A morpho-syntactic approach to pronominal binding

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Abstract
In this paper, I propose that the availability of a bound variable reading for pronouns is predictable from their morphological structure of the pronouns. More specifically I argue that noun-containing pronouns cannot be bound variables. My proposal is different from D&W’s (2002) argument in that in their theory, every DPs cannot have a bound variable reading, while in my theory, even DPs can have a bound variable reading as long as they do not contain a noun in it. I show that my proposal has more empirical and conceptual advantages than D&W’s (2002) theory through the binding properties of Korean pronouns. I also deal with the cases discussed in D&W (2002) and show that my proposal can explain those data without the additional category phi-P that D&W (2002) suggest.
A Morpho-syntactic Approach to Pronominal Binding

Heeshin Koak*

1 Introduction

Many researchers have tried to explain the binding properties of pronouns based on their morphosyntactic properties. For example, Wiltschko (2000) argues against the claim that pronouns are universally of category DP (cf. Abney 1987). She proposes that there are two different pronominal forms, AgrP (Agr-pronoun) and DP (D-pronoun), and argues that the category of a given pronoun is determined by morphosyntactic criteria. Déchaine and Wiltschko (2002) (henceforth D&W) develop the idea and propose that the notion “pronoun” is not a primitive; rather, pronoun types are defined morphosyntactically, and in turn, the given pronoun type determines its binding properties.

In this paper, I propose the following hypothesis about the availability of a bound variable reading for pronouns.

(1) a. The availability of a bound variable reading for pronouns is predictable from their morphological structure.
   b. Noun-containing pronouns cannot be bound variables.

The above hypothesis argues that a noun inside a DP blocks the availability of a bound variable reading for pronouns. So in the following nominal structures, only (2b) can have a bound variable reading under hypothesis (1).

(2) a. DP   b. DP   c. NP
       D     D     N
       NP

The above hypothesis is quite different from D&W’s argument. For example, (2b) cannot have a bound variable reading in D&W’s theory. In their theory, DPs are demonstrably definite and consequently function as R-expressions. So they cannot have a bound variable reading. For the pronouns

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that can have a bound variable reading, they introduce a new category, namely Pro-ϕP. But the introduction of this new category is not only unnecessary but also creates another problem. I show the problem in section 2.2.

My proposal is also different from the traditional Binding Theory (Chomsky 1981). The traditional Binding Conditions are not sensitive to the internal structure of a DP. It treats a pronoun as an undivided entity of DP. But my hypothesis is that only pronouns that consist purely of D can have a bound variable reading, whereas a pronoun that has a noun inside it—that is, phrases like (2a)—cannot have a bound variable reading.

In this paper, my primary goal is to show that the above hypothesis (1) explains the bound variable properties of Korean pronouns, while D&W’s proposal faces some problems. I also show that hypothesis (1) has broad empirical coverage in that it can explain the cases of pronominal binding discussed in D&W without positing an additional category like Pro-ϕP.

The paper is organized as follows. In section 2, the binding properties of Korean pronouns are presented. Based on these binding properties, I argue that the morphosyntactic analyses that Wiltschko (2000) and D&W propose cannot explain the binding properties of Korean pronouns without losing a consistent morphosyntactic analysis. In section 3, I show that the binding properties of Korean pronouns can be explained by hypothesis (1) without losing morphosyntactic consistency. In section 4, I extend the analysis to the pronouns of other languages discussed in D&W (2002). By comparing my analysis with that of D&W (2002), I show that my analysis has empirical and conceptual advantages over the competing analyses. In section 5, I present a summary of the discussion.

2 Binding Properties of Korean Pronouns

2.1 Binding Properties

Kang (1988) argues that the Korean 3rd person pronoun ku ‘he’ (and its feminine form kunye ‘she’) can have a bound variable reading outside its local domain.

(3) a. Nukuna, ku$_{ij}$-uy emeni-lul coaha-n-τa.
   everyone he-GEN mother-ACC like-IMPF-DEC
   ‘Everyone, likes his$_{ij}$ mother.’

