The Structure of Local Cases and Its Relevance for the Study of Uralic Languages

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In [5] we have analyzed the structure and semantics of locatives based on a survey of many languages, mainly from the family of Uralic, Caucasian and Indo–European languages. Here we will take the results of that paper and discuss the implications for the locatives of Uralic languages. For there is a fair number of Uralic languages with a rather rich system of locative cases, among them Finnish and Hungarian. The peculiarities of locative cases in particular are not as well studied as those of other cases, for example the structural cases. Nevertheless, as we will demonstrate, locatives and also locative cases are highly structured and pose very interesting questions concerning the organisation and the development of these languages.

According to [5] the structure of locative expressions is language universally as follows. (See also [7], who also proposes a strict terminology for local cases based on this structure.)

(1) [[DP L] M]

Here the DP (previously called NP in the pre–GB linguistic literature) is called the **landmark**, L the **localizer** and M 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 [5]). The constituent $[L\ DP]$ is called a **location phrase** or **LP** for short. The entire constituent is called a **mode phrase**, to distinguish it from the location phrase. Modalisers denote **modes**. A mode takes a parametrized neighbourhood and returns an event modifier whose denotation is an expression specifying how a specific element (the 'mover', typically the subject or undergoer) moves with respect to this region. An example is the expression from under the table. Here, the table is the landmark, under the localizer and from the modalizer. The semantic localizer expressed by under is denoted using upper case letters: UNDER. While there is practically any number of local relations expressed by localizers, the number of grammatically encoded modes tends to be limited to just a handful. We have the **static** mode, the **cofinal** mode, the **coinitial** mode, the **transitory** mode and the **approximative** mode. Static means that the object does not move with respect to the parametrized neighbourhood (as in Finnish talossa (in the house)), cofinal means that the object moves into the neighbourhood (as in Finnish taloon (into the house)), coinitial means that it moves away from that neighbourhood (as in talosta (out of the house)). Transitory means that it moves into and then out of the neighbourhood. Notice that the landmark need not be at rest. If Schumacher is racing behind Häkkinen throughout the race, then expressing this requires static mode since the two cars never change their relative positions. The details of this semantics are explained in [5] and need not concern us further. Notice that the analysis above predicts that local cases are not to be seen as feature bundles but as hierarchical structures (see [4] for a discussion).

Locative Case Systems. Locative cases tend to be systematically organized along the two orthogonal axes of mode and configuration. There is typically a set of localizers for languages inflect, and a set of modes. Finnish and Hungarian have three morphological modes: static, cofinal, and coinitial. Finnish has two localizers: the inner, denoted here by IN, and the outer, denoted here somewhat inappropriately by AT. Hungarian has three localizers: IN, AT and ON. In general, the Finnish outer cases provide a mixture of the Hungarian AT and ON series (see below). The modes are present in Hungarian also in the locative postpositions. We find alatt 'under', alá 'to under' and alól 'from under', one for each mode, and similarly with other local postpositions. It is to be remarked that the static mode is usually morphoplogically unmarked. In other words, the static mode is signalled by an empty modalizer. Therefore, a mode phrase in static mode is generally homophonous with a location phrase. Location phrases occur in several well–defined environments, so that the ambiguity is rather harmless. These are: (1) as complements of modalizers, (2) sentence initially, (3) as arguments of certain verbs (for example, to live). For example, the expression under the table as occurring in from under the table must denote a parametrized neighbourhood. However, as a free standing expression an adverbial must be a mode phrase in static mode. This appears to be a universal law in languages, and is responsible for a number of facts to which we will turn below.

Selection. Locatives can be used adverbially as well as attributively. But they can also be selected by some higher head. It can be shown that heads can select either the full case or just the mode. The first example is the most commonly described. Finnish näyttää 'to resemble' selects ablative case, likewise Hungarian félni 'to be afraid of'. The case of mode selection is exemplified by the verb jäädä. It is possible to use jäädä either with allative or with illative (Hän jäi laivalle/autoon, 'He stayed on the ship/in the car'). But no other locative is compatible. This suggests simply that this verb selects cofinal mode. A similar example is Hungarian bújni 'to hide'. Contra [2] we have argued in [5] that the lack of a truly directional meaning is not a consequence of an anyway abstract meanng 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. If this is correct, Finnish laivalta can mean three different things in three different environments:

/a/ As an adverbial it means *from the ship.* Semantically, its type is that of an event modifier.

/b/ As a complement of a mode selecting verb it means *(the region) on the ship.* Semantically it is a parametrized neighbourhood.

/c/ As a complement of a verb selecting ablative case it simply means *the ship.* Semantically, it is of the same type as a direct object.

The case of jäädä and similar verbs have attracted a lot of attention, and it has been tried to explain their behaviour using conceptual semantics. Yet, even if such endeavours succeed in one case, they will not cover the whole range of seemingly idiosyncratic selection. For example, it cannot be explained why jäädä does not simply select static mode (as do the corresponding English and German verbs). Our semantic principles do allow for this variation without any problem.

