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# Pseudo-incorporation vs. Differential Argument Marking in Korean

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# The phenomenon

Optional case marking correlating with semantic effects is often analyzed as **pseudo-noun incorporation** (PNI), where a nominal forms a closer-than-usual relation with the verb (*Massam 2001*), or **differential object marking** (DOM), where the addition of a case marker signals more discourse prominence (*Bossong 1991, Aissen 2003*).

## (1) Turkish

(Öztürk 2005)

- a. Ali      **kitab**-I      da      okudu.

Ali.NOM book-ACC also read.

‘Ali also read the book.’

- b. Ali      **kitab**      da      okudu.

Ali.NOM book      also read.

‘Ali also did book reading.’

PNI/DOM

Case drop often correlates with:

- Size effect: usually only possible with indefinite, sometimes non-specific, noun types
- Obligatory low scope readings
- Loss of binding and control properties

# Subjects and objects can undergo PNI/DOM

Subjects and objects show optional case marking in Korean.

- (2) a. Ecey        Minswu-ka   **chinkwu** (-lul)        manna-ss-ta.        (*Ha. Lee 2011*)  
yesterday Minsoo-NOM friend-ACC        meet-PST-DECL  
'Minsoo met (his) friend yesterday.'
- b. **Beoseu** (-ga)        o-goiss-da.        (*Kwon and Zribi-Hertz 2008*)  
bus-NOM        come-PROG-DECL  
'There's a/the bus coming.'

Similar observations have been made for Turkish (*Kornfilt 2003, 2008, Öztürk 2009*).

We will henceforth talk about **differential argument marking** (DAM) when referring to the Korean data set.

# Size effect

Case drop often affects the least prominent noun type in PNI/DOM languages.

## (3) *Mongolian*

(Guntsetseg 2016)

- a. Bi **tuun** <sup>\*(-ig)</sup> / **Tuya** <sup>\*(-g)</sup> / **ene uul** <sup>\*(-ig)</sup> har-san.  
 I 3.ACC / Tuya-ACC / this mountain-ACC see-PST  
 'I saw her/Tuya/this mountain.'
- b. Delxij **nar** <sup>\*(-yg)</sup> tojr-dog.  
 earth sun-ACC circle-HAB  
 'The earth circles around the sun.'
- c. Xen neg n minij zugluulgan-aas **neg nom** <sup>\*(-yg)</sup> / **nom** <sup>\*(-yg)</sup> xulgajl-žee.  
 someone my collection-ABL a book-ACC/book-ACC steal-PST  
 'Someone stole a specific book / a non-specific book from my collection.'

## (4) *Definiteness scale*

(Silverstein 1976, Aissen 1999, 2003)

PRONOUN  $\succ$  PROPER NAME  $\succ$  DEF  $\succ$  DEM  $\succ$  INDEF SPEC  $\succ$  INDEF NON-SPEC

CASE  $\leftarrow \leftarrow$

$\Rightarrow \Rightarrow$  NO CASE

# Size effect in Korean (Ha. Lee 2006, 2008, Kwon and Zribi-Hertz 2006, 2008)

In Korean, significantly more noun types are affected by case drop.

- (5) a. **Ku<sup>??(-ka)</sup> / Kunye<sup>??(-ka)</sup>** wus-ess-e. *Korean*  
 he-NOM/she-NOM laugh-PST-INT  
 'She/he laughed.'
- b. ... Na-nun **yeca<sup>\*(-lul)</sup>** kuly-ess-e.  
 I-TOP woman-ACC paint-PST-INT  
 '(Context: I met a woman yesterday) ... I painted the woman.'
- c. Yusu-ka {i/ce **kkoch(-ul)**} / {**kkoch(-ul)** **twu-songi**} sa-ss-e.  
 Yusu-NOM this/that flower-ACC flower-ACC two-CL buy-PST-INT.  
 'Yusu bought {this/that flower} / {two flowers}.'
- d. Minho-ka **chayk(-ul)** ilk-nun-ta.  
 Minho-NOM book-ACC read-PRS-DECL  
 'Minho is reading a book (specific or non-specific).'

## (6) *Definiteness scale in Korean*

(3RD) PRONOUN > DEF > DEM > NUM-CL > INDEF SPEC > INDEF NON-SPEC

CASE ⇐⇐

⇒⇒ NO CASE

# Outline of the talk

Since there is more than one noun type which can show optional case marking, Korean provides a good case study to test for each noun type whether case loss always correlates with semantic effects.

- We investigated *demonstrative phrases*, *numeral classifier phrases*, and *indefinites* wrt. established PNI/DAM diagnostics:
  - 1 case loss correlating with obligatory low scope
  - 2 case loss correlating with lack of binding
  - 3 case loss correlating with lack of control
- Result:  
**Only indefinites show a correlation between case marking and scope/binding/control!**
- We argue for two conclusions one can draw from the Korean data:
  - 1 DP/NP approaches can account for the data set, in contrast to raising accounts.
  - 2 A post-syntactic case marking approach based on OT-rankings is needed; a syntactic case licensing account makes the wrong predictions.

