

Structural Case on Adverbials

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Adverbial Case Marking

- (1) In several languages, certain non-argument adverbials can bear structural cases (NOM, ACC), e.g. Chinese (Li 1990) Finnish (Maling 1993, 2004, Kiparsky 2001), Korean (Wechsler and Lee 1996, Maling 2004, Kim and Sells 2006) Polish (Przepiórkowski 1999), Russian (Pereltsvaig 2000), and Warumungu (Simpson 1991)
- (2) This applies especially to adverbs of duration (e.g. 'sleep the whole day'), measure ('walk a mile'), frequency ('read once'), etc.

A rationale for case assignment (see e.g. de Hoop and Malchukov 2007)

- THE DISTINGUISHING FUNCTION: Cases distinguish arguments.
- THE CORRESPONDING FUNCTION: Cases encode semantic and pragmatic properties of arguments.

Goals of this talk: Based on the above rationale

- 1 Derive the basic case patterns of Finnish and Korean.
- 2 Derive the Case Tier Hypothesis (Zaenen, Maling, and Thráinsson 1985).
- 3 Identify and explain variable patterns.
- 4 Derive a typology of case assignment using OT tools.

The Case Tier Hypothesis (see e.g. Maling 1993:50)

- The grammatical function hierarchy: SUBJ \succ OBJ \succ ADV
- The highest available function is assigned NOM, the next highest ACC.

What the hypothesis predicts for Finnish

- (3) Esa nukku-i
Esa.NOM sleep-PAST
Esa slept.
- (4) Osta kirja
buy.IMP book.NOM
Buy a book!
- (5) Kirja oste-ttiin
book.NOM buy-PAST.PASS
The book was bought.
- (6) Esa osti kirja-n
Esa.NOM buy-PAST book-ACC
Esa bought a book.

What the hypothesis predicts for Finnish

- (7) Nuku tunti
 sleep.IMP hour.NOM
 Sleep an hour!
- (8) Esa nukku-i tunni-n.
 Esa.NOM sleep-PAST hour.ACC
 Esa slept an hour.
- (9) Esa luk-i kirja-n kerra-n.
 Esa.NOM read-PAST book-ACC once-ACC
 Esa read the book once.
- (10) Lue kirja kerra-n.
 read-IMP book.NOM once-ACC
 Read the book once!

What the hypothesis predicts for Finnish

- (11) Esa-lla ol-i kirja viiko-n.
Esa-ADE have-PAST book.NOM week-ACC
Esa had the book for a week.
- (12) Esa juoks-i kerra-n kilometri-n
Esa run-PAST once-ACC kilometer-ACC
'Esa ran a kilometer once.'

The Case Tier Hypothesis in Korean

- Maling, Jun and Kim 2001 (MJK):

(13) On a Duration/Frequency adverbial:

- a. ACC is the only possible case if the verb has an external argument;
- b. ACC and NOM are both possible if the verb has no external argument (underlyingly)

What the hypothesis predicts for Korean

- (14) a. John-i han sikan tongan-**i/ul* talli-ess-ta
 John-NOM one hour for-**NOM/ACC* run-PAST-DECL
 'John ran for an hour'
- b. pi-ka han sikan tongan-i/ul o-ass-ta
 rain-NOM one hour for-NOM/ACC come-PAST-DECL
 'It rained for one hour.'
- c. i pang-un nac tongan-i/**ul* etwup-ta
 this room-TOP day time for-NOM/**ACC* dark-DECL
 'This room is dark during the day time.'

Finnish impersonal passive

- In the impersonal passive, the adverbial sometimes appears in the nominative (but accusative seems possible):

(15) a. nii-tä polte-tt-i-in muutama vuosi.
 they-PAR burn-PASS-PAST-PASS a.few year.
 They [lights] were burning for a few years.

b. Tö-i-tä paine-ttiin koko päivä
 work-PL-PAR do-PASS whole day.NOM
 One was working the whole day.

c. Pushkin-in runo-j-a lausu-ttiin koko päivä
 Pushkin-ACC poem-PL-PAR recite-PASS.PAST whole day.NOM
 Pushkin's poems were being read the whole day.

d. Seokse-n anne-taan muhi-a muutama päivä
 mixture-ACC let-PASS ferment-INF a/few day.NOM
 (One should) let the mixture ferment a few days.

