Demonstrative and Bound Variable Anaphora*

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Choi, Young-Sik, 2003, Demonstrative and Bound variable Anaphora. The Linguistic Association of Korea Journal 11(2), 247-263. I claim that ku in Korean is a demonstrative, following Hoji (1988). It will be shown that the symmetry of ku in Korean and that in English regarding bound variable construal follows, given the present proposal for ku as a demonstrative. I will also claim that a demonstrative cannot have a bound variable construal once it cannot refer to an object that is not visible to both the speaker and the hearer, diverging from Hoji (1988) who claims that degree of deicity is what is essentially responsible for the lack of a bound variable construal of a demonstrative. His proposal poses a nontrivial problem with regard to learnability, since degree of deicity presupposes a complete mastery of deicity of demonstratives in a given language, which is not plausible if knowledge of bound variable construal is part of the grammar. The present proposal for visibility as a criterion for bound variable construal of a demonstrative is based on the demonstrative ce which cannot have a bound variable construal unlike ku in Korean and that in English. The former in contrast to the latter cannot refer to an object that is not visible to both the speaker and the hearer, hence cannot be construed as a bound variable.

Key words: visibility, demonstrative, bound, variable

1. Introduction

It is a well-known fact that English third person singular pronoun he

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can have a bound variable construal as shown below in (1-3).

- a. Everyone_i thinks he_i is intelligent.
 b. Everyone_i likes his_i mother.
- (2) Someone_i invited his_i mother to the party.
- (3) a. Who_i invited his_i mother?b. Which student_i invited his_i mother?

When it comes to Korean, native speakers seem to have a bound variable construal more readily with certain types of QPs as compared with other types of QPs as shown in (4–7).¹⁾

- (4) Nwukwuna_i ku_i-uy sensayng-ul coahanta. everyone his teacher-ACC like 'Everyone_i likes his_i teacher.' (Kang 1988: 195)
- (5) ?Motun haksayng_i-i ku_i-uy cito kyoswu-lul coahanta. every student-NOM his-POSS professor-ACC like 'Every student_i likes his_i professor.'
- - '*Most students; like his; professor.'
- (7) *Nwukwunka_i ku_i-uy cito kyoswu-lul coahanta. someone his-POSS professor-ACC like 'Someone_i likes his_i professor.'

¹⁾ It should be noted that the intended reading of *nwukwunka* (someone) is nonspecific in (7). When the wh-word in (8a) is stressed, it seems that the bound variable reading may marginally obtain.

- (8) a.?***Nwu**_i -ka kui -uy cito kyoswu-lul chotayhayss-ni? who-NOM professor-ACC his invited-QM 'Whoi invited hisi professor?'
 - b. **Enu** haksavng_i-i ku_i-uv cito kvoswu-lul which student-NOM his-POSS professor-ACC chotavhavss-ni? invited-QM 'Which student; invited his; professor?'

The generalization that emerges from the paradigm above in (1-8) is that bound variable construal of ku in Korean can obtain when the antecedent is a definite QP or a which-NP, whereas in English the construal obtains without any restriction on the QP type of the antecedent(see Barwise & Cooper 1981, Keenan 1987, Heim & Kratzer 1998, and Larson & Segal 1995 for the discussion various QP types in

the tradition of generalized quantifiers).

The question that somehow failed to receive a due amount of attention is thus why it is that Korean ku and its alleged English counterpart he shows a nonparallel pattern regarding bound variable construal. If Korean ku in (4-8) is a pronoun and is indeed the counterpart of he in (1-3) in English, that the same expressions in both languages exhibit a nonparallel pattern regarding the bound variable construal is certainly a blow to the assumption in the generative grammar that semantic interpretation is not a locus for variation (also see Hong 1985, Hoji 1988, Kang 1988, Suh 1990, among many others for the discussion of ku).

The organization of the paper is as follows: I will review Hoji (1988)'s proposal that ku is a demonstrative in section 2. I will claim in section 3 that the nonparallel pattern regarding the bound variable construal of ku in Korean and he in English has to do with the status of ku as a demonstrative, which corresponds to English that. It will be shown that the generalization holding for bound variable construal for ku in Korean directly extends to English that, further supporting the present thesis that ku is a demonstrative.