¹Nonstandard abbreviations: PNE pre-nominal ending, H honorific, FEM feminine, RED reduplicative, DEIC deictic, OBL oblique, C complementizer, DET determiner, INDEP independent pronoun, S subject, O object, TR transitive, DEC declarative, IMPF imperfective, HAB habitual, UNSP unspecified, FC full control.
b. Nukuna, [ku\textsubscript{i}/-lul ccocha-o-nun salam-ul] silh-e ha-n-ta.
   everyone he-ACC chase-come-PNE person-ACC hate-IMPF-DEC
   ‘Everyone, hates the person who chases him\textsubscript{i}.’

   (Kang 1988:193–195)

However, it cannot have a bound variable reading within a local domain as is
shown below.

(4) ^Nukuna\textsubscript{i} ku\textsubscript{i}-lul coaha-n-ta.
   everyone he-ACC like-IMPF-DEC
   ‘Everyone, likes him,’

On the other hand, the 3rd person emphatic pronoun kui ‘HE’ cannot have a
bound variable reading even outside its local domain.

(5) a. Nukuna, kui\textsubscript{ij}-uy emeni-lul coaha-n-ta.
    everyone HE-GEN mother-ACC like-IMPF-DEC
    ‘Everyone, likes HIS mother.’

b. Nukuna, [kui\textsubscript{ij}-lul ccocha-o-nun salam-ul] silheha-n-ta.
   everyone HE-ACC chase-come-PNE person-ACC hate-IMPF-DEC
   ‘Everyone, hates HIM who chases the-person\textsubscript{ij}.’

c. ^Nukuna, kui\textsubscript{-lul} coaha-n-ta.
   everyone HE-ACC like-IMPF-DEC
   ‘Everyone, likes HIM,’

The same contrast can be seen with regard to the honorific 3rd person
pronoun tangsin ‘(H)he’ and its emphatic form kupwun ‘(H)HE’. The honor-
ific 3rd person pronoun tangsin can have a bound variable reading and it is
subject to Binding Condition B as in (6). But its emphatic form kupwun can-
not have a bound variable reading as is shown in (7).

(6) a. Enu sensayng-nim-ina tangsin\textsubscript{ij}-ul conkyengha-nun
    every teacher-H-also (H)he-ACC respect-PNE
    haksayng-ul coaha-n-ta
    student-ACC like-IMPF-DEC
    ‘Every teacher, likes a student who respects (honorific) him\textsubscript{ij}.’

b. *Enu sensayng-nim-ina tangsin\textsubscript{-ul} coaha-n-ta.
    every teacher-H-also (H)he-ACC like-IMPF-DEC
    ‘Every teacher, likes (honorific) him\textsubscript{i},’

(7) a. Enu sensayng-nim-ina kupwun\textsubscript{ij}-ul conkyengha-nun
    every teacher-H-also (H)HE-ACC respect-PNE
Every teacher, likes a student who respects (honorific) HIM.

2.2 Problems under Wiltschko (2000) and D&W’s theories

An important property of the Korean 3rd person pronoun *ku* is that it is homophonous with the Korean demonstrative determiner *ku*. The 3rd person feminine pronoun *kunye* is also headed by the morpheme *ku*, which is homophonous with the determiner *ku*. Other pronouns such as *kui* and *kupwun* are also headed by the same morpheme *ku*.

According to Wiltschko (2000), if a pronoun is homophonous with a determiner, it is most likely a determiner, that is, a DP, used pronominally with an empty NP. She also argues that a pronoun is analyzed as a DP (D-pronoun) when it is headed by a syntactically visible determiner. According to these two criteria, the four pronouns, *ku, kunye, kui, and kupwun*, are to be analyzed as DPs. Furthermore, according to Wiltschko (2000), DPs cannot have a bound variable reading. But the prediction is not borne out with respect to the Korean non-emphatic pronouns, for *ku* and *kunye* can have a bound variable reading when they are outside their local domain (see (3)).

