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# Anaphoric Marking in Bare Noun Languages: When and Why Demonstratives Are Needed

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# Setting the stage

- Languages like English have a definite article (e.g., *the*).
- But many languages don't (e.g., Mandarin Chinese, Japanese, Korean, Thai, Vietnamese, Shan).
- **The overarching question:** How do article-less languages express various types of definiteness?

# Two types of definites (Schwarz 2009)

- **Unique/weak definites:**

- (1) Open the door! (*Immediate situation use in the sense of Hawkins 1978*)
- (2) a. The moon has risen. (*Larger/immediate situation use*)
- b. The moon orbits Earth. (*Larger situation use in the sense of Hawkins 1978*)

- **Anaphoric/familiar/strong definites:**

- (3) John bought a book<sub>1</sub> and a magazine. The book<sub>1</sub> was expensive.

- (4) Every farmer that owns a donkey<sub>1</sub> beats the donkey<sub>1</sub>.

(Schwarz 2009: 3, (3); 132, (95a))

# What has been said about article-less languages

- They use bare nouns to mark both types of definites.
- But they may **optionally** use a demonstrative (Dem) to mark **anaphoric** definites (e.g., Ahn 2019; Moroney 2021; Park 2022; Simpson and Wu 2022; Dayal and Jiang 2023) (compare Jenks 2018).
- In brief:
  - Unique/weak definites: **Bare nouns**
  - Anaphoric/familiar/strong definites: **Bare/Dem-NPs**

# Illustration from Mandarin

## (5) Unique/weak definite

**Yueliang**      sheng    shang    lai      le.  
moon            rise     up      come    LE

‘The moon has risen.’

(Chen 2004: 1165)

## (6) Anaphoric/familiar/strong definite

a. Jiaoshi      li            zuo   zhe    yi    ge    nansheng    he    yi    ge    nüsheng.  
classroom    inside    sit    PROG    one   CLF    boy            and    one   CLF    girl

‘A boy and a girl are sitting in the classroom.’

b. **Nüsheng**    zuo            zai            **nansheng**    pangbian.  
girl            sit            DUR            boy            side

‘The girl is sitting next to the boy.’

(Dayal and Jiang 2023: (11a,b))

# The problem

- Sometimes a Dem is necessary for an anaphoric definite, as shown in (7), and currently, there is no consensus as to when a Dem is needed and why.

- Illustration from Mandarin (Jenks 2018: (15a,b)):

(7) a. Jiaoshi li zuo zhe yi ge nansheng he yi ge nüsheng.  
classroom inside sit PROG one CLF boy and one CLF girl

‘There are a boy and a girl sitting in the classroom.’

b. Wo zuotian yudao #(na ge) nansheng.

I yesterday meet that CLF boy

‘I met the boy yesterday.’

# The goal of this talk

- To provide an answer to when and why a Dem may be needed for marking anaphoric definites by looking at Korean in comparison with a few other bare noun languages (Mandarin Chinese, Japanese, Slovenian, Turkish).
- **The main claim:**
  - Some Dem-NPs are “optional”, but some are necessary, and the latter occur as “the last resort” (compare, a.o., Ahn 2019).
  - And they are needed not just for contrast or anti-uniqueness effects (compare Dayal and Jiang 2023).
  - And even the “optional” ones are not truly optional in that they carry pragmatic meanings different from bare nouns’.

# Outline of the talk

- Identify environments where an anaphoric Dem is needed
- Brief explanation as to why
- Quick typological investigation
- Brief formal semantic analysis
- Conclusion



# When is a DEM needed?

- **Dayal and Jiang's (2023) answer:**
  - In contexts like (6), the situation described by (a) is defined by two individuals, and the *same* two individuals define the situation in (b). Hence, bare nouns can be used in (6b).
  - In contexts like (7), the situations described by (a) and (b) have *different* participants. So, in (7b), a Dem-NP is preferred over a bare noun.

# Problematic data to Dayal and Jiang (2023)

- Anaphoric bare nouns can appear even when the initial context is expanded to include *additional* participants: e.g., (8) (Dayal and Jiang 2023: (26a,b)).