Impersonal passives: Accusative (but Nominative seems possible)

- (16) a. Kirkonkello-j-a soite-ttiin koko päivä-n.
 church.bell-PL-PAR toll-PASS.PAST whole day-ACC
 The church bells were tolling the whole day.
- b. hei-lle makse-taan palkka-a koko vuode-n.
 they-ALL pay-PASS.PRES salary-PAR whole year-ACC
 They were paid salary the whole year.
- c. Divaripallo-a näh-dään vielä kerra-n tänä vuonna.
 division.football see-PASS still time-ACC this year
 One can watch division football once more this year.
- d. Neuvottelu-j-a jatke-ttiin koko päivä-n
 negotiation-PL-PAR continue-PASS.PAST whole day-ACC
 The negotiations continued the whole day.

Variation within a sentence (*Aamulehti* 1999):

- (17) Työ-tä on teht-ä-vä koko aja-n, ei vain muutama vuosi.
 time-ACC a.few year.NOM
 ‘One must work all the time, not just a few years.’

Verbs that allow variation

- (18) Verbs that allow variable case marking: *poltta-* 'cause to burn', *paina-* 'push', *lausu-* 'recite', *anta-* 'allow', *soitta-* 'ring', *maksa-* 'pay', *nähdä-* 'see', *jatka-* 'continue'

Verbs that require accusative

- With experiencer verbs, e.g. *nukutta-* ‘feel sleepy’, *väsyttä-* ‘feel tired’, *inhotta-* ‘feel disgusted’, etc., the experiencer is in the partitive and the adverbial is invariably in the accusative.

(19) Minu-a nuku-tt-i koko päivä-n (*päivä)
 I-PAR sleep-CAUS-PAST whole day-ACC (*day-NOM)
 I was sleepy the whole day.

Verbs that require nominative

- Invariant nominative with verbs like *on aikaa* 'there's time', *men-* 'go, take', *ol-* 'be', *kulu-* 'last'.

- (20) a. Siihen on aika-a enää muutama päivä.
 it.ILL is time-PAR only a.few.NOM day.NOM
 'It is only a few days away.'
- b. Siihen men-i muutama päivä.
 it.ILL go-PAST a.few.NOM day.NOM
 'It took a few days.'
- c. Siivous-tö-i-ssä kulu-i muutama päivä.
 cleaning-work-PL-INE take-PAST a.few.NOM day.NOM
 'Cleaning took a few days.'

Case alternations

- Many unaccusative verbs allow either NOM or ACC on a D/F adverb:

- (21) a. pi-ka twu sikan-i/ul o-ass-ta
 rain-NOM two hours-NOM/ACC come-PAST-DECL
 'It rained for two hours.'
- b. hay-ka twu sikan-i/ul pichi-ess-ta
 sun two hours-NOM/ACC shine-PAST-DECL
 'The sun shone for two hours.'

Case alternations

- Some predicates, such as 'melt' (intransitive) or *iss-* 'be', are usually taken to be canonical unaccusatives, yet 'melt' in Korean favors accusative on an adverbial modifier (cf. Kim and Sells 2006)

- (22) a. ku elum cokak-i han sikan-??i/ul nok-ass-ta
 that ice piece-NOM one hour-?NOM/ACC melt-PAST-DECL
 'That piece of ice melted for one hour.'
- b. noyey.tul-i ku sem-ey ipayk nyen kan-??i/ul iss-ess-ta
 slaves-NOM the island-LOC 200 years period-NOM/ACC exist-PAST
 'Slaves were on the island for 200 years.'
- c. Rice-nun Seoul-ey halwu tongan-*i/ul iss-ess-ta
 Rice-TOP Seoul-LOC one day for-*NOM/ACC exist-PAST-DECL
 'Rice stayed in Seoul for one day.'

The role of animacy and agentivity

- If the predicate has an animate subject, adverbial case marking is almost always accusative, regardless of the basic meaning of the predicate (cf. Kim and Sells 2006).

- (23) a. haksayng-tul-i twu pen-^{*}?i/ul o-ass-ta
 student-PLU-NOM two times-^{*}?NOM/ACC come-PAST-DECL
 'Students came (here and left) twice.'
- b. yecin-i twu pen-i/^{*}ul o-ass-ta
 aftershock-NOM two times-NOM/^{*}ACC come-PAST-DECL
 'Aftershocks came twice.'
- c. pesu-ka achim-ey twu pen-i/?ul
 bus-NOM morning-LOC two times-NOM/?ACC
 o-ass-ta
 come-PAST-DECL
 'Buses came twice in the morning.'