# Data

# Size effect in Korean

- (7) a. **Ku** <sup>??(-ka)</sup> / **Kunye** <sup>??(-ka)</sup> wus-ess-e. *3rd pronoun*  
he-NOM/she-NOM laugh-PST-INT  
'She/he laughed.'
- b. ... Na-nun **yeca** <sup>\*(-lul)</sup> kuly-ess-e. *(anaphoric) definite*  
I-TOP woman-ACC paint-PST-INT  
'(Context: I met a woman yesterday) ... I painted the woman.'
- c. Yusu-ka **i/ce** **kkoch** <sup>(-ul)</sup> sa-ss-e. *demonstrative*  
Yusu-NOM this/that flower-ACC two-CL  
'Yusu bought this/that flower.'
- d. Yusu-ka **kkoch** <sup>(-ul)</sup> **twu-songi** sa-ss-e. *numeral classifier*  
Yusu-NOM flower-ACC two-CL buy-PST-INT.  
'Yusu bought two flowers.'
- e. Minho-ka **chayk** <sup>(-ul)</sup> ilk-nun-ta. *indefinite*  
Minho-NOM book-ACC read-PRS-DECL  
'Minho is reading a book (specific or non-specific).'



# Scope: indefinites (bare nouns)

Indefinites cannot receive a wide scope reading wrt. negation if they are not marked for case, see (9b). Similar interactions have been observed for *Spanish* (López 2012), *Turkish* (Kelepir 2001), *Kannada* (Lidz 2006), *Tatar* (Lyutikova and Pereltsvaig 2013), *Hindi* (Dayal 2011) etc.

## (8) Context $\neg\exists$ :

*Yusu's friend is selling flowers. Yusu looked at all of them but decided not to buy any.*

- a. **Kkoch** -ul<sub>1</sub> Yusu-ka    \_\_\_<sub>1</sub> sa-ci    anh-ass-ta. case  
flower-ACC   Yusu-NOM        buy-CI   NEG-PST-DECL  
'Yusu did not buy a flower.'
- b. **Kkoch**<sub>1</sub> Yusu-ka    \_\_\_<sub>1</sub> sa-ci    anh-ass-ta. no case  
flower   Yusu-NOM        buy-CI   NEG-PST-DECL  
'Yusu did not buy a flower.'

## (9) Context $\exists\neg$ :

*Yusu's friend has only a few flowers left to sell and he wants to sell everything by the end of the day. Yusu decides to buy some of them but not all. So there is at least one flower he did not buy.*

- a. **Kkoch** -ul<sub>1</sub> Yusu-ka    \_\_\_<sub>1</sub> sa-ci    anh-ass-ta. case  
flower-ACC   Yusu-NOM        buy-CI   NEG-PST-DECL  
'Yusu did not buy a flower.'
- b. #**Kkoch**<sub>1</sub> Yusu-ka    \_\_\_<sub>1</sub> sa-ci    anh-ass-ta. no case  
flower   Yusu-NOM        buy-CI   NEG-PST-DECL  
'Yusu did not buy a flower.'

# Scope: numeral classifiers

In contrast, case marking on numeral classifiers is not sensitive to wide scope contexts.

(10) Context 1↯:

*Yusu's friend wanted to sell three flowers and Yusu bought two from him. So there is one flower Yusu did not buy.*

- a. [Kkoch-**ul** han-songi]<sub>1</sub> Yusu-ka \_\_\_<sub>1</sub> sa-ci anh-ass-ta. case  
flower-ACC one-CL Yusu-NOM buy-CI NEG-PST-DECL  
'One flower, Yusu did not buy.'
- b. [Kkoch han-songi]<sub>1</sub> Yusu-ka \_\_\_<sub>1</sub> sa-ci anh-ass-ta. no case  
flower one-CL Yusu-NOM buy-CI NEG-PST-DECL  
'One flower, Yusu did not buy.'

(11) Context 1↯:

*Suzi was waiting at Mapo bus stop. On the other side, there were three buses waiting for the signal. As soon as the traffic light turned green, two buses came straight to the stop where Suzi was standing.*

- a. [Pesu-**ka** han-tay]<sub>1</sub> nollapkeyto \_\_\_<sub>1</sub> o-ci anh-ass-ta. case  
bus-NOM one-CL to my surprise come-CI NEG-PST-DECL  
'One bus, did not come.'
- b. [Pesu han-tay]<sub>1</sub> nollapkeyto \_\_\_<sub>1</sub> o-ci anh-ass-ta. no case  
bus one-CL to my surprise come-CI NEG-PST-DECL  
'One bus, did not come.'

(Demonstrative phrases cannot be tested for scopal effects.)

# Binding: indefinites

Korean indefinites without case marking cannot bind a pronoun.

(12) Bare nouns

- a. **Koyangi**-ka<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e. *case*  
cat-NOM                      3rd self-ACC    lick-PST-INT  
'A cat washed itself.'
- b. \***Koyangi**<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e. *no case*  
cat                      3rd self-ACC    lick-PST-INT  
'A cat washed itself.'

Similar effects have been observed for DOM in *Hindi* (Bhatt 2007), DOM in *Spanish* (Leonetti 2004, López 2012), and DAM in *Turkish* (Öztürk 2009).

# Binding: demonstratives and numeral classifiers

For demonstrative phrases and numeral classifiers, no such interactions are found.

## (13) Demonstratives

- a. [I koyangi (-ka)]<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
DEM cat-NOM 3SG self-ACC lick-PST-INT  
'This cat<sub>i</sub> washed itself<sub>i</sub>.'
- b. [Ce koyangi (-ka)]<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
DEM cat-NOM 3SG self-ACC lick-PST-INT  
'That cat<sub>i</sub> washed itself<sub>i</sub>.'

## (14) Numeral classifiers

- a. [Koyangi (-ka) han-mali]<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
cat-NOM one-CL 3SG self-ACC lick-PST-INT  
'One cat<sub>i</sub> washed itself<sub>i</sub>.'
- b. [Koyangi (-ka) twu-mali]<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
cat-NOM two-CL 3SG self-ACC lick-PST-INT  
'Two cats<sub>i</sub> washed themselves<sub>i</sub>.'