(8) a. Jiaoshi      li      zuo zhe      yi      ge      nanhai      he      yi      ge      nühai.  
classroom inside sit PROG one CLF boy and one CLF girl

‘A boy and a girl were sitting in the classroom.’

b. Turan      yi      ge      xiaohai      pao jin      jiaoshi      jiao **nanhai**      gen      ta      chuqu.  
suddenly one CLF kid run in classroom ask boy with him go.out

‘Suddenly, a kid ran into the classroom and asked the boy to go out with him.’

- Dayal and Jiang (2023: 163) state that (8a) is “minimally” expanded in (8b) via a “controlled” introduction of an individual, but they do not explain exactly how (8) differs from (7).

# When is a DEM needed? Cont'd

- **Simpson and Wu's (2022) answer:**
  - Anaphoric bare nouns occur when the *same* spatiotemporal location is maintained in a narrative sequence.
  - Dem-NPs occur when there is a *shift* in the spatiotemporal location.
- This line of analysis captures the contrast between (6)/(8) and (7).

# Problematic data to Simpson and Wu (2022)

- Even if the same spatiotemporal location is maintained in a narrative sequence, a Dem-NP may be required (Kim 2021).

(9) Illustration from Korean:

a. Ecey          thipi          chwukkwu      cwungkey-eyse      Son Heung-Min-ul      pwassta.  
yesterday television soccer          broadcasting-LOC      Heung-Min Son-ACC      saw

‘Yesterday, on the soccer broadcast, I saw Heung-Min Son.’

b. **#(Ku)**      **senswu-ka**      mom-nollim-i                      kacang      ppallassta.  
that player-NOM      body-movement-NOM      most      was.quick

Intended: ‘That player (i.e., Heung-Min Son) exhibited the fastest performance of all.’

# Problematic data to Simpson and Wu Cont'd

- An anaphoric bare noun may be licensed even if the same spatiotemporal location is *not* maintained in the narrative sequence.

(10) Illustration from Korean:

a. Kyosil            an-ey            sonyen-kwa    sonye-ka    ancaissta.  
classroom    inside-LOC    boy-and        girl-NOM    are.sitting

‘A boy and a girl are sitting in a/the classroom.’

b. Ecey            **sonyen-i**    **sonye-lul**    mannassta.  
yesterday    boy-NOM    girl-ACC        met

‘The boy met the girl yesterday.’

# Why is a Dem needed in (9)?

- A Dem is needed because the anaphoric definite's referent is *not* the only  $x$  that has  $P$  in the *resource situation* ( $s_r$ ) in the sense of Schwarz (2009); if it is, then a Dem is not needed, as in (11).

- (11) a. Ecey            nolay.calang-eyse    yeca.ai    namca.ai    kuliko    elun    han-myeng-ul    pwassta.  
yesterday singing.contest-LOC girl            boy            and    adult    one-CLF-ACC    saw  
'Yesterday, in a singing contest, I saw a girl, a boy, and a grown-up person.'
- b. **(Ku)** yeca.ai-ka            nolay-lul            kacang    cal            hayssta.  
that girl-NOM            singing-ACC    most    well    did  
'The/that girl sang the best among them.'

# Why is a Dem *not* needed in (10)?

- In data like (10), bare nouns are used as *text-internally licensed quasi-names* (Kim 2021).
- **Support for this idea:** In story-telling contexts, anaphoric bare nouns can freely occur acting like proper names (cf. Jenks 2015; Ahn 2019).

- (12) a. Yes-nal enu swup-sok-ey thokki han mali-ka sal-ko isse.  
old-day some forest-inside-LOC rabbit one CLF-NOM live-CONN existed.INFML  
'Once upon a time, in some forest, there lived a rabbit.'
- b. **Thokki-nun** meli-ka acwu cohasse.  
rabbit-TOP brain-NOM very was.good.INFML  
'The rabbit was very smart.'

(Kim 2021: (15))

# Why is a Dem *not* needed in (10)? Cont'd

- Even in non-fable contexts, anaphoric bare nouns can be used as text-internally licensed quasi-names.

(13) a. Cinanswu-ey kangaci han mali-lul ipyanghayssta.

last.week-LOC puppy one CLF-ACC adopted

'Last week I adopted a puppy.'

b. Onul **kangaci-ka** salaciessta.

today puppy-NOM disappeared

'Today the puppy disappeared.'



