

Why do we need both external and internal local case forms for the Finnish gram *sisä*- 'in'?

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Finnish grams and their case marking

- Many Finnish grams have a historical background as nouns, and they are inflected in the locative cases.
- As adpositions, they often take their complement in the genitive case, reflecting the history of the complement as a genitive modifier.

- The development *noun* > *adposition* can still be seen in the usage of many grams, e.g. *pää* 'head; end':

1) *Liisa+n pää+ssä on haava.*
Name+GEN head+INE is wound.
'Liisa has a wound in her head.'

2) *Radio+n pää+llä on lamppu.*
radio+GEN on+ADE is lamp
'There is a lamp on top of the radio'.

The Finnish local case system: General features

- The Finnish local case system consists of 8 cases that form 3 series: 1) the external, 2) the internal, and 3) the general cases.
- In each series there is one lative, one locative, and one separative case (with the exception of a missing general separative case).

	LAT	LOC	SEP
INT	Illative	Inessive	Elative
EXT	Allative	Adessive	Ablative
GEN	Translative	Essive	-

E.g., *laatikko+on* (ILL) 'into the box'
laatikko+ssa (INE) 'in the box'
laatikko+sta (ELA) 'out of the box'
laatikko+lle (ALL) 'to/onto the box'
laatikko+lla (ADE) 'at/on the box'
laatikko+lta (ABL) 'off/away from the box'
laatikko+ksi (TRA) '(become) a box'
laatikko+na (ESS) 'as a box'

- The system is based on two oppositions: the opposition of quality (internal vs. external vs. general cases) and the opposition of directionality (lative vs. locative vs. stative cases).
- The system of oppositions works best in the spatial domain but is less functional in other semantic domains indicated by the cases, e.g. temporal, possessive and circumstantial.
- How does it work in adpositions?
→ A case study: the gram *sisä*- 'in'.

- Most grams have an incomplete case paradigm where only some but not all case forms are in use.
- The incompleteness of the case paradigm typically concerns the opposition of quality: e.g., a gram may only be inflected in internal but not external cases (or vice versa).
- In contrast, the opposition of directionality is usually functional in the inflection of grams: the grams have lative, locative and separative case forms.
- Directionality thus seems to be a more pervasive feature in the case inflection of grams than quality.

The case forms of *sisä*- 'in'.

- However, the gram *sisä*- 'in' has a full paradigm in both the external and the internal cases:

sisä+än [ILL] 'into'
sisä+ssä [INE] 'in'
sisä+stä [ELA] 'out of'
sisä+lle [ALL] 'into'
sisä+llä [ADE] 'in'
sisä+ltä [ABL] 'out of'

The goals of the present talk

- To look at the division of labor between the gram *sisä* 'in' and the internal local cases: what are the grams needed for in the first place?
- To analyze the case oppositions that are at work in the inflection of grams: What is the function of the opposition of quality in these grams? Are the forms synonymous?

Problems:

- Why do we need *external* case forms of a gram that that indicates an *internal* relationship (containment)? Isn't there a conflict between such meanings?
- On the other hand, we can also ask why do we need *internal* case forms of a gram that already indicates internal relations? (I.e., what is the function of the case ending?)
- Why do we have this gram in the first place when the internal cases are already there to indicate relationships of containment?

The opposition between the gram and the internal cases

- The internal cases are more polysemous than the gram, which indicates more strictly containment (Ojutkangas 2008)
- E.g., the internal cases are able to indicate a relationship of attachment of the TR to the surface of the LM, whereas *sisä*- indicates a relationship of containment.

3) Tarra on puskuri+ssa.
 sticker is bumper+INE
 'The sticker is on the bumper'.

4) Tarra on puskuri+n sisä+llä.
 sticker is bumper+GEN in+ADE
 'The sticker is inside the bumper'.

- The containment indicated by the internal cases is sometimes containment in a looser sense than that indicated by *sisä*-.

5) Häne+llä on tupakka suu+ssa.
 s/he+ADE is cigarette mouth+INE
 'S/he has a cigarette in her/his mouth'.