# Control: indefinites

Korean indefinites without case marking cannot control into a complement clause. Similar effects have been observed for DOM in *Hindi* (Bhatt 2007), DOM in *Spanish* (Leonetti 2004, López 2012), DAM in *Turkish* (Öztürk 2009), and DOM in *Tartar* (Lyutikova and Pereltsvaig 2013).

## (15) Object control for bare nouns

- a. Yusu-ka **haksayng**-ul<sub>1</sub> [PRO<sub>1</sub> ttena-la-ko] seltukhay-ss-e. case  
Yusu-NOM student-ACC leave-IMP-COMP persuade-PST-INT  
'Yusu persuaded a student to leave.'
- b. \*Yusu-ka **haksayng**<sub>1</sub> [PRO<sub>1</sub> ttena-la-ko] seltukhay-ss-e. no case  
Yusu-NOM student leave-IMP-COMP persuade-PST-INT  
'Yusu persuaded a student to leave.'

## (16) Subject control for bare nouns

- a. **Haksayng**-i<sub>1</sub> [PRO<sub>1</sub> ttena-keyss-ta-ko] kyelsimhay-ss-e case  
student-NOM leave-VOL-DECL-COMP decide-PST-INT  
'A student decided to leave.'
- b. \***Haksayng**<sub>1</sub> [PRO<sub>1</sub> ttena-keyss-ta-ko] kyelsimhay-ss-e no case  
student leave-VOL-DECL-COMP decide-PST-INT  
'A student decided to leave.'

# Control: demonstratives and numeral classifiers

For demonstrative phrases and numeral classifiers, no such interactions are found.

- (17) a. [I/ce **haksayng** (-i)]<sub>1</sub> [PRO<sub>1</sub> ttena-keyss-ta-ko] kyelsimhay-ss-e  
DEM student-NOM leave-VOL-DECL-COMP decide-PST-INT  
'This student decided to leave.'
- b. [**Haksayng** (-i) **han-myeng**]<sub>1</sub> [PRO<sub>1</sub> ttena-keyss-ta-ko]  
student-NOM one-CL leave-VOL-DECL-COMP  
kyelsimhay-ss-e  
decide-PST-INT  
'One student decided to leave.'
- c. [**Haksayng** (-i) **twu-myeng**]<sub>1</sub> [PRO<sub>1</sub> ttena-keyss-ta-ko]  
student-NOM two-CL leave-VOL-DECL-COMP  
kyelsimhay-ss-e  
decide-PST-INT  
'Two students decided to leave.'

# Interim summary

<b>Korean</b>	CASE			CASE DROP		
	DEM	NUM-CL	INDEF	DEM	NUM-CL	INDEF
<i>wide scope</i>	–	✓	✓	–	✓	✗
<i>binding</i>	✓	✓	✓	✓	✓	✗
<i>control</i>	✓	✓	✓	✓	✓	✗

# Theoretical implications



# Outline of the talk

Since there is more than one noun type which can show optional case marking, Korean provides a good case study to test for each noun type whether case loss always correlates with semantic effects.

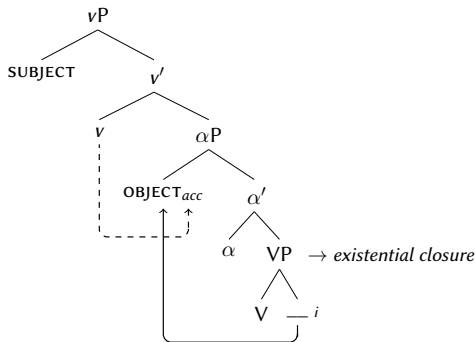
- We investigated *demonstrative phrases*, *numeral classifier phrases*, and *indefinites* wrt. established PNI/DAM diagnostics:
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# Raising analyses of DOM/PNI

Raising accounts of DOM model the interaction of case marking and low scope via **object shift**. The raised position has been taken to be the locus of ...

- case assignment (Torrego Salcedo 1999, Öztürk 2005, 2009, Dobrovie-Sorin et al. 2006, Rodríguez-Mondoñedo 2007, Merchant 2009, López 2012, Baker 2015)
- the escape of existential closure (Diesing 1992, Kelepir 2001)
- or both (Bhatt 2007, Bhatt and Anagnostopoulou 1996).

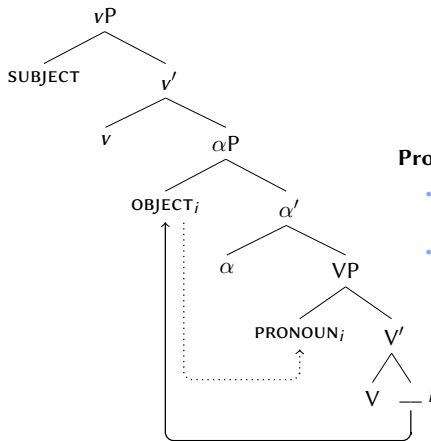
(18)



# Raising analyses of DOM/PNI

The binding and the control facts are rarely addressed. Some accounts propose to derive these effects from the landing site of the case-marked object (Bhatt 2007, López 2012). These PNI/DOM properties are discussed only for objects.