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 (which in Finnish is called translative, which is synchronically speaking not a correct label). We have not yet studied the precise semantics of these cases. Yet, as Fong observes in [2], jäädä takes translative rather than essive, in support of our claim.

Markedness. In [5] we also proposed a markedness hierarchy with respect to modes. It runs as follows.

(2) Static $<$ Cofinal, Coinitial $<$ Transitory, Approximative

This means the following. If a language has morphologically marked coinitial mode, it also has morphologically marked static mode; and if it has morphologically marked transitory mode, it also has cofinal and coinitial mode. This can be refined further. As [8] notes, following an idea by Korhonen, coinitial mode is more marked than cofinal mode. This has probably to do with the fact that goals are less marked than sources. A DP in cofinal mode specifies the goal while a DP in coinitial mode specifies the source. Additional evidence is that there is an essive and a transformative (cofinal mode) but a corresponding case in coinitial mode is lacking. (The partitive is *not* of this kind, synchronically speaking.) With respect to the localizing functions, matters are less straightforward. On the basis of the evidence at hand, one might propose the following hierarchy.

(3) IN $<$ AT $<$ ON

This means that a language that has a series of outer locatives (corresponding to AT) also has a series of inner locatives, corresponding to IN. Finnish and Hungarian provide support for this hierarchy. Unfortunately, the factual evidence is not as clear as with the modes. The problem is that the localizing systems work by differentiation as well as expansion. If there is only series of locatives, it is likely not to correspond to any single one of the above localizing functions; its meaning will be relatively diffuse (see below concerning PU/PFU). If there are two localizers, we expect to have IN and AT, but it is not clear that they have the same meaning as those in a three localizer system. For example, there is a difference in meaning between outer locatives and the locatives of Hungarian using AT. To give an example, Finnish laivalla 'on the ship' uses adessive case, hence the AT localizer. The same will in Hungarian be construed with the superessive: hajón. A different example is given by place names. By default, a city is used with the IN localizer (Finnish Berlinissä, Hungarian Berlinben ('in Berlin')). However, there are Finnish place names where one uses the localizer AT, and there are Hungarian place names where one uses the ON localizer in Hungarian. So, we have Finnish Tamperella 'in Tampere' and Hungarian Budapesten 'in Budapest'. Many more examples can be adduced. This differentiation of the outer locatives is clear if we look at the semantics: from the shape of and object we can derive the distinction between IN and AT/ON. However, the latter two are distinguished only by using the orientation. Further locatives, as can be found in Caucasian languages, are obtained by differentiating the IN and the AT localizers.

Aktionsart. The correspondence between aktionsart and mode has not been studied in [5] but is a very intricate area that would merit a study of its own. Notice that the presence of a cofinal locative enforces a telic aktionsart. In that respect the cofinal mode differs from the approximative; the latter is appropriate with nontelic events (processes, to be exact) in the same way as the former is with telic events.

Matters are even a little bit more complex. There is in addition to the cofinal cases also a **terminative** in some languages (e. g. in Hungarian and Udmurt). The terminative is even stronger in its requirements on telicity. Therefore, the use of terminative and cofinal adjuncts creates paradoxes of incomplete events (see [10]). Look at

(4) Elkezdett futni *a falig/a fal-hoz/a fal felé.
He began to run the wall-TERM/the wall-ALL/the wall towards
He began to run towards the wall.

The problem is that to begin to do something is an event that ends before the subordinate event ends. Therefore, since the story time is clocked with the time of the higher event, the subordinate event must remain incomplete during the time of the sentence. Depending on the strength of requirement caused by the locative that the embedded event be completed, the various modes are more or less felicitous. Approximative mode is always felicitous, as it does not imply telicity. However, cofinal mode is often infelicitous, but more acceptable than terminative. The judgements vary with the DP from case to case, but the general tendency is nevertheless clear. Notice that the terminative carries the localizer AT. There is no case that expresses the terminative meaning with the IN localizer. Further, the terminative is not a case in yet another mode. Rather, the difference between the terminative and the allative is purely in the strength of association with telicity. This remains to be spelled out in more detail, though.

Segmentation and Historical Development. Let us recall the structure of a locative. It has the form [[DP L] M]. It may be (as in English from under the table) that all three are distinct units. However, there are theoretically four possibilities, with the DP now being a simple noun N (# signals a word boundary, + a morpheme boundary):

/0/	All three form a single unit:	# N # L # M#,
/1/	L and N form a single unit:	# N + L # M#,
/2/	L and M form a single unit:	# N # L + M#,
/3/	M, L, and N each form a unit:	# N + L + M#.

We have seen examples of /0/: from under the table is a case in point. We have argued above that there is a general prohibition in languages against option /1/, since this would create free expressions denoting locations. /1/ is only an option in the unmarked static case; for then the apparent complex L+N might also appear to be a locative in static mode (since the static mode is unmarked). This unit is either a case or an apposition. Finnish local cases exemplify Type /3/. Finnish is to some degree also morphologically transparent (see [1] and also [3]).