The role of animacy and agentivity

- MJK also list the ‘semantically passive’ predicates *pat-ta* ‘receive’, *tangha-ta* ‘undergo’, *mac-ta* (lit.) ‘be hit’. These verbs all have animate subjects, leading us to expect that they will take accusative adverbials.

(24) John-i sang-ul yelepen-*i/ul
 John-NOM award-ACC several.times-*NOM/ACC
 pat-ass-ta
 receive-PAST-DECL
 ‘John received awards several times.’

(25) John-un sensayngnim-kkey sey pen-*i/ul
 John-TOP teacher-DAT(HON) three times-*NOM/ACC
 yatan mac-ass-ta
 be.scolded-PAST-DECL
 ‘John was scolded by the teacher three times.’

The role of eventuality

- Animacy alone cannot license accusative if the predicate is stative. Intuitively, (26) describes a non-temporary property of the runner while (27) describes something about what the runner was doing.

(26) ku malathonsenswu-nun chopan tongan-i/*ul
 the marathoner-TOP first.half for-NOM/ACC
 ppal-ass-ta.
 fast-PAST-DECL
 'The marathoner was fast in the first half.'

(27) ku malathon-senswu-nun chopan tongan-*i/ul ppalli
 the marathoner-TOP first.half for-NOM/ACC fast
 talli-ess-ta.
 run-PAST-DECL
 'The marathoner ran fast in the first half.'

The role of eventuality

- The presence of accusative case on a D/F modifier correlates with a stage-level predication, while nominative correlates with an individual-level predication. That is, nominative will suggest a dispositional property of an individual, while accusative will bring out the stage-level behavior of stages of the individual. (cf. Kim and Sells 2006)

Representations

- (28) (a) SUBJECT (S) \succ OBJECT (O) \succ ADVERBIAL (A)
(b) EXTERNAL (E) \succ INTERNAL (I) \succ NONARGUMENT (X)

We will consider the following mappings:

- (a) S/E **Kim** runs.
 S/I **Kim** fell.
 S/X **It** is raining.
 O/I Read **the book!**
 A/X Sleep **an hour!**
- (b) S/E O/I **Kim** bought **a book**.
 S/E A/X **Kim** slept **an hour**.
 S/I A/X **Kim** fell **a mile** (e.g. in parachuting).
 S/I O/I **Kim** dislikes **Sandy**.
 O/I A/X Read **the book once!**
- (c) S/E O/I A/X **Kim** walked **Fido a mile**.
 S/E A/I O/I **Kim** gave **Sandy a book**.

The distinguishing function

OCP-CORE External and internal argument NPs differ in case.
OCP NPs differ in case.

The corresponding function

Constraints	
*MARKED-CASE/S	Subject is not case-marked
*MARKED-CASE/SO	Subject/Object is not case-marked
*MARKED-CASE/SOA	Subject/Object/Adverbial is not case-marked
*MARKED-CASE/E	External is not case-marked
*MARKED-CASE/EI	External/Internal is not case-marked
*MARKED-CASE/EIX	External/Internal/Non-Argument is not case-marked

Sample Tableau 1

- S/E can only have NOM, no matter how the constraints are ranked.

S/E	OCP-CORE	OCP	*MC/S	*MC/SO	*MC/SOA	*MC/E	*MC/EI	*MC/EIX
a. S/E								
b. S/E-ACC		*	*	*	*	*	*	*

Sample Tableau 2

- S/E-O/I can have NOM-NOM or NOM-ACC, depending on how the constraints are ranked.

S/E O/I	OCP-CORE	OCP	*MC/S	*MC/SO	*MC/SOA	*MC/E	*MC/EI	*MC/EIX
a. S/E O/I	*	*						
b. S/E O/I-ACC				*	*		*	*
c. S/E-ACC O/I			*	*	*	*	*	*
d. S/E-ACC O/I-ACC	*	*	*	**	**	*	**	**

Predictions: If the input only contains one NP

INPUT	OUTPUT		EXAMPLE	GLOSS
S/E:	NOM	F	Esa nukkui	'Esa slept'
		K	Esa-ka canta	
S/I:	NOM	F	Esa kaatui	'Esa fell'
		K	Esa-ka ossta	'Esa came'
O/I:	NOM	F	Osta kirja	'Buy a book!'
		K	*	
A/X:	NOM	F	Nuku tunti	'Sleep an hour!'
		K	*	