(19)



## Problem I:

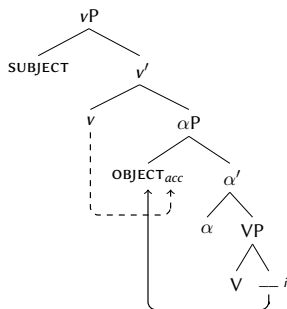
- The binding and control diagnostics also hold for subjects in Korean.
- Even for objects, the rationale is only valid for adjunct control, and not object control.

# Raising analyses of DOM/PNI

## Problem II:

- Recall the results of the Korean data set:
  - Indefinites*, *numeral classifiers*, and *demonstratives* show optional case marking.
  - But only *indefinites* display and additional correlation with semantic effects (scope/binding/control).
- If arguments move to a higher case assignment position from which they can take wide scope and initiate binding and control, why can *numeral classifiers* and *demonstratives* still undergo such semantic operations even without case marking?

(20)

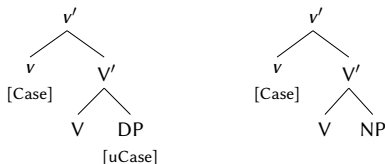


# DP/NP approaches of PNI/DOM

The **size** of the noun phrase correlates with meaning and **case**.

- smaller arguments like NPs do not need case (Massam 2001, Dayal 2011, Barrie and Li 2015, Müller 2018), DPs need case

(21)



- case-marking is tied to the highest projection in an elaborate nominal projection structure (Kalin 2018, van Urk 2019, Levin 2019), often used for DOM-patterns related to animacy and specificity

# DP/NP approaches of PNI/DOM

The **size** of the noun phrase correlates with **meaning** and case.

- DP can be of type  $\langle e \rangle$  or  $\langle et, t \rangle$  or constitute choice functions which enables them to take flexible scope
- NP are properties:  $\langle e, t \rangle$ , they don't take scope
- compositionality: incorporation denotations for V/v (van Geenhoven 1998, Dayal 2011, Jo and Palaz 2019); a new compositional mode to combine predicates and verbs (Chung and Ladusaw 2004); a type-shifting determiner on PNI-ed nouns (Driemel 2020a,b,c)

$$(22) \quad a. \quad \llbracket \text{seek} \rrbracket = \lambda y_e \lambda x [\text{SEEK}(x, y)] \quad (\text{van Geenhoven 1998})$$

$$b. \quad \llbracket \text{seek}_{inc} \rrbracket = \lambda P_{\langle e, t \rangle} \lambda x \exists y [\text{SEEK}(x, y) \wedge P(y)]$$

$$(23) \quad a. \quad \llbracket \text{catch} \rrbracket = \lambda x_e \lambda y \lambda e [\text{CATCH}(e) \ \& \ \text{AG}(e) = y \ \& \ \text{TH}(e) = x] \quad (\text{Dayal 2011})$$

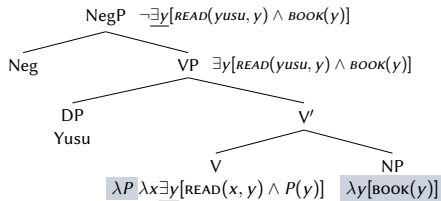
$$b. \quad \llbracket \text{catch}_{inc} \rrbracket = \lambda P_{\langle e, t \rangle} \lambda y \lambda e [P\text{-CATCH}(e) \ \& \ \text{AG}(e) = y],$$

where  $\exists e [P\text{-CATCH}(e)] = 1$  iff  $\exists e' [\text{CATCH}(e') \ \& \ \exists x [P(x) \ \& \ \text{TH}(e') = x]]$

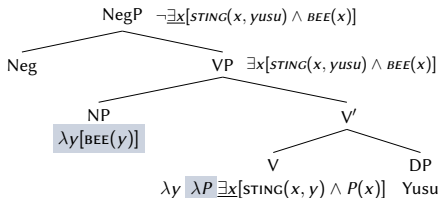
# DP/NP approaches of PNI/DOM

A simplified illustration of the scope properties is given below.

(24) No case on indefinite object:



(25) No case on indefinite subject:



# DP/NP approaches of PNI/DOM

The binding and control properties are not addressed in the literature.<sup>1</sup> There is, however, a promising way to derive them from the  $\langle e, t \rangle$ -denotation of NPs.

- (26) a. **Koyangi**-ka<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
cat-NOM 3SG SELF-ACC lick-PST-DECL  
'A cat washes itself.'
- b. DP<sub>1</sub>  $\lambda f_e \dots [trace_e]_1 \dots [pronoun_e]_1$  *variable binding à la Heim and Kratzer (1998)*
- (27) a. \***Koyangi**<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
cat 3SG SELF-ACC lick-PST-DECL  
'A cat washes itself.'
- b. NP<sub>1</sub>  $\lambda f_{\langle e, t \rangle} \dots [trace_{\langle e, t \rangle}]_1 \dots [pronoun_{\langle e, t \rangle}]_1$

Based on observations by Postal (1994), Poole (2017, 2018) argues that there are no higher type traces, see (28). We think (27b) is blocked by the TIC.

- (28) TRACE INTERPRETATION CONSTRAINT (TIC) (Poole 2018: 217)  
\*[XP<sub>1</sub> [ $\lambda f_\sigma$  [ ... [ $f_\sigma$ ]<sub>1</sub> ... ]]], where  $\sigma$  is not an individual type

<sup>1</sup> One exception is Müller (2018).