The binding properties of Korean pronouns pose a problem under D&W’s theory too. According to their theory, a (pro-)DP is predicted to have the syntax of a determiner and always contain φP and NP. They also argue that DPs are demonstrably definite and cannot be construed as a bound variable. Then Korean *kui* and *kupwun* must be analyzed as DPs, since they contain an NP and cannot be construed as a bound variable. But Korean *kukunye* and *tangsin* must be analyzed as φP, since they can be construed as a bound variable and they are subject to Binding Condition B. The following trees show the structures.
In the above trees, the same morpheme \( ku \) must be placed in different heads. In (8a), \( ku \) belongs to \( \phi \), while in (8b) the same morpheme \( ku \) belongs to D. This inconsistency results from the assumption that different binding properties must be represented by different maximal projections which are associated with a distinct syntactic head. So in their theory, if a pronoun can be construed as a bound variable, then it can never be a DP even if it contains a determiner, which is thought to be in D. But the binding properties of Korean pronouns show that this is not correct.

3 Analysis of Korean Pronouns

I propose that Korean pronouns \( ku/kunye \) and \( tangsin \) are in D, while \( kui \) and \( kupwun \) are made up of two independent heads as shown below.

The above structures represent the fact that the \( ku \) in \( ku/kunye \) and \( kui/kupwun \) is the same morpheme and belongs to the same head D. Note that \(-nye\) in \( kunye \) is different from \(-i/-pwun\) in \( kui/kupwun \) in that the former is a bound morpheme, while the latter are independent morphemes as is shown below.
(10) A Paradigm of nye and i/pwun

<table>
<thead>
<tr>
<th></th>
<th>i ‘this’</th>
<th>ce ‘that’</th>
<th>adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>nye</td>
<td>*i-nye ‘this she’</td>
<td>*ce-nye ‘that she’</td>
<td>*nappun nye ‘a bad woman’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*cohun nye ‘a good lady’</td>
</tr>
<tr>
<td>i</td>
<td>i-i ‘this person’</td>
<td>ce-i ‘that person’</td>
<td>nappun i ‘a bad person’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>cohun i ‘a good person’</td>
</tr>
<tr>
<td>pwun</td>
<td>i pwun ‘this person(H)’</td>
<td>ce pwun ‘that person(H)’</td>
<td>nappun pwun ‘a bad person(H)’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>cohun pwun ‘a good person(H)’</td>
</tr>
</tbody>
</table>

The above paradigm shows that -nye in kunye ‘she’ can be used only as a bound morpheme. It cannot be used with other demonstrative determiners nor can it be modified by an adjective. But -i and -pwun do not have such restrictions. They can be modified by adjectives as well as other demonstrative determiners such as i ‘this’ and ce ‘that’. So we can see that -nye is different from -i and -pwun.

However, tangsin cannot be treated like ku/kunye, since it does not contain the determiner ku. Then there arises a question: why should it be analyzed as D, not N? There is independent evidence that tangsin should be analyzed as D, and not N.

Korean has a distinctive quantifying expression enu ~na ‘every ~’. The particle -na is attached to an NP immediately following the quantifying expression enu. Only an NP can come between the quantifying expression enu and the particle na.

(11) a. enu (*ku-) salam-ina ‘every (*the) man’
    b. enu (*ku-) pwun-ina ‘every (*the) person(H)’
    c. *enu ku/kunye-na ‘every he/she’
    d. *enu tangsin-ina ‘every he(H)’

The above paradigm shows that after the quantifying expression enu, only an NP can be used. The example (11d) shows that tangsin cannot be used after enu, which means that tangsin cannot be analyzed as an NP.

With the above proposal that ku/kunye and tangsin belong to D, while kui and kupwun are made up of D+NP, the bound variable property of Korean pronouns can be explained straightforwardly. As ku/kunye and tangsin are DPs without an NP complement, they can have a bound variable reading. But kui and kupwun contain a noun, so they cannot have a bound variable reading according to hypothesis (1).
4 Extending the Analysis

4.1 Halkomelem\(^2\) Independent Pronouns

Halkomelem independent pronouns are subject to Binding Condition C as is shown below.