I will claim in section 4 that a demonstrative cannot have a bound variable construal if it cannot refer to an object that is not visible to both the speaker and the hearer, crucially based on the behavior of the demonstrative *ce* in korean, which indeed cannot refer to an object not visible to both the speaker and the hearer. Section 5 is the conclusion.

2. Demonstratives in Korean

As a starting point of our discussion here, I will briefly review the claim made by Hoji (1988), which addressed the issue of parametric variation in bound variable anaphora in Korean and Japanese in terms of demonstrative system, which I think is essentially correct. The Korean demonstratives i (this), ku (that), and ce (that) are illustrated below in (9).

(9) a. i kes 'this thing' b. ku kes 'that thing' c. ce kes 'that thing'

i kes in (9a) is a combination of demonstrative i(this) and kes (thing) and it refers to an object close to the speaker. ce kes in (9b), which is a combination of ce (that) and kes (thing), refers to an object far from both the speaker and the hearer. ku kes in (9c), which is a combination of ku (that) and kes (thing), refers to an object close to the hearer. ku kes can also refer to an object, which is not visible both from the speaker and the hearer. Thus the demonstrative ku is on a par with English that in that both can refer to an entity that is or is not visible to both the speaker and the hearer. Korean, however, seems to have a richer demonstrative system as compared with the one in English, which does not have a demonstrative which exclusively refers to an entity that is visible to both the speaker and the hearer.

Hoji's claim is supported by the independent observation made by Kang (1988: 196), according to which historically the introduction of *ku* (he) with meaning akin to *he* in English is fairly recent in Korean and

it is from ku + N which has been used as a referring expression.

Hoji further contends that ku can have a bound variable construal, following the intuition as reported by Kang (1988) and Suh (1990), suggesting that its availability of bound variable construal is directly related to the fact that ku is less deitic than ce in Korean, which cannot have a bound variable construal at all, assuming that deicity is more or less synonymous with having independent reference.

The question that arises regarding his proposal is what degree of deiticity an expression should have such that it does (not) yield a bound variable construal. To the extent that the degree of deicity is the crucial factor in determining the availability of bound variable construal, his proposal invites a nontrivial question in terms of learnability. Given that degree of deicity is a relative notion, a child acquiring the bound variable construal will invariably be subject to the almost unattainable task of having to have a complete list of degree of deicity across languages to master the bound variable construal. Thus if knowledge of bound variable construal is part of the grammar, Hoji's proposal is untenable.

As an alternative for the notion of degree of deicity in Hoji, I suggest that a demonstrative cannot have a bound variable construal once it cannot refer to an object that is not visible to both the speaker and the hearer, crucially based on ce (that) in Korean, which cannot refer to an object not visible both to the speaker and the hearer and hence cannot have a bound variable construal, as will be discussed in section 4.

3. Demonstrative Ku and Bound Variable Construal

It was observed in section 2 that ku can have a bound variable construal with a definite QP type or which-NP as its antecedent. The relevant data are repeated in (10-14).

(10) Nwukwuna_i ku_i-uy sensavng-ul coahanta. his-POSS teacher-ACC everyone like 'Evervone; likes his; teacher.' (Kang 1988: 195)

- (11) ?Motun haksayng_i-i ku_i-uy cito kyoswu-lul coahanta. every student-NOM his-POSS professor-ACC like 'Every student_i likes his_i professor.'
- (12) ?Taypwupwun-uy haksayng_i-i ku_i-uy cito kyoswu-lul most-POSS student-NOM his-POSS professor-ACC coahanta.

 like

 '*Most students_i like his_i professor.'
- (13) *Nwukwunka_i ku_i-uy cito kyoswu-lul coahanta. someone his-POSS professor-ACC like 'Someone_i likes his_i professor.'
- (14) a.?*Nwu_i-ka ku_i-uy cito kyoswu-lul chotayhayss-ni? who-NOM his-POSS professor-ACC invited-QM 'Who_i invited his_i professor?'
 - b. Enu_i haksayng-i ku_i-uy cito kyoswu-lul which student-NOM his-POSS professor-ACC chotayhayss-ni? invited-QM
 'Which student_i invited his_i professor?'

Given the proposal for the *ku* as a demonstrative and the availability of a bound variable construal, one should expect that the same holds for English demonstrative *that*, regarding bound variable construal.