6) Häne+llä on tupakka suu+n
 s/he+ADE is cigarette mouth+GEN
 sisä+llä.
 in+ADE
 'She has a cigarette inside his/her mouth'.

The opposition between internal vs. external case forms of *sisä*-

- The received view in Finnish linguistics suggests that the case opposition between internal and external cases is neutralized in many grams (ISK 2004: 1173), including *sisä*-, i.e. that the forms are synonymous.

7) Hän on talo+n sisä+llä ~ sisä+ssä.
 s/he is house+GEN in+ADE~INE
 'S/he is inside the house'.

Text frequencies of the cases

- In written Finnish, the text frequencies of actual (internal / external) local cases are as follows (per cent of nouns carrying a case marking):
 - illative 'into' 6,1 %
 - inessive 'in' 5,8 %
 - elative 'from (in)' 4,0 %
 - allative 'onto, to-at' 2,2 %
 - adessive 'on, at' 4,0 %
 - ablative 'from-at, off' 1,0 %

- The internal cases are more frequent than the external cases, with the exception of the adessive whose high frequency can probably be explained by its use in the canonical possessive construction.
- One can also see that the separative 'from' cases (elative and ablative) are less frequent than the corresponding lative (illative, allative) and locative (inessive, adessive) cases.

Frequencies of the forms of the gram

- In actual usage (Google search), the internal vs. external case forms form a mixed paradigm. The lative meaning is most frequently indicated by the internal illative *sisään*, though the external allative *sisälle* is also quite productive, whereas the locative and separative meanings are predominantly indicated by the external case forms:

Frequencies of the different case forms of *sisä*- in the Internet (Google)

	LAT	LOC	SEP
INT Illative		Inessive	Elative
	11 200 000	48 200	38 500
EXT Allative		Adessive	Ablative
	598 000	3 490 000	505 000

- Compared with the general frequencies of the local cases, we observe
 - A very strong preference lative > locative > separative, i.e. the gram *sisä-* expresses the lative meaning approximately 3 times more frequently than the locative meaning, and the locative meaning approximately 6 times more frequently than the separative meaning.
 - A mixed paradigm where the internal illative is the most frequent expression of the lative meaning but the external adessive and ablative are the most frequent expressions of the locative and separative meanings.

Semantic oppositions?

- A closer look reveals that the internal and external case forms of *sisä-* are in fact **not** quite synonymous. In general, the external case forms are semantically compatible with a wider range of landmarks than the internal case forms, with the exception of the internal illative *sisään*.
- To see the differences we need to consider LMs that are not canonical containers.

1. Two-dimensional bounded surfaces as landmarks

- If the LM is a two-dimensional surface with boundaries around it, then only the external but not the internal case forms are natural:

8) Pelaaj+i+en on pysy+ttävä
 player+PL+GEN is stay+PASS.PRTC

kentä+n sisä+llä ~ ??sisä+ssä
 field+GEN in+ADE~ ??INE
 'The players must stay within the field'.

9) Pelaaja+t ei+vät saa poistu+a
 player+PL NEG+3PL may leave+INF

kehän sisä+ltä ~ ??sisä+stä
 ring+GEN in+ABL~??ELA
 'The players may not leave the ring'.

10) Yleisö hurras+i pelaaj+i+en
 audience cheer+PST player+PL+GEN

ehti+e+ssä kentä+n sisä+lle ~ ??sisä+än
 reach+INF+INE field+GEN in+ALL~ ??ILL
 'The audience was cheering when the players reached the field'.

2. Channel / doorway / boundary LMs

- The opposition is clearest when the LM is a channel or a route used by the TR to enter a bounded space; in such instances the internal case forms are not possible at all.

11) Porti+n sisä+llä ~ *sisä+ssä on museo
 gate+GEN in+ADE~ *INE is museum.
 'There is a museum inside the gate'.