# DP/NP approaches of PNI/DOM

**Binding:** If NPs denote properties, they cannot act as binders.

- (29) a. \***Koyangi**<sub>1</sub> [ku casin-ul]<sub>1</sub> halth-ass-e.  
cat 3SG SELF-ACC lick-PST-DECL  
'A cat washes itself.'
- b. \*NP<sub>1</sub>  $\lambda f_{\langle e,t \rangle} \dots [trace_{\langle e,t \rangle}]_1 \dots [pronoun_{\langle e,t \rangle}]_1$

**Control:** Control relations will be blocked if it is assumed that for a control relation to be established the control argument has to bind PRO (Chomsky 1981, Manzini 1983, Koster 1984, Landau 2015, 2017).

- (30) a. Yusu-ka **haksayng**-ul<sub>1</sub> [PRO<sub>1</sub> ttena-la-ko] seltukhay-ss-e.  
Yusu-NOM student-ACC leave-IMP-COMP persuade-PST-INT  
'Yusu persuaded a student to leave.'
- b. ... DP<sub>1</sub>  $\lambda f_e \dots [trace_e]_1 \dots [ [PRO_e]_1 \dots ] \dots$
- (31) a. \*Yusu-ka **haksayng**<sub>1</sub> [PRO<sub>1</sub> ttena-la-ko] seltukhay-ss-e.  
Yusu-NOM student leave-IMP-COMP persuade-PST-INT  
'Yusu persuaded a student to leave.'
- b. \*... NP<sub>1</sub>  $\lambda f_{\langle e,t \rangle} \dots [trace_{\langle e,t \rangle}]_1 \dots [ [PRO_{\langle e,t \rangle}]_1 \dots ] \dots$

# DP/NP approaches of PNI/DOM

The DP/NP account can be combined with the rationale of a definiteness scale, which is needed to account for the Korean data.

**Idea:** NPs instantiate the lowest scale mates.

(32) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF $_{\langle e, t \rangle}$

CASE  $\Leftarrow$

OPTIONAL CASE

$\Rightarrow$  NO CASE

- The semantic effects (scope/binding/control) for indefinites derive from the size difference: NPs denote properties.
- NP indefinites are also never marked for case since they constitute the lowest member of the definites scale.
- The scale-based approach must leave open the possibility for a set of noun types which are optionally marked for case.

# Outline of the talk

Since there is more than one noun type which can show optional case marking, Korean provides a good case study to test for each noun type whether case loss always correlates with semantic effects.

- We investigated *demonstrative phrases*, *numeral classifier phrases*, and *indefinites* wrt. established PNI/DAM diagnostics:
  - 1 case loss correlating with obligatory low scope
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# Case-marking in syntax

## (33) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF $\langle e,t \rangle$

CASE  $\Leftarrow$

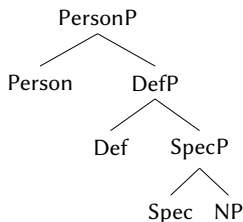
OPTIONAL CASE

$\Rightarrow$  NO CASE

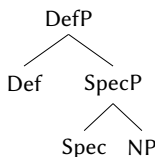
## How and in which module do we implement differential case marking?

- Kalin (2014, 2018) proposes that prominence scales can be translated into privative nominal projections (see also Tyler 2019, Levin 2019).

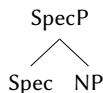
(34) (3RD) PRONOUN:



(35) DEF:



(36) DP-INDEF:



# Case-marking in syntax

(37) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF $\langle e,t \rangle$

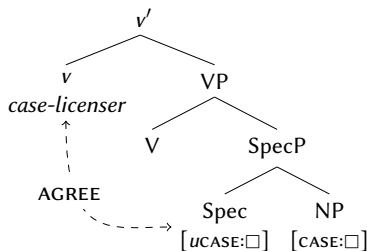
CASE  $\Leftarrow$

OPTIONAL CASE

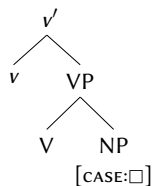
$\Rightarrow$  NO CASE

*Assumptions:* (i) only some nominal heads bear uninterpretable case, i.e. [ $u\text{CASE}:\square$ ];  
 (ii) uninterpretable case must be licensed via AGREE

(38) DP-INDEF:



(39) NP-INDEF:



# Case-marking in syntax

(40) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF  $\langle e, t \rangle$

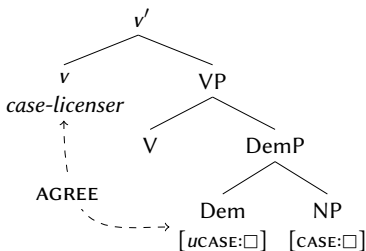
CASE  $\Leftarrow$

OPTIONAL CASE

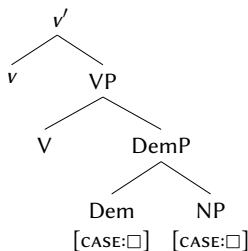
$\Rightarrow$  NO CASE

**Problem I:** Optional case marking for some scale mates is not predicted. Can certain heads come with both, interpretable and uninterpretable, case features?

(41) DEM:



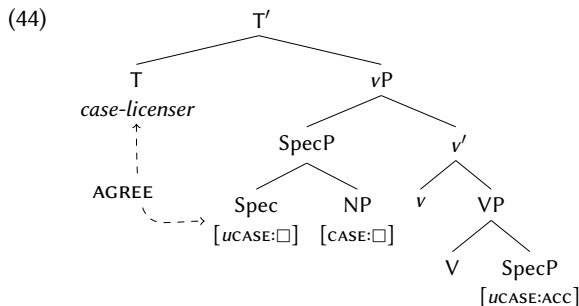
(42) DEM:



# Case-marking in syntax

**Problem II:** The theory predicts an interaction of DAM with other AGREE-related operations. Honorific AGREE (e.g. Choi and Harley 2019) is, however, independent of case marking.