- (15) Every logician_i was walking with a boy near that logician_i's house. (Evans 1977: 491)
- (16) ?*Some logician_i was walking with a boy near that logician_i's house.
- (17) a. *Whoi recommended that linguisti's student for a lucrative

project?

b. Which linguist; recommended that linguist;'s student for a lucrative project? (Hoji 1995)

In fact, the demonstrative that in English can also have a bound variable construal with a definite QP type or a which-NP as its antecedent. What is the common property of the two demonstratives in Korean and English such that they can have a bound variable construal? I suggest that the ability of these demonstratives to refer to an entity that is not visible to both the speaker and the hearer is crucially responsible for the reading. That both demonstratives can refer to an entity not visible both the speaker and the hearer is illustrated by the following: Suppose A and B are talking about John who is away from them such that they cannot see him. A as the speaker can still ask John's wellbeing by saying the following in (18-19):

- (18) How is that guy doing?
- (19) Ku chinkwu ettesskey cinay-ni? yocum that lately how doing-QM guy 'How is that guy doing?'

Thus it is not a surprise that that in English and ku in Korean can have a bound variable construal with the same type of QPs as antecedents as shown above in (10-17), given the fact that both are demonstratives that can refer to an entity not visible to both the speaker and the hearer.

Interestingly, the demonstrative ku in Korean can also have a bound variable construal with a definite QP type with a different domain of quantification too, namely, quantification over time. The following examples in (20-21) involving conditional construction with an indefinite nwukwu (someone) in the antecedent and ku in the consequent have a covarying interpretation of ku:

- (20) John_j-i **nwukwu**_i-lul manna-myen (pro_j) nul ku_i-lul J-NOM who-ACC meet-if always he-ACC cip-ulo chotayhanta.

 house-to invite for every x, x an individual if John meets x, he invites x to his place.
- (21) John_j-i **nwukwu**_i-lul manna-myen (pro_j) taychaylo ku_i-lul J-NOM who-ACC meet-if mostly he-ACC cip-ulo chotayhanta.

 house-to invite for most x, x an individual if John meets x, he invites x to his place.

Assuming the co-varying interpretation of ku (he) is a bound variable reading, with the adverbial quantifier binding it at LF as in (21) it suggests that ku (he) in Korean can be construed as a bound variable anaphora (see Lewis 1975, Heim 1982 for adverbs of quantification). ²⁾ (22) [Always/most]_i if-clause [main clause ku_i]

Interestingly the covarying interpretation does not obtain when the binder is an existential QP over time as shown below in (22).

(23) John_j-i **nwukwu**_i-lul manna-myen (pro_j) kakkum ku_i-lul J-NOM who-ACC meet-if sometimes he-ACC cipu-lo chotayhanta.

house-to invite

'There is a particular individual x such that if John meets x he sometimes invites x to his place.'

²⁾ Of course, that is not the only reading for the sentences in (20-21). They also have the following readings, respectively.

There is a particular x, x an individual such that if John meets x, he always invites x to his place.

There is a particular x, x an individual such that if John meets x, he mostly invites x to his place.

#'for some x, x an individual if John meets x, he sometimes invites x to his place.'

The data above in (20-21) and (23) suggest that essentially the same generalization for bound variable construal ku holds for QPs quantifying over time too, in that the bound variable construal of ku can only with a certain type of QP, namely, a definite QP type over time, nul (always) and taychaylo (mostly) but not kakkum (sometimes). Now let us have a look at another instance of demonstrative ku, i.e., ku kos (the place), which is a combination of ku (the) and kos (place).³⁾ As shown below, it can have a bound variable construal with a definite QP type.

- (24) a. Motun hoysa-uy hyenci pepin_i-i everv company local subsidiary-NOM ku kos_i-uy pwulpep kunlocatul-ul haykohaysssta. workers-ACC that place-POSS illegal fired 'Every company's local subsidiary_i fired its_i illegal workers.'
 - b. Motun tavhak-uv hvenci pwunkvo;-ka university-POSS local extension-NOM ku kosi enehakkwa-lul phyesoyhassta. that place linguistics dept-ACC demolished 'Every university's local extension; demolished its; linguistics department.'
- (25) a. Taypwupwun hoysa-uy hyenci pepin_i-i most company local subsidiary-NOM ku kosi-uy pwulpep kunlocatul-ul haykohaysssta. that place-POSS illegal workers-ACC fired '*Most company's local subsidiaries, fired its illegal workers.' b. Tavpwupwun tavhak-uv hvenci pwunkvo_i-ka university-POSS local extension-NOM most

³⁾ Ku Kos (that place) is singular denoting expression. For the original discussion for a similar expression in Japanese, see Hoji (1995).

ku kosi enehakkwa-lul phyesoyhassta.

that place linguistics dept-ACC demolished

'*Most university's local extensionsi demolished itsi linguistics department.'

