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The expression of spatial relations in Uralic languages

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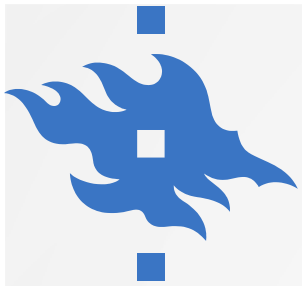
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■ THE EXPRESSION OF SPATIAL RELATIONS IN URALIC LANGUAGES

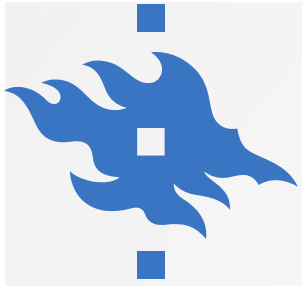
Riku Erkkilä

University of Helsinki / Descriptive grammar of Mordvin project



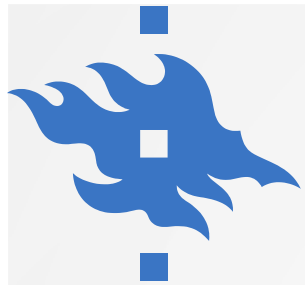
BACKGROUND

- Generally, Uralic languages have three systems of spatial relators
 - Spatial cases
 - Relational nouns, that can take spatial cases (traditionally called postpositions and adverbs)
 - "True" postpositions and adverbs, that do not inflect
- The variation in spatial expressions has been studied in e. g. Levinson (2003), and Levinson & Wilkins (eds.) (2006)
 - Levinson (2003) has concluded, that usually cases express topological relations and adpositions express frame of reference when both are used in a language
- Klavan et. al. (2011) have studied the variation between Estonian adessive case and the relational noun *peal* 'on, above' depends on the prototypicality of the relation between Trajector and Landmark
 - In prototypical relations the adessive tends to be used, in non-prototypical relations the postposition is preferred



BACKGROUND (CONT.)

- Ojutkangas (2005, 2008, 2012) has studied the spatial expressions in Finnish
 - Ojutkangas (2005) shows that there is overlap between topological and frame of reference information in the relational nouns of Finnish
 - Ojutkangas (2008) shows that the variation in the use of inessive case and relational noun *sisä*- 'in' can be explained with the focusing of active zone
 - Ojutkangas (2012) shows that the use of Finnish relational noun *ulko*- 'out' can best be explained by the phenomenon of windowing of attention
- The aim of this paper is to investigate, whether the results presented above also apply to other Uralic languages
 - Is there a correlation on the one hand between cases and topological relations, and on the other between postpositions (relational nouns) and expressions frame of reference
 - Can (some of) the variation be explained with the concepts of active zone and windowing of attention, and does the prototypicality of the relation between Trajector and Landmark affect the variation



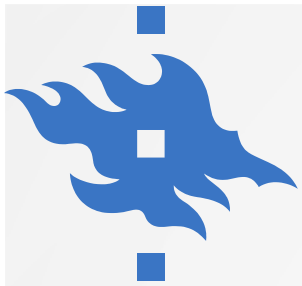
LANGUAGES

- Mordvin languages (Erzya and Moksha)
 - 5 productive spatial cases
 - Some relational nouns take unproductive spatial cases

	[-GOAL]	[+GOAL]
[-SOURCE]	Inessive (Locative)	Illative/Lative
[+SOURCE]	Elative (Ablative)	Prolative

- Permic languages (Udmurt and Komi)
 - 7 (Udmurt) or 8 (Komi) productive spatial cases

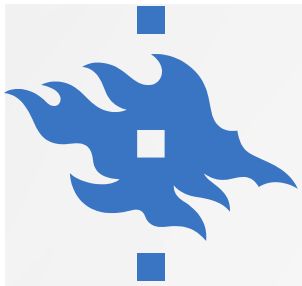
	[-GOAL]	[+GOAL]	[+TARGET]
[-SOURCE]	Inessive	Illative	Terminative/ Approximative
[+SOURCE]	Elative	Prolative/ Transitive (in Komi)	Egressive



THE DATA

- Relational nouns coding 6 basic relations ('above', 'below', 'front', 'back', 'in', 'out')
 - In Mordvin languages 8 relational nouns
 - In Udmurt 7 relational nouns
 - In Komi 6 relational nouns
- 4 cases of each relational noun (LOCATION, SOURCE, GOAL, PATH)

