' if it is an AVM, or B in case $C' = B/B'$ or $C' = B'\backslash B$. See [10].)

In Finnish, there are five signs that form all the local cases: $\textsc{stat}_F$, $\textsc{cof}_F$, $\textsc{coi}_F$, $\textsc{in}_F$ and $\textsc{at}_F$. Suppose we start with the sign

$$\textsc{ship}_F := \langle /\mathsf{laiva}/, \mathrm{NP}[\textsc{case} : \varepsilon], \mathsf{ship}'\rangle$$

Finnish laivalta is the exponent of the following signs:

(a) $(\textsc{ship}_F \bullet \textsc{at}_F) \bullet \textsc{coi}_F$. This is an adverbial with meaning 'from the ship'. It has type $\varepsilon \to \varepsilon$. Syntactically, it has case ε, called **null case**.

Hän menee laiva-lta.
he.NOM goes ship-ABL
He is going/walking from the ship.

(b) $(\textsc{ship}_F \bullet \textsc{at}_F) \circledR \textsc{coi}_F$. This must be a complement of a mode selecting head, meaning '(the region) on the ship'. Semantically it is a parametrized neighbourhood. Syntactically, it has case /ta/, which we call **coinitial**.

Hän löysi raha-n-sa laiva-lta.
he.NOM found money-ACC-POSS:3SG ship-ABL
He found his money on the ship.

(c) $(\text{SHIP}_F \mathbin{®} \text{AT}_F) \mathbin{®} \text{COI}_F$. This is a complement of a head selecting ablative case. It simply means 'the ship'. Semantically, it is of the same type as a direct object. Syntactically it has case $\langle /\mathsf{l}/; /\mathsf{ta}/\rangle$, also called **ablative**.

Tämä näyttää laiva-lta.
this.NOM look-like ship-ABL
This looks like (resembles) a ship.

(The term $(\text{SHIP}_F \mathbin{®} \text{ON}_F) \bullet \text{COI}_F$ does *not* denote a sign, due to a typing mismatch.) Similarly, the word alhaalta is the exponent of two distinct signs, formed using

$$\text{DOWN}_F := \langle /\mathsf{alhaa}/, \text{LP}[\text{CASE} : \varepsilon], \mathsf{down}'\rangle$$

(a) $\text{DOWN}_F \bullet \text{COI}_F$. This is an adverbial with meaning 'from downstairs'. It has type $\varepsilon \to \varepsilon$. Syntactically, it has null case.

Hän tulee alhaa-lta.
he.NOM come down-ABL
He is coming from downstairs.

(b) $\text{DOWN}_F \mathbin{®} \text{COI}_F$. This must be a complement of a mode selecting head, meaning 'downstairs'. Semantically it is a parametrized neighbourhood. Syntactically, it has case /ta/ (coinitial).

Hän löysi raha-n-sa alhaa-lta.
he.NOM found money-ACC-POSS:3SG down-ABL
He found his money downstairs.

We consider jäädä 'to remain' to be a verb selecting cofinal case, löytää 'to find' a verb selecting coinitial case. By contrast, näyttää 'to resemble' is a verb selecting ablative. This explains the ungrammaticality of (4).

(4) *Pekka löysi raha-n-sa ja tämä näyttää laiva-lta.
*Pekka found money-ACC-POSS:3SG and this.NOM resembles ship-ABL
Pekka found his money from and this resembles a ship.

In Hungarian, there are two types of question words: (1) the inflected forms of ki 'who' or mi 'what' and (2) the three locational question words mentioned above. The verbs bújni 'to hide' and gondolni 'to think' select cofinal and sublative, respectively. The theme argument of gondolkodni, although in the sublative, does not denote movement towards a location. We expect therefore that it is not possible to ask for it using the word hova 'whereto', while with bújni we expect that hova is mandatory.

(5) Ho-va/??Mi-re bújt el Béla? – A hajó-ba.
where-COF/??what-SUBL hid PRT Béla.NOM? – the ship-ILL.
Where did Béla hide? – In the ship.

(6) *ho-va/mi-re gondol Béla? – A hajó-ra.
where-COF/what-SUBL thinks Béla.NOM? – the ship-SUBL.
About what does Bela think? – About the ship.

In (5), mire is not totally unacceptable, see [11] for a discussion.

Interesting supporting evidence for mode selection is provided by looking at the non–local cases. Modalizers do not necessarily take location phrases as complements. Also predicates can be complements of modalizers. Clear cases of this kind are the essive and the transformative case (the Finnish translative). We regard them as the manifestations of a combination of a morpheme ESS_F creating a property from an DP together with a modalizer STAT_F or COF_F. The word laivaksi can be an adverbial, a cofinal DP denoting the property of being a ship, and a translative marked DP. Similarly for laivana. As Fong observes in [5], jäädä can be construed with translative but not with essive. This supports our claim that it actually selects cofinal case.