That the relation between the antecedent and ku kos (the place) is a bound variable is confirmed by the weak crossover effects (Postal 1971, Chomsky 1976) as shown in (26) below with every-QP in construction with the demonstrative ku, for example.

(26) a. *Ku kos;-uv pwulpep kunloca-tul-i worker-PL-NOM its-POSS illegal hvenci pepin;-ul motun hovsa-uv kopalhavsssta. every company-POSS local subsidiary-ACC sued 'Itsi illegal workers sued every company's local subsidiaryi.' b *K11 kosi enehakkwa-uy kyoswu-ka linguistics dept-POSS professor-NOM that place hyunci pwunkyo_i-lul motun tayhak-uy kopalhayssta. every university-POSS local extension-ACC sued 'Its_i linguistics professor sued every university's local extension_i.'

 $ku\ kos$ (that place) can have a bound variable construal with a definite QP type only can be further supported by the following conditional: The examples as in (27–29) were discussed in Choi (2002). The original examples, however, do not include $ku\ kos$ (that place).⁴⁾

(27) (?) John_j-i **eti**_i-lo oycwulha-myen (pro_j) nul J-NOM where-to go out always

4) The sentences in (27-28) also have the following readings respectively:

There is a particular x, x a place, if John goes out to x, he always returns late from x.

There is a particular x, x a place, if John goes out to x, he mostly returns late from x.

ku kosi-ulopwuthe nusskev tolaonta. that place-from late return 'for every x, x a place if John goes out to x, he returns home late from x.'

- (28) (?)John_i-i eti:-lo oycwulha-myen (pro_i) tavchavlo I-NOM where-to go out mostly kosi-ulopwuthe nusskev tolaonta. that place-from late return 'for most x, x a place if John goes out to x, he returns home late from x '
- (29) (?)John_i-i eti;-lo oycwulha-myen (pro_i) kakkum I-NOM sometimes where-to go out kos;-ulopwuthe nusskey tolaonta. that place-from late return 'There is a particular place x such that if John goes out to x he sometimes returns late from x.' #'for some x, x a place if John goes out to x, he returns home late from x.'

The same seems to hold in English, too. The definite QP always, which quantifies over time can also induce a co-varying construal of the demonstrative that in contrast to the existential QP over time. sometimes as illustrated below

- (30) a. If John meets some student, he always invites that student, to his place.
 - b. If John meets some student, he sometimes invites that student, to his place.

To summarize our discussion thus far, Korean ku (he) behaves like that in English when it comes to the bound variable construal. Thus the symmetry of bound variable construal of the two demonstratives in Korean and English in various constructions is not a mere accident, given the present proposal that ku is from the demonstrative system in Korean.

4. Demonstrative ce and Bound Variable Construal

As noted in section 2, ce in Korean cannot have a bound variable construal unlike ku in Korean and that in English. The point is illustrated by the following examples in (31-34) with ce.

- (31) a. *Motun hyenci pepin_i-i ce kos_i-uy every local incorporation-NOM that place-POSS pwulpep kunlocatul-ul haykohaysssta. illegal workers-ACC fired
 - 'Every company's local subsidiary_i fired its_i illegal workers.'
 - b. *Motun tayhak-uy hyenci pwunkyoi-ka
 every university-POSS local extension-NOM
 ce kosi enehakkwa-lul phyesoyhassta.
 that place linguistics dept-ACC demolished
 'Every university's local extensioni demolished itsi linguistics department.'
- (32) a. *Taypwupwun hoysa-uy hyenci pepin_i-i most company local subsidiary-NOM ce kos_i-uy pwulpep kunlocatul-ul haykohaysssta. that place-POSS illegal workers-ACC fired '*Most company's local subsidiaries_i fired its_i illegal workers.'
 - b. *Taypwupwun tayhak-uy hyenci pwunkyo_i-ka
 most university-POSS local extension-NOM
 ce kos_i-uy enehakkwa-lul phyesoyhassta.
 that place-POSS linguistics dept-ACC demolished
 '*Most university's local extensions_i demolished its_i linguistics department.'