	Total (Adv)	'above' (PP/Adv)	'top'	'below'	'front'	'back'	'in'	'out'
Erzya	297 (103)	67 (35/32)	36	39	35	40	40	40
Moksha	271 (93)	63 (39/24)	34	37	31	36	38	32
Udmurt	410 (34)	26	77	74	64	64	80	25
Komi	161 (65)	-	36	32	36	23	40	40



TOPOLOGICAL INFORMATION

- Topological information can be expressed both by a spatial case (1) or a postpositional relational noun (2)
- Adverbial relational nouns can't express topological information

(1) Erzya (MokshEr-V.3/V.2 additions/Erzya/Syatko-2008_12_111-113.txt)

Тень кис Московонь эрва лавкасонть микшневьсь сынст якстере винаст – «Бика вер».

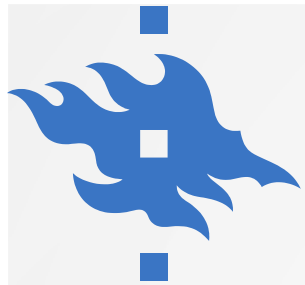
Te-nʲ *kis* *Moskovo-nʲ* *erʲva* *lavka-sonʲ* *mi-kšnʲe-v-sʲ*

DMST-GEN because Moscow-GEN every shop-INE.DEF sell-FRE-PASS-PST1.3SG

sinst *jaksʲtʲerʲe* *vina-st* – “Bika ver”.

3PL.GEN red liquor-POSS.3PL Bika ver

‘Because of this they used to sell them red liquor, called Bika ver, in every shop in Moscow.’



TOPOLOGICAL INFORMATION (CONT.)

(2) Erzya (MokshEr-V.3/V.1/Erzya/Syatko/3-2003/6.txt)

(...) китне вельтязь асфальтсо, кудотнень икельга – пирявкскеть, тротуарт.

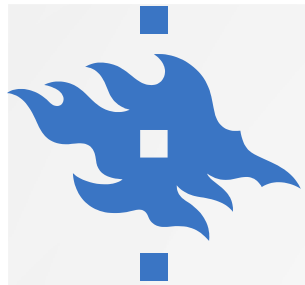
ki-tⁿie *vel^ʃt^a-z^ʃ* *asfal^ʃt-so,* *kudo-tⁿenⁱ*
road-NOM.PL.DEF cover-PST.PTCP asphalt-INE house-GEN.PL.DEF

ikel^ʃ-ga – *pir^ʃavks-ke-t^ʃ,* *trotuar-t.*

front-PROL fence-DIM-NOM.PL sidewalk-NOM.PL

‘(...) the roads have been covered with asphalt, in front of the houses – yards, sidewalks.’

- In Mordvin languages the relational nouns E *vel^ʃks-* M *vel^ʃks-* ‘above[PP]’, E M *lang-* ‘top’, E M *al-* ‘below’ E *ikel^ʃ-* M *ingə^ʃ-* ‘front’, E *udal-* M *ftal-* ‘back’, E *pot-* M *potmə-* ‘in’ can express topological information
- In Permic languages the relational nouns U *vaj^s-* ‘above’, U K *vil-* ‘top’, U K *ul-* ‘below’, U *až-* K *vodž-* ‘front’, U *šər-* K *bər-* ‘back’, U *pufk-* K *pit^ʃk-* ‘in’ can express topological information



FRAME OF REFERENCE

- Both postpositional (3) and adverbial (4) relational nouns can express frame of reference
- Spatial cases do not express frame of reference

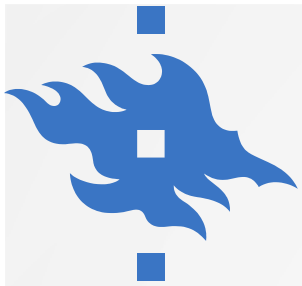
(3) Коми (Кытӧн Коля гудӧкасьӧ / Юшков Г. А. // Би кинь (2007. №9)/Komicorpora)

Нӧрыс улын, кытӧн шор, Саӧсь пывсян, изъя гор.