Predictions: If the input only contains two NPs

INPUT	OUTPUT		EXAMPLE AND GLOSS
S/E O/I:	NOM NOM	F	*
		K	*
	NOM ACC	F	Esa osti kirja-n 'Esa bought a book'
		K	Esa-ka chayk-ul ssassta 'Esa bought a book'
S/E A/X:	NOM NOM	F	*
		K	John-i han sikan-i tali-ko sipta (CP) 'John wants to run an hour'
	NOM ACC	F	Esa nukkui tunni-n 'Esa slept an hour'
		K	Esa-ka hansikan-ul cassta 'Esa slept an hour'

Predictions

S/I A/X:	NOM NOM	F	*
		K	pi-ka twu sikan-i naylessta 'It rained for two hours'
	NOM ACC	F	Minu-a nukutti päivä-n 'I was sleepy for a day'
		K	pi-ka twu sikan-ul naylessta 'It rained for two hours'
O/I A/X:	NOM NOM	F	*
		K	*
	NOM ACC	F	Lue kirja kerra-n 'Read the book once'
		K	*

Predictions

S/I O/I:		NOM NOM		F	*	
				K		Kim-i Sandy-ka silhta 'Kim dislikes Sandy'
		NOM ACC		F		Esa kaatui kerra-n 'Esa fell once'
				K	*	

Predictions

S/E O/I A/X:				
	NOM NOM NOM	F	*	
		K		John-i cacenke-ka han sikan-i tha-ko sipta (CF 'John would like to ride a bike an hour')
	NOM NOM ACC	F	??	
		K		John-i cacenke-ka han sikan-ul tha-ko sipta (C 'John would like to ride a bike an hour')
	NOM ACC ACC	F		Esa luki kirja-n kerra-n 'Esa read the book once'
		K		Esa-ka chayk-ul han sikan-ul ilkessta 'Esa read the book for an hour'
	ACC NOM NOM	F	*	
		K	*	

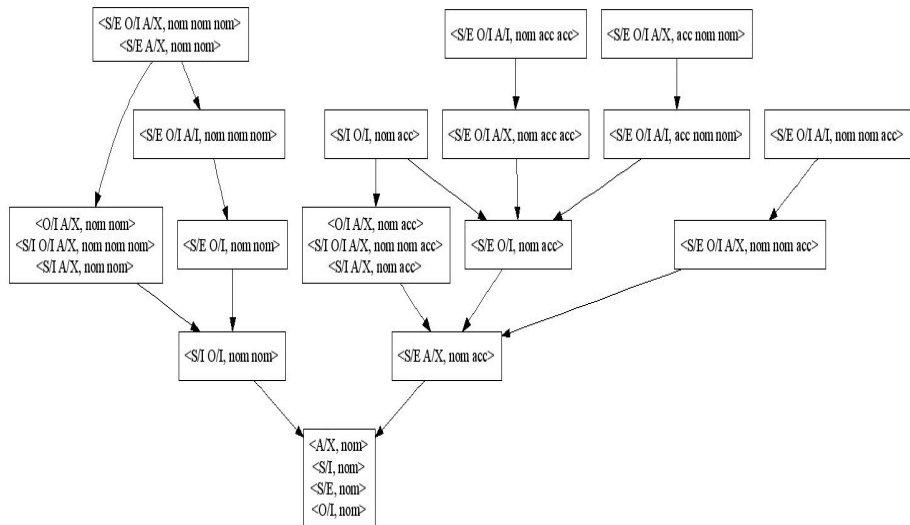
Predictions

S/E O/I A/I:	NOM NOM NOM	F	*
		K	*
	NOM NOM ACC	F	*
		K	*
	NOM ACC ACC	F	??
		K	Kim-i Mary-lul chayk-ul cwuessta 'Kim provided Mary with a book'
	F	*	
	K	*	
S/I O/I A/X:	NOM NOM NOM	F	*
		K	Kim-i Mary-ka han tal-i cohassta 'Kim liked Mary for a month'
	NOM NOM ACC	F	*
		K	*

Predictions

- (29) In addition to these $\langle \text{input}, \text{output} \rangle$ mappings, the theory predicts **implicational universals** among them.

146 implicational universals



Case shift: S/E-O/I → NOM-ACC

	S/E O/I	*MC/S	OCP	⋮
a.	S/E O/I		*	
b.	S/E O/I-ACC			
c.	S/E-ACC O/I	*!		
d.	S/E-ACC O/I-ACC		*	

Case shift: O/I-A/X → NOM-ACC

S/E O/I		*MC/S	OCP	*MC/SO	...
a.	O/I A/X		*!		
b.	O/I A/X-ACC				
c.	O/I-ACC A/X			*!	
d.	O/I-ACC A/X-ACC		*!		