(12) *Halkomelem:* Wiltschko (1998a:444)

a. súq’-t-es te swíyeqe, [te kopú-s\(_{ij}\)]
   "search-TR-3SG DET man DET coat-3POSS"
   ‘The man, was looking for his, coat’

b. súq’-t-es te swíyeqe, [te kopú-s tútł’o\(_{ij}\)]
   "search-TR-3SG DET man DET coat-3POSS DET-3SG"
   ‘The man, was looking for his\(_{ij}\) coat’

The 3rd person possessive marker -s can be read with the antecedent in (12a), but the independent pronoun tútł’o cannot be coreferent with the antecedent in (12b). The following example shows that Halkomelem independent pronouns cannot have a bound variable reading as well as a coreferent reading.


*[Mékw’ye swíyeqe], kwákw’ets-et-es te stóles-s
   every-DET.PL man looking-TR-3SG DET wife-3.POSS
   [tú-tl’ölem],
   DET-3PL
   ‘All men, are looking at their, wives.’

Given the above binding property, D&W argue that Halkomelem independent pronouns are DPs with φP as is shown in (14).

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\(^2\)Halkomelem is a Central Coast Salish language, spoken in British Columbia. It is a head-marking language, i.e. full DP-arguments are optional. Halkomelem has a set of independent (emphatic) pronouns, which have the same syntactic distribution as full (DP)-arguments (from Wiltschko 2000).
The above structure shows that the second part of the pronoun tl’ò belongs to φ, but not N.
However, the evidence for this argument is not strong. The argument comes from the following example.

(15) **Halkomelem:** Galloway (1993:174)

\[\text{Tl’ó-cha-l-su} \quad \text{qwemcwe-t} \quad [\text{thú-} \text{tl’ò} \quad \text{q’ami}]_{\text{ARG}}.\]

then-FUT-1SG-so hug-TR DET.FEM-3SG girl

‘Then I’m going to hug that girl.’

The reason for analyzing tl’ò as being in φ instead of N is because the independent pronoun thú-tl’ò can function as an article and it comes before another NP q’ami. But the fact that another noun q’ami can follow the independent pronoun does not guarantee that tl’ò cannot be in N position. For example, Japanese personal pronouns, which are argued to be NP (see Noguchi (1997) and references cited there), can be followed by another noun as in the following example.

(16) **Japanese:** Noguchi (1997:780)

a. watasi-tati gengogakusya
   I-PL linguist
   ‘we linguists’

b. anata-tati ronrigakusya
   you-PL logician
   ‘you logicians’

So I propose that the second part of the pronoun belongs to N, eliminating the need to introduce the new category φP. Then the structure of thú-tl’ò q’ami ‘that girl’ would be like one of the following two structures.
(17) a. DP                                                b.          DP
        D                NP                                        DP                 D'
        DP            N                        D             NP    D           NP
        D            NP   q’amí                   thú             N                    N
        thú           N                                                 tl’ò                 q’ami

If the independent pronouns of Halkomelem contain a noun, the proposed hypothesis (1) correctly predicts that they cannot have a bound variable reading.

4.2 Shuswap Independent Pronouns

Shuswap independent pronouns can have a bound variable reading unlike Halkomelem. D&W (p. 414) argue that Shuswap independent pronouns are of category \(\phi\)P. Their argument depends on the following 3 properties. First, Shuswap independent pronouns have neither D syntax nor N syntax. Second, they can be predicates or arguments. Third, they act like Binding Condition B pronouns.

But their arguments have some problems to consider. First of all, the third property might be a supporting argument for their claim that Shuswap independent pronouns are not DPs if we accept their claim that DPs cannot be bound even outside their local domain. But the property cannot be a counter argument to traditional binding theory or the theory proposed in this paper, since those theories assume that pronouns can be DPs even if they are bound outside their local domain.