- (43) Halapeci(-kkeyse)      cenyek-ul    capswu-si-n-ta.  
 grandfather-HON.NOM dinner-ACC eat-HON-PRS-DECL  
 'Grandfather is having dinner.'



# Case-marking in post-syntax

## (45) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF $\langle e,t \rangle$

CASE  $\Leftarrow$

OPTIONAL CASE

$\Rightarrow$  NO CASE

## How else can we implement differential case marking?

- The scale can be translated into an OT-ranking (Aissen 1999, 2003, Keine and Müller 2008, 2011, 2015) which regulates the realization of case features post-syntactically based on economy and iconicity pressures.
- The only size difference relevant in syntax is the one between NP and DP.
- DPs, however, can instantiate different nominal types, depending on the feature bundles of the D heads.

## (46) *Definiteness scale*

$[3,+D] \succ [ +DEF,+D] \succ [-DEF,+D] \succ [ +DEM,+D] \succ [ +CL,+D] \succ [-DEF]\langle e,t \rangle$

CASE  $\Leftarrow$

OPTIONAL CASE

$\Rightarrow$  NO CASE



# Case-marking in post-syntax

## (47) *Definiteness scale*

$$[3,+D] \succ [ +DEF,+D] \succ [-DEF,+D] \succ [ +DEM,+D] \succ [ +CL,+D] \succ [-DEF]_{\langle e,t \rangle}$$

CASE  $\Leftarrow$

OPTIONAL CASE

$\Rightarrow$  NO CASE

- The syntactic features are accessible in post-syntax. They are made reference to via faithfulness constraints, locally conjoined with **MAX-C** which preserves case marking.
- The markedness constraint **\*[-OBL]** (captures both nominative and accusative) triggers case deletion and is ranked depending on the cut-off point on the definiteness scale.
- The constraints for DEM and NUM-CL are not ranked with respect to **\*[-OBL]**, hence case marking is optional.

## (48) *Constraint ranking:*

$$\left\{ \begin{array}{l} * [3,+D] \text{ } \textcircled{\neq} \text{ MAX-C} \\ * [+DEF,+D] \text{ } \textcircled{\neq} \text{ MAX-C} \\ * [-DEF,+D] \text{ } \textcircled{\neq} \text{ MAX-C} \end{array} \right\} \gg \left\{ \begin{array}{l} * [+DEM,+D] \text{ } \textcircled{\neq} \text{ MAX-C} \\ * [+CL,+D] \text{ } \textcircled{\neq} \text{ MAX-C} \\ * [-OBL] \end{array} \right\} \gg \left\{ * [-DEF] \text{ } \textcircled{\neq} \text{ MAX-C} \right\}$$

# Case-marking in post-syntax

## (49) *Definiteness scale*


(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF  $\langle e, t \rangle$

CASE  $\Leftarrow$


OPTIONAL CASE

$\Rightarrow$  NO CASE

## (50) NP-INDEF not case-marked

$[-DEF][-OBL]$	$*[+DEF,+D]$ $\checkmark$ MAX-C	$*[-DEF,+D]$ $\checkmark$ MAX-C	$*[+DEM,+D]$ $\checkmark$ MAX-C	$*[+CL,+D]$ $\checkmark$ MAX-C	$*[-OBL]$	$*[-DEF]$ $\checkmark$ MAX-C
a.  $[-DEF]$						*
b. $[-DEF][-OBL]$					*!	

## (51) DP-INDEF case-marked

$[-DEF,+D][-OBL]$	$*[+DEF,+D]$ $\checkmark$ MAX-C	$*[-DEF,+D]$ $\checkmark$ MAX-C	$*[+DEM,+D]$ $\checkmark$ MAX-C	$*[+CL,+D]$ $\checkmark$ MAX-C	$*[-OBL]$	$*[-DEF]$ $\checkmark$ MAX-C
a. $[-DEF,+D]$		*!				
b.  $[-DEF,+D][-OBL]$					*	

# Case-marking in post-syntax

## (52) *Definiteness scale*

(3RD) PRONOUN  $\succ$  DEF  $\succ$  DP-INDEF  $\succ$  DEM  $\succ$  NUM-CL  $\succ$  NP-INDEF  $\langle e, t \rangle$

CASE  $\Leftarrow$

OPTIONAL CASE

$\Rightarrow$  NO CASE

## (53) DEM optionally case-marked

[+DEM,+D][-OBL]		*[+DEF,+D] ☞ MAX-C	*[-DEF,+D] ☞ MAX-C	*[+DEM,+D] ☞ MAX-C	*[+CL,+D] ☞ MAX-C	*[-OBL]	*[-DEF] ☞ MAX-C
a.	☞ [+DEM,+D]			*			
b.	☞ [+DEM,+D][-OBL]					*	

## (54) NUM-CL optionally case-marked

[+CL,+D][-OBL]		*[+DEF,+D] ☞ MAX-C	*[-DEF,+D] ☞ MAX-C	*[+DEM,+D] ☞ MAX-C	*[+CL,+D] ☞ MAX-C	*[-OBL]	*[-DEF] ☞ MAX-C
a.	☞ [+CL,+D]				*		
b.	☞ [+CL,+D][-OBL]					*	

# Summary

- Korean displays a set of noun types where case marking is optional.
- As these noun types rank low on the definiteness scale, the case-marking properties can be identified as **differential argument marking**.
- Only a subset shows an interaction of case marking with semantic effects wrt. scope/binding/control.
- The semantic effects can be explained by DP/NP accounts, often proposed for the phenomenon of **pseudo-incorporation**.
- Korean case marking is modeled via (post-syntactic) realization of case features, regulated by an OT-ranking which maps to the definiteness scale.