# BUT sometimes it may take some work

(14) Paykman-nyen-ina cwuk-ci ahn-un koyangi-ka  
one.million-year-as.much.as die-CONN neg-REL.PRF cat-NOM  
iss-ess-supni-ta. (S<sub>1</sub>)  
exist-PST-ALLO.HON-DECL

‘Once upon a time, there was a cat which had lived for as long as one million years.’

**Ku koyangi-nun** paykman-pen-ina cwuk-ko  
that cat-TOP one.million-time-as.much.as die-CONN  
paykman-pen-ina sal-ass-supni-ta. (S<sub>2</sub>; Dem)  
one.million-time-as.much.as live-PST-ALLO.HON-DECL

‘The cat had died as many as one million times but re-lived as many as one million times.’

Kuleten han-ttay **koyangi-nun** ... (S<sub>6</sub>; Bare)  
then one-time cat-TOP ...

‘Then one day, the cat ...’

(<https://market.bookshopmap.com/100만-번-산-고양이/>, accessed May 24, 2021)

# Interim summary

- In a narrative sequence instantiating discourse anaphora:
  - A Dem is not needed for an anaphoric definite if the sentences in the narrative sequence share the spatiotemporal location, but it may still be needed for *situation-internal identifiability* (e.g., (9)).
  - If the sentences do not share the spatiotemporal location, then a Dem is needed for an anaphoric definite *unless* the definite acts like a *quasi-name* at the *text level* (e.g., compare (7) and (10)).
- **In short:**
  - *Spatiotemporal relation* between the situations matters; and
  - *situation-internal or text-internal identifiability* matters.

# Quick typological investigation

- I tested the idea I just outlined against five genetically-unrelated bare noun languages by using Korean as the point of departure (Kim 2022):
  - Korean (Language Isolate)
  - Mandarin (Sino-Tibetan)
  - Japanese (Language Isolate)
  - Slovenian (South Slavic)
  - Turkish (Turkic)

# Templates used for data collection

#1: 'There's a boy and a girl sitting in the classroom. The girl is sitting next to the boy.'  
(No spatiotemporal location change)

#2: 'There's a boy and a girl sitting in the classroom. I met the boy yesterday.'  
(Spatiotemporal location change; object position)

#3: 'Yesterday I saw a dog. The dog was cute.'  
(No spatiotemporal location change necessary)

#4: 'Yesterday I saw a dog. The dog came to my house today.'  
(Spatiotemporal location change; subject position)

#5: 'Yesterday I saw Heung-Min Son on TV. That player was the fastest of all the players.'  
(No spatiotemporal location change but a need for situation-internal identifiability)

# Data obtained for Korean

(15) **Template 1:** No spatiotemporal location change

Kyosil          an-ey          sonyen   han-myeng-kwa   sonye   han-nyeng-i   ancaissta.  
classroom   inside-LOC   boy          one-CLF-and          girl          one-CLF          are.sitting

'There's a boy and a girl sitting in the classroom.'

**Sonye-ka   sonyen   yep-ey          ancaissta.                          (Bare)**  
girl-NOM    boy            side-LOC            are.sitting

'The girl is sitting next to the boy.'

(16) **Template 2:** Spatiotemporal location change; object position

Kyosil          an-ey          sonyen   han-myeng-kwa   sonye   han-nyeng-i   ancaissta.  
classroom   inside-LOC   boy          one-CLF-and          girl          one-CLF          are.sitting

'There's a boy and a girl sitting in the classroom.'

**Na-nun   ecey          #(ku)   sonyen-ul                          mannassta.                          (Dem)**  
I-TOP      yesterday    that   boy-ACC                          met

'I met the boy yesterday.'

# Data obtained for Korean cont'd

(17) **Template 3:** No spatiotemporal location change necessary

Ecey kay han mali-lul pwassta. (?Ku) kay-ka kwiyessta. (Bare)  
yesterday dog one CL-ACC saw that dog-NOM was.cute

'Yesterday I saw a dog. The dog was cute.'