6. Semantics of Uralic Locatives

There is a distinction into two kinds of languages depending on the locus where the *mode* of a locative is expressed. If it is expressed in the verb we speak — following Talmy — of a **verb–framed language**, if it is expressed in the locative PP we speak of a **satellite–framed language**. [16] claims that Indo–European languages (with the exception of Romance languages) are **verb–framed** while Finno–Ugric languages are **satellite–framed languages**. On the other hand, Uralic languages do express the mode on the PP. Therefore, if Slobin is correct this must mean that the verbs select the mode much more frequently than in Indo–European languages. This could in the long run threaten the semantic basis of the mode distinctions altogether. (By contrast, Romance languages hardly mark directionality morphologically. Thus the verb must express the directionality if needed.) In fact, since static mode MPs are hard to distinguish from LPs, distinctly positive evidence only comes from Finnic languages. They display a great tendency to select directional mode regardless of meaning. (However, Bowerman regards Finnish as satellite–framed, see [3]). Hungarian seems to be at best a mixed case. Slobin notes that a distinct trait of satellite–framed languages is the use of verbal prefixes, and this is a characteristic that Hungarian shares with them. The empirical evidence of the classification allows no firm conclusion.

Finnish and Hungarian use locatives for complements and arguments of diverse kinds. For example, subject matter is marked in Finnish by the elative (hän puhuu tästä 'he is speaking of/about this'), while Hungarian uses delative (erről beszél, idem). However, there are irregularities too: álmodik 'to dream') also allows sociative, gondolkodik 'to think' delative and superessive. Notice that subject matter is marked in English by about, in German by an+ACC (= allative) or von+DAT (= ablative). The tendency to use locatives for subject matter is pretty widespread, but it is hard to predict which one gets used. Nevertheless, within one language one can observe a certain amount of regularity.

The regularities can even go further. Elena Skribnik (p.c.) has brought to my attention that Altaic languages are very consistent in viewing negative emotions as the canonical mover of the emotion, and that it flows from the theme to the experiencer (while it is the converse with positive emotions). In many of these languages, cases are therefore more semantic than in Indo–European languages. (Irregularities exist, though: Hu. neheztel 'to be filled with wrath against' wants sublative.) This fits well with the theory by [17]. According to Wechsler, the lexicon is structured using subsumption and inheritance. If w falls under w' then the template for w inherits the entire template for w'. Specifically, it inherits the selectional restrictions of w'. So, the fact that félni 'to fear' is a verb of negative emotion will make it inherit the template for verbs of negative emotions. The linking of arguments is done using a general rule: in a construction V+[P+DP], the arguments of the semantics of P are linked to those of V such that the linking condition for each of the roles of P is logically satisfied through the meaning of V after linking. (For example, in a directional PP the variable of the trajector must be linked to the mover of the verb.)

Uralic languages have a number of constructions that fall outside the scope of the present theory. For example, verbs of change of state often select coinitial or cofinal mode. (The Finnish data was compiled from various sources by [5].)

(7) (Fi.) Ukko väsyi tie-lle.
old.man got.tired way-ALL
The old man got tired on (lit. onto) the road.

(8) (Fi.) Joulu-na Jumala syntyi hevo-n heinähuonee-seen.
Christmas-ESS God.NOM was.born horse-GEN stable-ILL
At Christmas, God was born in (lit. into) a horse stable.

(9) (Fi.) Somap' on sota-han kuolla.
sweet is war-ILL to.die
It is sweet to die in (lit. into) war.

(10) (Fi.) Tää-ltä pyrkii häviämään tavaro-i-ta.
this-ABL tends disappear thing-PL-PART
From here, things tend to disappear.

(11) (Fi.) Metsästäjä ampui karhun metsä-än.
hunter.NOM shot bear-ACC forest-ILL
The hunter shot the bear in (lit. into) the forest.

(12) (Mari) Wə·δeš ko·lâšâ wo·l'âk.
The animal died in (lit. into) the water.

(13) (Hu.) Közel vagyunk a repülőtér-hez.
close we.are the airport-ALL
We are close to (sic!) the airport.

The explanation according to Fong is as follows: the verb meaning consists of two phases. If the property holds at the end state, cofinal mode is used, if the property holds at the begin state, coinitial mode is used. However, (7) and (11) clearly counterexemplify this. As for (7), one may think of the cofinal mode as contributing the notion of change of state, but not change of location. But even this is hard to work out in exact detail. However, this analysis fails to work for (11). The bear never changes location during event time with respect to the forest. What makes these facts particularly difficult to analyse is that the PPs are not complements. If they are adjuncts, however, the present analysis forces us to present a unified meaning for the locatives. This is so far largely unexplored territory.