12) Laste+n on ol+ta+va ov+i+en
 child+PL be be+PASS.PRTC door+PL+GEN

sisä+llä ~ *sisä+ssä ennen pimeä+ä.
 in+ADE~*INE before dark+PAR
 'The children must be indoors before dark'.

- In such contexts the internal case forms of *sisä-* would indicate a relationship between the TR and the LM entity itself (not an area reached through the LM).
- The same meaning opposition arises when the LM is a wall, fence or other boundary surrounding an area: the external case variants indicate the presence of the TR within the area surrounded by the LM, whereas the internal cases indicate the TR's presence in the LM itself.

13) Linnu+t ovat pensasaida+n sisä+ssä.
 bird+PL are hedge+GEN in+INE
 'The birds are inside the hedge' (i.e. sitting in the hedge).

14) Linnu+t ovat pensasaida+n sisä+llä.
 bird+PL are hedge+GEN in+ADE
 'The birds are inside (the area surrounded by) the hedge'.

3. Sphere-like LMs

- The internal case forms are also less natural with sphere-like LMs, such as the atmosphere, the solar system, or a magnetic field. Although these are three-dimensional LMs, their boundaries are fuzzy and they are not conventional containers.

13) Avaruusluotain on vielä aurinkokunna+n
 space.probe is still solar.system+GEN

sisä+llä ~ ??sisä+ssä.
 in+ADE ~ ??INE
 'The space probe is still inside the solar system'.

14) Kappale siirre+ttiin pois
 particle move+PASS.PST away

magneettikentä+n sisä+ltä ~ ??sisä+stä.
 magnetic.field+GEN in+ABL~ ??ELA
 'The particle was moved away from the magnetic field'.

4. Social groups as LMs

- A more abstract case in point are groups consisting e.g. of people or animals. With such LMs, the internal cases (except the productive illative) are again awkward.

15) Sukeltaja on nyt kalaparve+n
 diver is now school.of.fish+GEN
 sisä+llä ~ ?sisä+ssä.
 in+ADE~?INE
 'The diver is now in a/the school of fish'.

16) Hallitukse+n sisä+ltä ~ ?sisä+stä
 administration+GEN in+ABL~ ?ELA

asia+a ei ole kommentoi+tu.
 matter+PAR NEG be comment+PRTC
 'The matter has not been commented on from inside the administration'.

17) Poliisi ujutt+i ilmiantaja+n
 Police infiltrate+PST informer+ACC

liiga+n sisä+än ~ sisä+lle.
 ring+GEN in+ILL ~ ALL
 'The police infiltrated an informer into the crime ring'.

5. Container-like LMs with an open top

18) Osa kukkaruuku+i+sta roikku+i
 part flower.pot+PL+ELA hang+PST.3SG

kaitee+n yli, loput olivat
 balustrade+GEN over rest were

parvekkee+n sisä+llä ~ ?sisä+ssä.
 balcony+GEN in+ADE ~ ?in+INE

'Part of the flower pots were hanging over the balustrade, the rest were inside the balcony'.

Conclusions

- The differences demonstrate that the internal vs. external cases of the gram *sisä-* are not synonymous, though the semantic opposition between the cases is more vague than in noun inflection.
- This suggests that not only directionality but also quality (internal vs. external) is relevant in the case inflection of *sisä-*.

- A general tendency is that the internal case forms of *sisä-* indicate strictly containment within the LM. The search domain of the internal case forms is thus the space actually inside the LM.
- The external forms, in contrast, are more flexible and able to indicate the TR's presence in a search domain that is not, in the strictest sense, the *inside* of the LM, e.g., a bounded surface, an area surrounded by the actual LM, a spherical space with no clear boundaries, or a social group.

- The differences reflect the general meaning opposition between internal vs. external cases though in an idiomatic way:
 - the internal case forms indicate canonical containment within a three-dimensional space inside the LM entity itself.
 - the external case forms also indicate relations where the TR is situated within a space contained / surrounded / supported by the LM, i.e. outside the LM entity itself but inside a search domain contained by the LM.

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