Nəris ul-in, kitən šor, Saə pivean, iz-ja gor.

highland under-INE INDF creek soot sauna stone-ADJ stove

‘Below the highland, where there is a creek, (there is) a smoke sauna (and/with) a stone stove.’



FRAME OF REFERENCE (CONT.)

(4) Moksha (MokshEr-V.3/V.1/Moksha/Moksha/2002/14.txt)

Штурмовикнень эзда сядя вьре и аф ламода ширеса шарсть-пульхксть истребительхне (...)

sturmovik-n'ən' ez-da s'ada væɾj-æ i af lamə-da fir'ə-sa

sturmovik-GEN.PL.DEF POSTP-PART CMP above-LOC and NEG much-PART side-INE

ʃarʲ-s'ʲ_puɫk-s'ʲ iʃt'r'abitəɫ-n'ə

circle-PST1.3PL_hurry-PST1.3SG fighter-NOM.PL.DEF

'Above (from) and not much to the side of the Sturmoviks the fighters were circling (and) hurrying (...)'

- In Mordvin languages the relational nouns E *veɫks-* M *veɫks-* 'above[PP]', E *verj-* M *væɾj-* 'above[ADV]', E M *al-* 'below' E *ikeɫj-* M *ingəɫj-* 'front', E *udal-* M *ftal-* 'back' can express frame of reference
- In Permic languages the relational nouns U *vajs-* 'above', U K *vil-* 'top', U K *ul-* 'below', U *aʒ-* K *vodʒ-* 'front', U *ɕər-* K *bər-* 'back' can express frame of reference



ACTIVE ZONE

- Postpositional relational nouns can focus the active zone of the landmark in comparison to the spatial cases
 - This seem to be the case when the relation coded by the case coincide with the semantic content of the relational noun and the prototypical relation of Trajector and Landmark
- It could be argued that active zone is included in all relational nouns as a background element, but in cases like (5) focusing the active zone seems to be the primary function of the relational noun (compare (6))

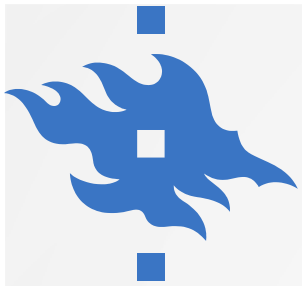
(5) Udmurt (Udmurt dunne 21.5.2013/Udmurt corpus)

Нылпиослы «Выжыкыл сюрес» малпамын, нюлэс пушкытй со ортче.

Nilpi-os-li "Vizikil eures" malpa-min, Jules pufki-ti so orttf-e.

child-NOM.PL-DAT fairytale road design-PST.PTCP forest in-PROL 3SG go-PRS.3SG

'A "Fairytale route" has been designed for the children, it goes through (along the inside of) a forest.'



ACTIVE ZONE (CONT.)

(6) Udmurt (muketulon.tumblr.com (Alina Krestyaninova 2014–2015)/Udmurt corpus)

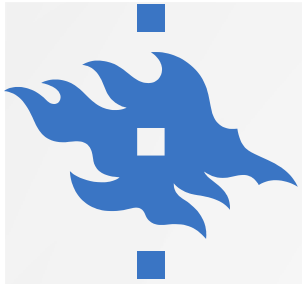
Огпол ѓм чидалэ но жыны нунал ветлім тулыс пушійсь нюлэстї (...)

Ogpol əm tʃida-le no dʒini nunal vetl-im tulʲs
once NEG.PST.1PL endure-CNG.PST and half day walk-PST1.1PL spring

pyʃ-iε nules-ti
sprout-PRS.PTCP forest-PROL

‘One time we could not stand (it) anymore and walked through the sprouting spring forest for half a day (...)’