7. Historical Development

It is assumed that PU had the following cases: nominative, accusative, possibly a genetive, and three locative cases: a locative in na/nä or ta/tä, an ablative in ta/tä and a lative in k/j/ń. (See [14], [1].) Thus the configuration was morphologically unmarked. Table 4 reproduces a table found in [1].

This is basically supported by the fact that only Hungarian and Finnish distinguish localizers morphologically and that in the case of

TABLE 4. Selected Uralic Postpositions 'behind, in the back of'

	Stasis	Motion			
		Source	Goal	Trajectory	Terminus
Hungarian	mögött	mögül	mögé		
Vakh Khanty	čöŋŋə	čöŋčööɣ	čöŋč(ää)		
Estonian	taga	tagant	taha		
M. Mordva	ftalə̂	ftaldə̂	ftalu	ftalga	
F. Nenets	punnʲaana	punnʲaat	punnʲaŋ	punnʲaanma	
Komi	sajin	sajïšʲ	sajë	sajti	sajëdzʲ

Hungarian the development from nouns becoming postpositions is satisfactorily documented. A similar situation obtained in Indo–European, though it seems that in general it only distinguished locative (static) from ablative (coinitial). The static/cofinal distinction is marked in German quite consistently with the contrast dative/accusative. In English and many German dialects there is no distinction between dative and accusative, and consequently these languages are at the border of losing the morphological cofinal/static distinction completely. Latin used the ablative/accusative contrast to distinguish static cofinal. So, while these languages use the marking of the DP to indicate the contrast, Finnish and Hungarian use a different strategy. They inflect the localizer for the mode. Morphologically this means that the postposition realizes L and M together. It is interesting to compare the inflectional paradigm of these postpositions with that of nouns (see Table 5). Komi uses inessive, illative and elative as paradigms. In Finnish, there is a parallel between the essive and the static mode, the translative and the cofinal mode and the partitive with the coinitial mode. In Hungarian, the situation is less clear, but fortunately the historical sources point to an analogous situation. The static mode is marked on the postposition by a suffix -t. The accusative suffix -t of present day Hungarian is in fact believed to derive from the PFU locative case suffix *t (see e.g. [15]). The cofinality suffix á is identical with the transformative marker á (< PFU *k), except that the latter induces a doubling of the preceding consonant (or inserts a v if there is none). They are believed to be of common origin. The parallel between the coinitiality suffix -ól and the case endings -tól/-ról/-ból has led to the assumption of an ablative case suffix *l, but it is disputed whether it can be traced back to PFU origins. We mention also hátul 'in the back' and Németül 'in German'. It is without doubt that many case endings developed from mode inflected postpositions. In older sources we find

TABLE 5. The Postpositions of Finnish and Hungarian

(a) Finnish

static	cofinal	coinitial
takana behind	taakse to behind	takaa from behind
essive	tanslative	partitive
talona as a house	taloksi (turning) into a house	taloa of a house

(b) Hungarian

static	cofinal	coinitial
alatt under	alá to under	alól from under
accusative	transformative	ablative
házat a house	házzá (turning) into a house	házból out of a house

(c) Komi (Syriaenic)

static	cofinal	coinitial
dinin̆ at	dine̊ to	dini̊ś from
inessive	illative	elative
ver̆in̆ in a forest	ver̆e̊ into a forest	vi̊ś out of a forest

rea, functioning as a postposition or as a suffix, also bele, which is to become the case suffix -ba/-be.

The situation with Finnish is different and has been discussed for example in [14]. Finnish did not use postpositions, rather it used coaffixes. A clear case is the suffix -la, which means roughly 'the place of' (Tapiola 'the land of Tapio', Kalevala). A basic noun was inflected as if it was first suffixed by -la and then by the case suffix proper. This account can only work, however, if we assume that the locative case system for nouns has already been a different one from that of the postpositions. In fact, the case can be made for Finnish due to the less regular character of the postpositions that their formation was basically complete before the nominal paradigm got reshaped.

8. List of Abbreviations

ABL: ablative, ACC: accusative, ADE: adessive, ALL: alative, APPR: approximative, COF: cofinal, COI: coinitial, EGR: egressive, ELA: elative, ESS: essive, ILL: illative, INE: inessive, LAT: lative, NOM: nominative, PART: partitive, PL: plural, POSS:3SG: 3rd singular possessor, PROL: prolative, PROS: prosecutive, SUBL: sublative, TERM: terminative, TRANS: translative.

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