With respect to the second property, it is controversial that DPs can only be an argument and not predicate. There are many arguments that DPs can be both (see Stowell 1989, Longobardi 1994 among others). So the property that Shuswap independent pronouns can be either predicates or arguments does not guarantee that they cannot be DPs.

Lastly, they argue that Shuswap independent pronouns do not have D syntax based on the following data.

\[\text{Shuswap belongs to the Northern Interior branch of Salish, spoken in the interior of British Columbia. Like Halkomelem, Shuswap is a head-marking language (full DP arguments are optional) and it is predicate initial (from D&W).}\]
(18) **Shuswap:** Lai (1998:28, 11)

a. [Wi.w.k-t-Ø-en]_{PRED} [re n-tséts-weʔ]_{ARG.}
   see(RED)-TR-3SG.O-1SG.S DET 1SG-EMPH-DEIC
   ‘I saw him.’

b. [Wi.k-t-Ø-s]_{PRED} [re John]_{ARG.}
   see-TR-3SG.O-3SG.S DET John
   ‘S/he saw John.’

The Shuswap independent pronoun *ntsétsweʔ* can be preceded by a determiner *re*. The determiner *re* can also be used before a proper name *John*, which is assumed to be an NP. So they argue that if Shuswap pronouns were themselves DPs, it would not be possible for them to be preceded by another determiner *re*.

However, there is some evidence that the determiner-like element *re* is not a determiner but rather a case marker. The following is a table of Shuswap determiners.

(19) **Determiners of Shuswap** (adapted from Gardiner 1993:24)\(^4\)

<table>
<thead>
<tr>
<th></th>
<th>Proximal</th>
<th>Distal</th>
<th>Irrealis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Case</td>
<td>re- (ɣ-)</td>
<td>l-</td>
<td>k-</td>
</tr>
<tr>
<td>Oblique Case</td>
<td>te- (tə-) / ʔχ</td>
<td>tk-/ʔχk-</td>
<td></td>
</tr>
</tbody>
</table>

Gardiner (1993) presents some arguments that Shuswap proclitic determiners are actually case markers. First, the distinction between direct and oblique case marking is syntactically determined. There is a correlation between a direct case marker and person marking. So in intransitive clauses where one argument is marked for person on the predicate, there can be at most one nominal with direct case. This is confirmed in the intransitive construction in (21) and the middle in (22).

(20) **Shuswap:** (here and below adapted from Gardiner 1993)

m-ʔek-Ø re-xpēʔe te-skwelk’wel’t
PERF-go-3SG.S DET-grandfather OBL-snowmountains
‘Grandfather went to the snowmountains.’

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\(^4\)Parentheses indicate the original transcription used in Gardiner (1993).
In (20) and (21), only the nominal linked to person marking on the predicate takes the direct case marker re. Any additional nominals not linked to person marking necessarily take oblique determiners. Gardiner (1993) presents more examples of possessive constructions, passive constructions, transitive clauses and applicative constructions showing the same property.

Another important property to support the claim that the so called determiners in Shuswap are actually case markers is that all of them can be used to introduce clauses. For example, direct determiners mark the dependent clause in incomplete constructions.

(22) wʔex re-píx-mes
    exist DET-hunt-UNSP 3SG.DEP
    ‘He is hunting.’

In addition, the distal determiner l is common in factive constructions.

(23) č-lx-m-st-O-étń l-čúm’qs-n-O-s
    HAB-know-UNSP-CAUS-3SG.O-1SG.S.+C DET-kiss-1SG.FC-3SG.O-3SG.S
    re-núxwenxw DET-woman
    ‘I know that he kissed the woman.’

The above data indicate that Shuswap determiners are much like case markers. If Shuswap determiners are in fact case markers, then D&W’s argument that Shuswap independent pronouns do not have DP syntax cannot be maintained. The presence of the case marker re does not mean that the element after it cannot be a DP, since a case marker can be attached to an NP, DP and even to a clause.