- In Mordvin languages the relational nouns E M *lang-* ‘top’, E *pot-* M *potmə-* ‘in’ can focus the active zone of the landmark
- In Permic languages the relational nouns U K *vil-* ‘top’, U *ul-* ‘below’, U *puʃk-* K *pitʃk-* ‘in’ can focus the active zone of the landmark



WINDOWING OF ATTENTION

- Adverbially used relational nouns can be used to window the attention to certain part of the expressed situation
 - Especially SOURCE and GOAL cases, but LOCATION and PATH cases are also possible
- It could be argued that windowing is present in every expression, but only in situations like (7) and (8) the primary function of the relational noun is to express windowing

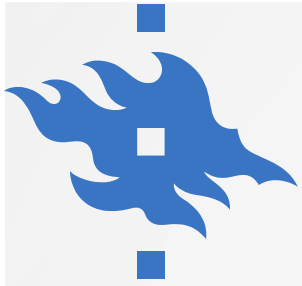
(7) Erzya (MokshEr-V.3/V.1/Erzya/Syatko/7-2003/1.txt)

Кардонтењ ушосто совась валдо.

Kardo-nⁱt^enⁱ ufo-sto sova-sⁱ valdo.

barn-DAT.DEF out-ELA enter-PST1.3SG light

‘Light came in(to) the barn from outside.’



WINDOWING OF ATTENTION (CONT.)

(8) Коми ("Олан гуйвизьыс Нина..." / Kodko // Би кинь (2010. №2)/Komicorpora)

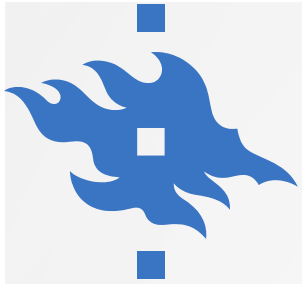
(...) о́ни на пыр дась видзодлыны водзти аддзывлытөм муяс.

əni na pir daɕ vidzəd-li-ni vodz-ti addziv-li-təm mu-jas.

now yet all ready look-CONT-INF front-PROL see-CONT-CAR.PTCP field-NOM.PL

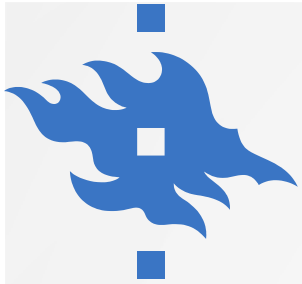
'(...) and now everyone is ready to look at the invisible fields in the front.'

- It seems that all adverbially used relational nouns can express primarily windowing



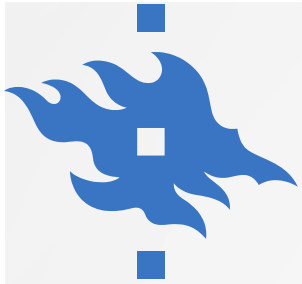
OVERLAPS

- As the same relational nouns ('above', 'below', 'front', 'back') can be used to express topological information and frame of reference both of these concepts are present in every expression that code them
 - Which concept is foregrounded seem to depend on the physical or functional closeness of Trajectory and Landmark (Ojutkangas (2005) has shown this with the relational nouns coding vertical axis in Finnish)
 - Topological information is foregrounded when the relation is close, frame of reference is foregrounded when the relation is distant
- Focus on active zone and windowing are always present, but only in special situations they are foregrounded



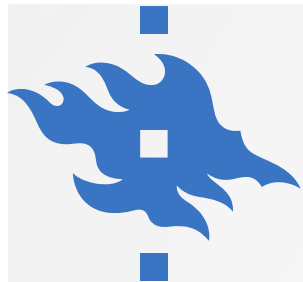
CONCLUSION

- The results of Ojutkangas (2005, 2008, 2012) get confirmation
 - There is overlap in expressing topological information and frame of reference in Mordvin and Permic languages
 - The variation of inessive case and relational noun 'in' can partly be explained by the focusing of the active zone in Mordvin and Permic languages
 - Same applies to relational noun 'top' in Mordvin and Permic languages and 'under' in Udmurt
 - The use of the relational noun 'out', can be expressed by windowing of attention
 - This applies to most of the adverbial relational nouns in the data
- The result of Klavan et. al. (2011) get (partial) confirmation
 - Cases seem to be used when expressing prototypical relations between Trajector and Landmark, but focusing of attention can be done with relational nouns in the same situations



CONCLUSION (CONT.)

- The results of Levinson (2003) and Levinson & Wilkins (2006) seem to be contradicted
 - Every "postposition" in the data can code topological information
 - However, this is actually an argument for analyzing the inflecting "postpositions" and "adverbs" of Mordvin and Permian (and probably other Uralic languages) as relational nouns, not postpositions and adverbs as has traditionally been done



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