(18) **Template 4:** Spatiotemporal location change; subject position

Ecey kay han mali-lul pwassta. Onul #(ku) kay-ka cip-ey wassta. (Dem)  
yesterday dog one CLF-ACC saw today that dog-NOM house-to came

'Yesterday I saw a dog. Today the/that dog came to my house.'

# Data obtained for Korean cont'd

(19) **Template 5:** No spatiotemporal location change but a need for situation-internal identifiability

Ecey            thipi            chwukkwu    cwungkey-eyse    Son Heung-Min-ul            pwassta.

yesterday    television    soccer            broadcasting-LOC    Heung-Min Son-ACC            saw

'Yesterday, I saw Heung-Min Son in a soccer game on TV.'

**#(Ku)    senswu-ka            mom-nollim-i            kacang    ppallassta.            (Dem)**

that    player-NOM            body-movement-NOM    most    was.quick

Intended: 'That player (i.e., Heung-Min Son) was the fastest of all the players.'

# The findings

- The five languages behaved *alike*, but there were a few unexpected *differences*.

	<b>Korean (n=2)</b>	<b>Mandarin (n=2)</b>	<b>Japanese (n=3)</b>	<b>Slovenian (n=2)</b>	<b>Turkish (n=3)</b>
Template 1	Bare	Bare	Bare/ <b>Dem</b>	Bare	Bare
Template 2	Dem	Dem	Dem	Dem	Dem
Template 3	Bare	Bare	<b>Dem</b>	Bare/ <b>Dem</b>	Bare
Template 4	Dem	Dem	Dem	Dem	Dem
Template 5	Dem	Dem	Dem	Dem	Dem (n=2) Bare/ <b>Dem</b> (n=1)



# What to make of the findings?

- In bare noun languages, spatiotemporal shift between sentences instantiating discourse anaphora ordinarily requires using a Dem-NP.
- If there is no spatiotemporal shift, then a Dem is “optional”, but languages or speakers may vary as to how they use a Dem:
  - My Japanese speakers seemed to use a Dem (along with the “nominative” marker *ga*) to focus a *discourse salient* entity.
  - My Slovenian speakers seemed to use a Dem to mark *emotivity*.
- As to the behavior of one of my Turkish speakers regarding Template 5, additional discussion suggests that they were using a bare noun as a *quasi-name/epithet*.

# Towards a formal semantic analysis

- Based on her analysis of Shan (Tai-Kadai, Myanmar), Moroney (2021) posits that bare noun languages have a *null anaphoric type shifter*  $\iota^x$ , which has the semantics of the strong definite article proposed by Jenks (2018), given in (20b).
- Dayal and Jiang (2023) make essentially the same claim, as shown in (21b).

(20) Jenks (2018: (22))

a. **Unique definite article:**  $\llbracket \iota \rrbracket = \lambda s_r \lambda P: \exists !x[P(x)(s_r)].\iota x[P(x)(s_r)]$

b. **Anaphoric definite article:**  $\llbracket \iota^x \rrbracket = \lambda s_r \lambda P \lambda Q: \exists !x[P(x)(s_r) \ \& \ Q(x)].\iota x[P(x)(s_r)]$

(21) Dayal and Jiang (2023: (19a,b))

a.  $\llbracket \text{Dem} \rrbracket = \lambda s \lambda P: \exists s' \ s \leq s' \ |P_{s'}| > 1. \iota x[P_s(x) \ \& \ x = y]$

b.  $\llbracket \text{the}_{\text{STRONG}} \rrbracket / \llbracket \iota \rrbracket = \lambda s \lambda P: |P_s \cap \lambda x[x = y]| = 1. \iota x[P_s(x) \ \& \ x = y]$

# My proposal

- Bare noun languages have *two* different null anaphoric type shifters, one for *situation-internally licensed* definites,  $\iota^x_s$ , and one for *quasi-names* licensed at the *text* level,  $\iota^x_T$ .
- Dems encode a locative relation (*LR*) between an individual  $x$  and another individual  $y$ .
- Below,  $s_s$  stands for ‘source situation’, the situation where the immediate antecedent of an anaphoric definite is found;  $\infty$  stands for ‘spatiotemporal overlap’;  $T$  stands for ‘text’.

