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

Min-Joo Kim

Department of English

Texas Tech University, USA



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 book₁ and a magazine. The book₁ was expensive.

(4) Every farmer that owns a donkey₁ beats the donkey₁.

(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) and Jenks (2018); 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. Cinancwu-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.'

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.'
(No spatiotemporal location change but a need for situation-internal identifiability)

Data obtained for Korean cont'd

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

Ecey kay han mali-lul pwassta. (?Ku) kay-ka kwiyeuwessta. (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.'

The findings

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

| | Korean (n=2) | Mandarin (n=2) | Japanese (n=3) | Slovenian (n=2) | Turkish (n=3) |
|------------|-----------------|-------------------|-------------------|--------------------|-----------------------------|
| Template 1 | Bare | Bare | Bare/Dem | Bare | Bare |
| Template 2 | Dem | Dem | Dem | Dem | Dem |
| Template 3 | Bare | Bare | Dem | Bare/Dem | Bare |
| Template 4 | Dem | Dem | Dem | Dem | Dem |
| Template 5 | Dem | Dem | Dem | Dem | Dem (n=2) Bare/Dem (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* ι^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. $\llbracket \text{Dem} \rrbracket = \lambda s \lambda P: \exists s' s \leq s' \mid P_{s'} \mid > 1. \iota x[P_s(x) \& x = y]$

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

My proposal

- Bare noun languages have *two* different null anaphoric type shifters, one for *situation-internally licensed* definites, l^x_s , and one for *quasi-names* licensed at the *text* level, l^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; ∞ indicates spatiotemporal overlap; and T stands for *text*.

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

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

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

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

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_r*.

- (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, to appear).

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 ι^x_S are comparable to immediate situation uses of definites.
- Anaphoric definites with ι^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!

min-joo.kim@ttu.edu