# Outlook

- Another language which shows a set of noun types where case marking is optional, is Tamil. As in Korean, indefinites are the only noun types where case marking leads to semantic effects. A similar analysis can be applied, see Driemel (2020a) for data description.
- There is one property which we have ignored so far: mobility.
  - PNI-ed arguments have been shown to be immobile in languages like Tamil, Sakha, and Mongolian (Baker 2014, Guntsetseg 2016).
  - Other languages such as Hindi do not show movement restrictions (Dayal 2011). Hence, there is cross-linguistic variation.
  - Korean indefinites without case marking are also limited in their scrambling properties, in the same way that VPs are limited.
  - In fact, there is a connection between VP-movement and PNI-movement across a number of PNI languages, see Driemel (2020a,b) for discussion.
- There is also a class of noun types we have ignored (weak definites, proper names, local pronouns) which show optional case marking with semantic effects, see Driemel (2020a) for discussion.

# References I

- Aissen, J. (1999). Markedness and Subject Choice in Optimality Theory. *Natural Language and Linguistic Theory*, 17:673–711.
- Aissen, J. (2003). Differential Object Marking: Iconicity vs. Economy. *Natural Language and Linguistic Theory*, 21:435–483.
- Baker, M. (2014). Pseudo Noun Incorporation as Covert Noun Incorporation: Linearization and Crosslinguistic Variation. *Language and Linguistics*, 15:5–46.
- Baker, M. (2015). *Case. Its Principles and Parameters*. Cambridge University Press, Cambridge.
- Barrie, M. and Li, A. (2015). The Semantics of (Pseudo) Incorporation and Case. In Borik, O. and Gehrke, B., editors, *The Syntax and Semantics of Pseudo-Incorporation*, pages 159–188. Brill, Leiden/Boston.
- Bhatt, R. (2007). Unaccusativity and case licensing. Talk presented at McGill University.
- Bhatt, R. and Anagnostopoulou, E. (1996). Object shift and specificity: Evidence from ko-phrases in Hindi. In Dobrin, L., Singer, K., and McNair, L., editors, *Papers from the 32nd Regional Meeting of the Chicago Linguistic Society*, pages 11–22. Chicago Linguistic Society, Chicago.
- Bossong, G. (1991). Differential Object Marking in Romance and Beyond. In Kibbee, D. A. and Wanner, D., editors, *New Analyses in Romance Linguistics*, pages 143–170. John Benjamins, Amsterdam.
- Choi, J. and Harley, H. (2019). Locality domains and morphological rules. *Natural Language and Linguistic Theory*, 37(4):1319–1365.
- Chomsky, N. (1981). *Lectures on Government and Binding*. de Gruyter, Berlin.
- Chung, S. and Ladusaw, W. A. (2004). *Restriction and Saturation*, volume 42 of *Linguistic Inquiry Monograph*. MIT Press, Cambridge, MA.
- Dayal, V. (2011). Hindi pseudo-incorporation. *Natural Language and Linguistic Theory*, 29:123–167.
- Diesing, M. (1992). *Indefinites*. MIT Press, Cambridge.
- Dobrovie-Sorin, C., Bleam, T., and Espinal, M. T. (2006). Bare nouns, number and types of incorporation. In Vogeleer, S. and Tasmowski, L., editors, *Non-definiteness and Plurality*, pages 51–79. John Benjamins, Amsterdam/Philadelphia.
- Driemel, I. (2020a). *Pseudo-incorporation across languages*. PhD thesis, Leipzig University.
- Driemel, I. (2020b). Pseudo-incorporation and its movement patterns. *Glossa: a journal of general linguistics*, 5:106.

# References II

- Driemel, I. (2020c). Pseudo-noun incorporation: A DP/VP approach. In Asatryan, M., Song, Y., and Whitmal, A., editors, *Proceedings of NELS 50*, pages 173–182, Amherst, MA. GLSA.
- van Geenhoven, V. (1998). *Semantic Incorporation and Indefinite Descriptions*. CSLI, Palo Alto.
- Guntsetseg, D. (2016). *Differential Case Marking in Mongolian*. Harrassowitz Verlag, Wiesbaden.
- Heim, I. and Kratzer, A. (1998). *Semantics in Generative Grammar*. Blackwell, Oxford.
- Jo, J. and Palaz, B. (2019). Licensing Pseudo-Noun Incorporation in Turkish. In Baird, M. and Pesetsky, J., editors, *Proceedings of the 49th Annual Meeting of the North East Linguistic Society*. GLSA, Amherst, MA.
- Kalin, L. (2014). *Aspect and argument licensing in Neo-Aramaic*. PhD thesis, University of California, Los Angeles.
- Kalin, L. (2018). Licensing and Differential Object Marking: The View from Neo-Aramaic. *Syntax*, 21:112–159.
- Keine, S. and Müller, G. (2008). Differential Argument Encoding by Impoverishment. In Richards, M. and Malchukov, A., editors, *Scales*, pages 83–136. Linguistische Arbeitsberichte 86, Leipzig.
- Keine, S. and Müller, G. (2011). Non-Zero/Non-Zero Alternations in Differential Object Marking. In Lima, S., Mullin, K., and Smith, B., editors, *Proceedings of NELS 39*, pages 441–454. GLSA, Amherst.
- Keine, S. and Müller, G. (2015). Differential Argument Encoding by Impoverishment. In Bornkessel-Schlesewsky, I., Malchukov, A., and Richards, M., editors, *Scales and Hierarchies: A Cross-Disciplinary Perspective*, page 75–130. de Gruyter, Berlin.
- Kelepir, M. (2001). *Topics in Turkish syntax: Clausal structure and scope*. PhD thesis, MIT.
- Kornfilt, J. (2003). Scrambling, Subscrambling, and Case in Turkish. In Karimi, S., editor, *Word Order and Scrambling*, pages 125–155. Blackwell Publishing, Oxford.
- Kornfilt, J. (2008). DOM and Two Types of DSM in Turkish. In de Hoop, H. and de Swart, P., editors, *Differential Subject Marking*, pages 79–112. Springer, Dordrecht.
- Koster, J. (1984). On binding and control. *Linguistic Inquiry*, 15:417–459.
- Kwon, S.-N. and Zribi-Hertz, A. (2006). Bare objects in Korean: (Pseudo-)incorporation and (in)definiteness. In Vogelee, S. and Tasmowski, L., editors, *Non-definiteness and Plurality*, pages 107–132. John Benjamins, Amsterdam/Philadelphia.