The localizer AT can be identified with the l–infix, while the localizer IN can be identified with the s–infix. The coinitial mode is most clearly identifiable by its /lta/–suffix. (The slashes indicate abstract morphological units rather than actual phonological strings.) It is argued that the suffix for the static mode derives from *na through assimilation, and the suffix for the cofinal mode from a suffix *ne, likewise (at least partly) through assimilation. We find the suffix *na today in the essive, and *ta also in the partitive.

Hungarian, in addition to exemplifying Type /3/ also exemplifies Type /2/ in a very interesting transparent way. In Hungarian, spatial postpositions also come in triplets, once for each grammatical mode (alatt 'under' (static), alá 'to under' (cofinal) and alól 'from under' (coinitial)). The suffix /ól/ thatappears with the coinitial modein postpositions is reminiscent of the coinitial case of Hungarian (/ból/ (elative), /tól/ (ablative) and /ról/ (sublative)). Indeed, it is known (see [3]) that Hungarian passed through a stage where there was only a simple threefold series of locatives inherited from PU, and the locative case endings of present day Hungarian derive typically from postpositions (for example, the inessive /ban/, illative /ba/, and the elative /ból/, all share the marker b.) The following transition is therefore a very likely scenario for these cases:

(5)	# N # L # M	>	# N# L + M#	>	# N + L + M #
Type	/0/	>	/3/	>	/1/

Thus, the present analysis of locatives also sheds some light on the possible development of locative case systems. It is consensus that PFU had no distinction in localizers. Thus it only had a locative, a lative and a prolative. The elxaborated case systems of some Uralic languages has developed only later. [9] follows Korhonen in assuming that iconicity (= explicitly differentiated local functions) was not present in PFU. The interesting problem to solve here is how the diversity of localizers got introduced, since morphologically they have priority over the modalizers. It is more or less clear how it happend in Hungarian: the new system simply superseded the old one. The original marking eroded or got marginalized. However, mode marking was always present in the system, though it appeared elsewhere (in the postpositions) before it ended up in the case system.

Finnish however presents a problem. It is assumed that the suffixes for the modes derive from the PU/PFU period, which means that the localizer must have been introduced by infixation. [8] speaks in this connection of coaffixation, which basically explains the process as a move from an optional, possibly restricted localizing affix to an obligatory affix with an unrestricted domain. While this is not unplausible, there is a claim found in [8] and [9] that the inner Finnish and Saami locative cases contain an element that was originally a lative element (case marker?), namely *s. But according to our analysis we must expect the inner element to be a localizer rather than a modalizer. The only plausible analysis is therefore that *s first lost its directional character, and became a localizer of some sort. Only after that was it possible to use *s before a mode. Thus *s had become the analogue of the FP locative suffix *l for the outer cases. Therefore, what we conclude is that when the localizing coaffixes/infixes got introduced, they must already have had a purely localizing character. We note here that in English there is an interesting parallel loss of distinction between static and cofinal mode. German local prepositions use the distinction between accusative and dative to encode the distinction between cofinal and static mode. English, in contrast to German, has completely lost the distinction between these two cases, and thereby also lost the distinction between cofinal and static mode in many constructions (compare the prepositions under, near, next to with in/into and at/to). (See [2] for the ensuing polysemy in these prepositions.)

Non–Spatial Use of Locatives. One should be aware of the fact that locative cases can be used also with non–spatial meaning. We have noted above examples of local cases being selected by verbs. Here we shall note a few cases of different nouns controlling a non–spatial meaning. The obvious examples are provided by abstract entities, such as school and peace. To go to school as an institution is a different notion as going to the school building, and the difference shows up typically in a restricted set of localizers being available. You have to say Jussi käy kouluun 'Jussi goes to school', you cannot say (in connection with the abstract meaning) *Jussi käy koululle — as you do in fact in English. In [5] we have noted that the less straightforward it is to define a parametrized neighbourhood from the denotation of the noun the more standardized the localizer tends to be. Further evidence is provided by temporal expressions. Given a time denoting epression, it is hard to make a difference between IN, AT and ON (not to mention the modes, which are already without function here). The following table demonstrates of the choice of localizers, with no obvious difference in meaning. (There are also some adverbs, such as Hungarian reggel 'in the morning', which further complicate the matter.) The range is IN and AT as well as essive in Finnish, IN and ON in Hungarian and English.

(6)

Finnish	Hungarian	English
tammikuussa	januárban	in January
tiistaina	kedden	on Monday
aamulla	reggel	in the morning
täällä viikolla	ezzen a héten	this week

Postscript. The present version of this paper is a revision of an original paper that appeared in print in the Proceedings of the IX. Congress of Finno–Urgists in Tartu, 2000. Several facts have necessitated a revision of that paper. The paper is based on [5], which has now been replaced by [6]. The changes between these two versions are significant, so that reference is made only to the Potsdam version, for clarity. Moreover, the published version of this paper suffered from some insufficiencies, which have now hopefully been removed. Special thanks to the audience of the IX. Congress of Finno–Ugrists for inspiring discussion.

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