Why variation in adverbials?

- (30) a. Runo-j-a lausu-ttiin koko päivä / koko päivä-n
 poem-PL-PAR recite-PASS.PAST whole day.NOM / whole day-ACC
 Poems were recited the whole day.
- b. Aamu-lla lausu-ttiin runo / *runo-n
 morning-ADE recite-PASS.PAST poem-NOM / poem-ACC
 'In the morning, a poem was recited.'

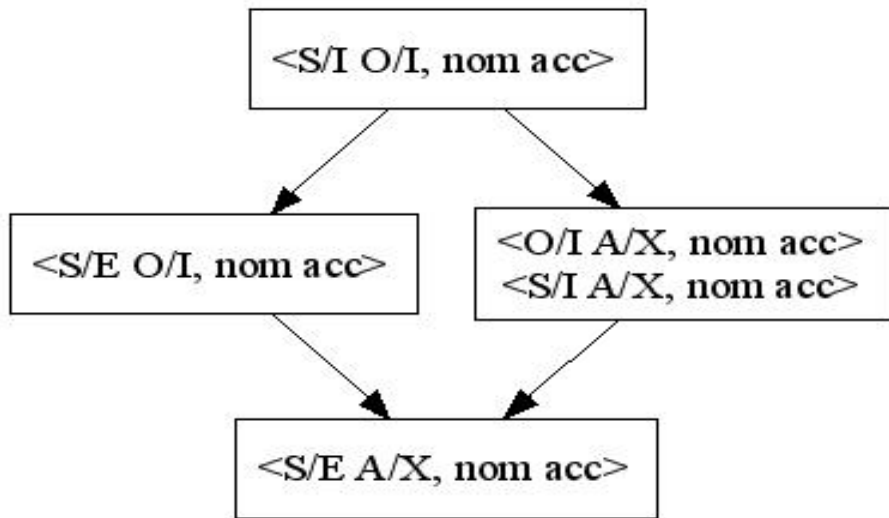
Why variation in adverbials?

- Answer: Because OBJ > ADV

This is predicted:

- S/E O/I-ACC implies S/E-A/X-ACC
- S/E A/X implies S/E O/I

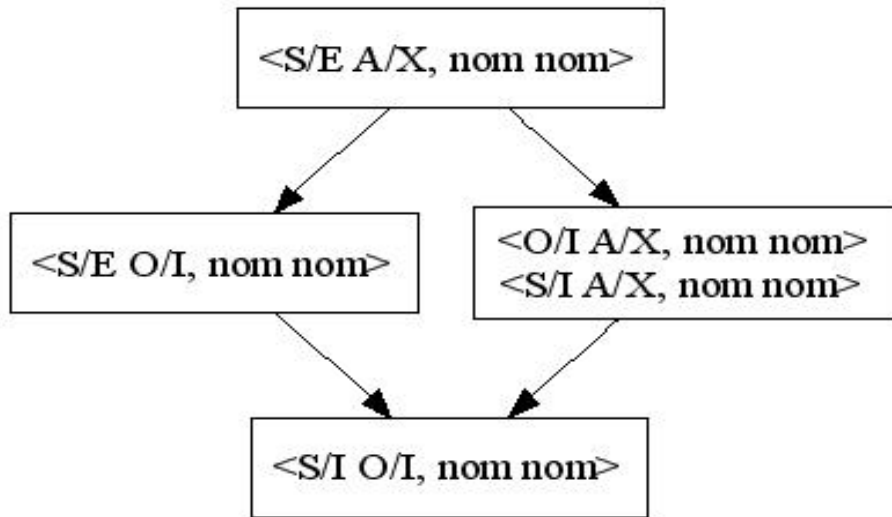
Implicational universals



Why is NOM NOM best with unaccusatives?

- Answer: S/I O/I is the least marked configuration for NOM NOM.

Implicational universals



Why is NOM NOM best with unaccusatives?

The intuitive reason is this:

- In S/I O/I, NOM NOM only violates OCP, and no other constraints.
- The closest competitor O/I A/X does better with NOM ACC.

Conclusions

- We have derived a case typology using OT and showed how it works in Finnish and Korean.
- In particular, we have derived the Case Tier Hypothesis.

Selected References

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