# References III

- Kwon, S.-N. and Zribi-Hertz, A. (2008). Differential Function Marking, Case, and Information Structure: Evidence from Korean. *Language*, 84:258–299.
- Landau, I. (2015). *A Two-Tiered Theory of Control*. MIT Press, Cambridge.
- Landau, I. (2017). Direct Variable Binding and Agreement in Obligatory Control. In Patel-Grosz, P., Grosz, P. G., and Zobel, S., editors, *Pronouns in Embedded Contexts*, pages 1–41. Springer, Dordrecht.
- Lee, Hanjung (2006). Iconicity and variation in the choice of object forms in Korean. *Language Research*, 42:323–355.
- Lee, Hanjung (2008). Quantitative Variation in Korean Case Ellipsis: Implications for Case Theory. In de Hoop, H. and de Swart, P., editors, *Differential Subject Marking*, pages 41–61. Springer, Dordrecht.
- Lee, Hanjung (2011). Gradients in Korean case ellipsis: An experimental investigation. *Lingua*, 121(1):20–34.
- Leonetti, M. (2004). Specificity and Differential Object Marking in Spanish. *Catalan Journal of Linguistics*, 3:75–114.
- Levin, T. (2019). On the nature of differential object marking: Insights from Palauan. *Natural Language and Linguist Theory*, 37:167–213.
- Lidz, J. (2006). The grammar of accusative case in Kannada. *Language*, 82:10–32.
- López, L. (2012). *Indefinite Objects. Scrambling, Choice Functions, and Differential Marking*. The MIT Press, Cambridge, Massachusetts.
- Ljutikova, E. and Pereltsvaig, A. (2013). Elucidating Nominal Structure in Articleless Languages: A Case Study of Tatar. In Faytak, M., Goss, M., Baier, N., Merrill, J., Neely, K., Donnelly, E., and Heath, J., editors, *Proceedings of the 39th Annual Meeting of the Berkeley Linguistics Society*, pages 123–136. Berkeley Linguistics Society, Berkeley, CA.
- Manzini, R. (1983). On Control and Control Theory. *Linguistic Inquiry*, 14:421–446.
- Massam, D. (2001). Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory*, 19:153–97.
- Merchant, J. (2009). Polyvalent case, geometric hierarchies, and split ergativity. In Bunting, J., Desai, S., Peachey, R., Straughn, C., and Tomkova, Z., editors, *Proceedings of the 42nd annual meeting of the Chicago Linguistics Society*, pages 57–76. University of Chicago Press, Chicago.
- Müller, G. (2018). Pseudo-incorporation by structure removal. Handout, Talk at CGSW 33, Göttingen.
- Öztürk, B. (2005). *Case, Referentiality and Phrase Structure*. John Benjamins, Amsterdam/Philadelphia.



# References IV

- Öztürk, B. (2009). Incorporating agents. *Lingua*, 119:334–358.
- Poole, E. (2017). *Movement and the semantic type of traces*. PhD thesis, University of Massachusetts, Amherst.
- Poole, E. (2018). Constraining (shifting) types at the interface. In Sauerland, U. and Solt, S., editors, *Proceedings of Sinn und Bedeutung 22*, page 217–234, Berlin. ZAS.
- Postal, P. (1994). Contrasting extraction types. *Journal of Linguistics*, 30:159–186.
- Rodríguez-Mondoñedo, M. (2007). *The syntax of objects: Agree and Differential Object Marking*. PhD thesis, University of Connecticut.
- Silverstein, M. (1976). Hierarchies of features and ergativity. In Dixon, R. M. W., editor, *Grammatical categories in Australian Languages*, pages 112–171. Australian Institute of Aboriginal Studies, Canberra.
- Torrego Salcedo, E. (1999). El complemento directo preposicional. In Bosque, I. and Demonte, V., editors, *Gramática descriptiva de la lengua española. Las construcciones sintácticas fundamentales. Relaciones temporales, aspectuales y modales*, volume 2, pages 1779–1805. Espasa Calpe, Madrid.
- Tyler, M. (2019). Differential Object Marking by A'-status. In Baird, M. and Pesetsky, J., editors, *Proceedings of the 49th Meeting of the North East Linguistics Society*. GLSA Publications, Amherst.
- van Urk, C. (2019). Object Licensing in Fijian and the role of adjacency. *Natural Language and Linguist Theory*, 38:313–364.