(22) a.  $[[\iota^x_s]]^g = \lambda P: \exists!x[P(x)(s_s) \& s_s \infty s_r \& \exists y[y \neq x \& Q(y)(s_s) \& Q \neq P]].$

$\iota x[P(x)(s_r) \& \exists y[y \neq x \& Q(y)(s_r) \& Q \neq P] \& x = g(1)]$

b.  $[[\iota^x_T]]^g = \lambda P: \exists!x[\text{Known-as-}P(x)(T)].\iota x[\text{Known-as-}P(x)(T) \& x = g(1)]$

c.  $[[\text{Dem}]]^g = \lambda P: \exists!x[P(x)(s_r) \& LR(x)(y)(s_s)].\iota x[P(x)(s_r) \& LR(x)(y)(s_r) \& x = g(1)]$

# My proposal cont'd

- The present analysis lets us explain data like (23), improving previous analyses (e.g., Ahn 2019; Moroney 2021; Dayal and Jiang 2023):
  - In (23), the anaphoric definite meets the uniqueness presupposition of the strong determiner assumed in the literature, but it cannot be a bare noun because there is no  $y$  different from  $x$  such that  $y$  has property  $Q$  that is different from  $P$  in  $s_r$ .
  - It can be a Dem-NP because it satisfies the presupposition of (22c).

- (23) a. Tongmwul-pyengwon-eyse kay han mali-lul po-ass-ta.  
animal-hospital-LOC dog one CLF-ACC see-PST-DECL  
'I saw a dog at a/the veterinary hospital.'
- b. **\*(Ku)** kay-ka kacang kwiyawu-ess-ta.  
that dog-NOM most be.cute-PST-DECL  
Intended: 'The dog was the cutest.'

# My proposal cont'd

- The present analysis also explains the contrast between (23) and (24):
  - In (24), an anaphoric bare noun is used because the situation-internal identifiability presupposition of (22a) is satisfied.
  - Using a Dem-NP is judged infelicitous because, here, comparison is being made among the three animals that have been introduced into the discourse *in s<sub>r</sub>*.

- (24) a. Tongmwul-pyengwon-eyse kay han mali-wa, koyangi han mali,  
animal-hospital-LOC dog one CLF-and cat one CLF  
kuliko haymsutha han mali-lul po-ass-ta.  
and hamster one CLF-ACC see-PST-DECL  
'I saw a dog, a cat, and a hamster at a/the veterinary hospital.'
- b. Ku cwung-eyse (#ku) kay-ka kacang kwiyeuwu-ess-ta.  
that among-LOC that dog-NOM most be.cute-PST-DECL  
Intended: 'The dog was the cutest among the three.'

# Conclusion

- The goal of this talk was to provide an answer to when and why a Dem may be needed for marking anaphoric definites in bare noun languages like Korean.
- Along the way, I also mapped out when bare anaphoric definites may be licensed.
- **Central claims:**
  - There are two types of anaphoric bare nouns and one of them behave like quasi-names.
  - Anaphoric Dems which are necessary occur as “the last resort” to locate a referent (compare Sybesma and Sio 2008; Ahn 2019; Dayal and Jiang 2023).
  - Dems encode *LRs* between two individuals but pragmatic effects such as anti-uniqueness may come about due to the interplay between their semantics and information-structural or cognitive factors (cf. Kim 2019, in revision).

# Implications

- Anaphoric bare nouns are licensed by the salient property  $P$  their referents have in contrast to another individual  $y$  with a different property  $Q$ .
- Dem-NPs are licensed by the salient  $LR$  they have in contrast to another individual  $y$  with the same  $P$  but with a different  $LR$ .
- In both cases, *contrast* plays a role but in different ways (compare Jiang 2012; Robinson 2005; Dayal and Jiang 2023).
- Anaphoric definites with  $\iota^x_S$  are comparable to immediate situation uses of definites.
- Anaphoric definites with  $\iota^x_T$  are comparable to larger situation uses of definites.
- This may be the reason why they have the same form as truly unique/weak definites, i.e., bare noun.
- Bare nouns and Dem-NPs are not really “in competition” (compare Ahn 2019).

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Thank you for listening!

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