I propose that Shuswap independent pronouns are DPs without an NP complement. Then hypothesis (1) predicts that Shuswap independent pronouns can have a bound variable reading and this prediction is borne out.

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Shuswap shows another characteristic property of languages which have case markers. Following Kuipers (1974), Gardiner (1993) states that Shuswap has a relatively free word order. This property is typical of languages like Korean and Japanese, which have case markers.
[Xwexwéyt], re swet xwis-t-Ø-e [newiʔ-s], re
all DET who like-TR-3SG.O-3SG.S EMPH-3 DET
qéʔtse-si.
father-3.POSS
‘Everyone, likes HIS, father.’

4.3 Japanese Pronouns kare/kanozyo

D&W argue that Japanese kare/kanozyo ‘he/she’ is a Pro-NP, which is predicted to have the syntax of NPs. As for its binding property, they argue that Pro-NPs are inherently constants, so they cannot function as bound variables.


a. *Daremo i-ga kare-i-no hahaoya-o aisite-iru.
everyone-NOM he-GEN mother-ACC love-PRES
‘Everyone, loves his, mother.’

every woman-also she-NOM genius-COP C think-PRES
‘Every woman, thinks that she, is a genius.’

However, D&W’s argument that NPs are inherently constants and constants cannot function as bound variables is not a syntactic argument but a semantic one. By contrast, if we accept the argument that Japanese kare is syntactically a noun (Noguchi 1997, D&W and many others), hypothesis (1) correctly predicts that Japanese kare cannot have a bound variable reading. The ungrammaticality of (25) is explained syntactically.

4.4 English Pronouns

D&W argue that English 1st and 2nd person pronouns I/you are DPs, whereas 3rd person pronouns he/she/they are φPs. But analyzing the 1st and 2nd pronouns as DPs causes a problem under D&W’s framework. According to their theory, DPs cannot have a bound variable reading. They propose the following example to support their argument.

(26) *D&W (p. 423)

I, know that John saw me, and Mary does too.
=a. ‘I know that John saw me, and Mary knows that John saw me.’
≠b. ‘I know that John saw me, and Mary knows that John saw her.’
The above sentence involving VP-ellipsis can receive a strict identity reading (26a), but not a sloppy identity reading (26b).

However, whether the sloppy identity reading is indeed excluded with the 1st person and 2nd person pronouns is not clear. According to Rullman (2004), the sloppy identity reading for the pronouns is possible in many cases.

(27) Rullman (2004:162)
   a. I got a question I understood, but John didn’t.
   b. I hope that I will win, but of course you do too.
   c. You may think you’re the smartest person in your class, but so do most of the other kids.

Based on the above data, Rullman (2004) argues that the sloppy identity reading of the 1st and 2nd person pronouns is possible in English. French examples presented by D&W also show that the sloppy identity reading of the 1st and 2nd person pronouns in French is possible, although the judgment on the French equivalent of (26) varies from speaker to speaker. This fact supports Rullman’s claim that both in English and French, sloppy identity readings of 1st and 2nd person pronouns are possible in principle, although individual speakers may differ in the extent to which they accept such examples.

In summary, D&W’s arguments that English 1st and 2nd person pronouns, which are DPs without an NP complement, cannot function as a bound variable and they are subject to Binding Condition C cannot be maintained. By contrast, the binding property of English 1st and 2nd person pronouns can be explained under the hypothesis in (1), which argues that only NP plays a role in disallowing the bound variable reading of pronouns.

5 Conclusion

The central claim of this paper is that the failure of a bound variable reading for pronouns is predictable from the morphological structure of the pronouns. Specifically, I propose that all noun containing pronouns cannot have a bound variable reading. With this hypothesis, we can correctly explain the different binding properties of the Korean pronouns ku/kunye/tangsin and kui/kupwun, as well as pronouns in other languages. Moreover, the hypothesis makes it possible to explain the binding properties of various pronouns without positing an additional syntactic category like φP, which is proposed in D&W.
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