- $(33) *John_i-i$ eti;-lo oycwulha-myen (pro_i) nul I-NOM where-to go out always kosi-ulopwuthe nusskey tolaonta. that place-from late return 'for every x, x a place if John goes out to x, he returns home late from x.'
- $(34) *John_i-i$ eti;-lo oycwulha-myen (pro_i) tavchavlo I-NOM where-to go out mostly ce kos_i-ulopwuthe nusskey tolaonta. place-from late return 'for most x, x a place if John goes out to x, he returns home late from x.'

The above examples in (31-34) do not have a bound variable construal of ce at all. Now let us turn to the question of why ce (that) does not admit bound variable reading at all in contrast to ku in Korean and that in English.

I maintain that it has to do with the fact that the demonstrative ce can refer to an object that is only visible to both the speaker and the hearer, hence no room for suppressing the referentiality of the demonstrative unlike ku and that, both of which can refer to an object that is not visible to both the speaker and the hearer. That is the crucial difference between ce on the one hand and ku and that on the other. That the former in contrast to the latter cannot refer to an object which is not visible to both the speaker and the hearer is clear given the following situation: Suppose A and B are talking about John who is away from them such that they cannot see him. Given this situation, the speaker A cannot ask John's wellbeing by saying the following in (35) with *ce*:

(35) *Ce ettesskev cinay-ni? chinkwu yocum do-QM that guv lately how 'How is that guy doing?'

The present proposal for a necessary correlation of visibility with the availability of bound variable construal seems to find additional cross linguistic support. In Japanese, the demonstrative expression *kare* (he), which used to be widely claimed not to have a bound variable construal is recently reported by an increasing number of researchers to be able to have a bound variable reading as in (36) (see Hoji 1988, Hoji 1991, Takubo 1996 among others).

- (36) a. ?Dono kakusei;-mo Sensvuu kare_i-o which-GEN student-MO last week he-ACC sensei-nil suisensits ore-o okutta. recommended teacher-DAT present-ACC sent 'Every student_i sent a present to the teacher who recommended himi last week.'
 - b. **Dono** noberusyoo zyusyoo sakka_i-mo kare_i-no which-GEN Nobel prize winning author-MO he-GEN hisyo-o turetekita.
 secretary-ACC brought.

 'Every Nobel prize winning author_i brought his_i secretary.'
 (Hoji, Kinsui, Takubo & Ueyama 2002)

Given that *kare* can refer to an individual not visible to both the speaker and the hearer as shown in (37), it is not a surprise that it can have a bound variable construal once its referentiality can be suppressed under the appropriate context. Suppose John wants to know where Bill is. He can address Mary who he believes knows where he is at the moment by asking the following:

(37) Kare-wa do-ko-da?
he-TOP which place-COPULA
'Where is he?'

The Japanese *kare* (he) thus further supports our claim that the notion 'visibility' of a demonstrative is indeed what is responsible for

the bound variable construal. The present proposal thus is superior to Hoji (1988) in that it does not have the techinical problem of determining what degree of deicity is responsible for the lack of the bound variable construal nor does it encounter the problem of learnability since the child when exposed to the data will instantly acquire bound variable construal of a particular demonstrative, given the criteria of visibility as part of his knowledge of language.

5. Conclusion

I claimed that ku in Korean is a demonstrative, following Hoii (1988). I tried to show that the symmetry of ku in Korean and that in English regarding bound variable construal follows, given the present proposal for ku as a demonstrative. I also claimed that a demonstrative cannot have a bound variable construal once it cannot refer to an object that is not visible to both the speaker and the hearer, diverging from Hoji (1988) who claims that degree of deicity is what is essentially responsible for the lack of a bound variable construal of a demonstrative. His proposal, however, poses a nontrivial problem with regard to learnability, since degree of deicity presupposes a complete mastery of deicity of demonstratives in a given language, which is not plausible if knowledge of bound variable construal is part of the grammar. The present proposal is based on the demonstrative ce which cannot have a bound variable construal unlike ku in Korean and that in English. The former in contrast to the latter cannot refer to an object that is not visible to both the speaker and the hearer, hence supporting the present proposal for visibility of a demonstrative as a criterion for the availability of bound variable construal.

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