# On the nature of null WH-phrases in Korean*

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**Chung, Daeho. 2013. On the nature of null WH-phrases in Korean.** *Linguistic Research* 30(3), 473-487. Although both wh-phrases and corresponding question endings in Korean may be overt or covert, their combination is not entirely free. As observed in Chung (2008), an overt question ending requires an overt wh-phrase, though not vice versa. The restriction in wh-questions in Korean makes an interesting implication as to the theory of null arguments in the language. This paper tries to show that, as far as the distributional restriction on the null argument associated with a wh-phrase is concerned, a pro approach to null arguments is favored over an ellipsis or (flexible) topic approach. This is because the former approach only requires an independently motivated condition on the relation between a wh-phrase and its corresponding question ending, while the latter two do not properly account for the restriction on the null argument associated with a wh-phrase. **(Hanyang University)**

**Keywords** null argument, null-wh-phrase, ellipsis, null topic, pro, sloppy-like reading

## 1. Introduction

There are three major theories entertained in the literature to characterize the properties of null arguments in a language like Korean and Japanese: ellipsis analyses (VP ellipsis analyses: Otani and Whitman 1991, Huang 1991; argument ellipsis analyses: Kim 1999, Saito 2007, Takahashi 2008, Lee and Kim 2010); (flexible) null topic analyses (Huang 1984, Hong 2012, 2013); and pro analyses (Hoji 1998, Ahn 2012, Ahn and Cho 2010, 2012, Moon 2010). As will be discussed

in Section 2, the null counterpart of a wh-phrase (henceforth WP) is subject to some syntactic restrictions in its distribution, which makes an interesting implication as to the theory of null arguments. This paper tries to show that, as far as the elliptical behaviors of WPs in Korean are concerned, pro analyses are favored over ellipsis or topic analyses.

This paper is organized as follows. Section 2 repeats from Chung (2008) some restrictions on the distribution of wh-phrases in Korean. Section 3 and Section 4 show that ellipsis analyses and (flexible) topic analyses do not properly account for the restrictions discussed in Section 2 and some additional data involving a null-wh-phrase. Section 5 illustrates that all the relevant data can be accommodated under a pro analysis. Section 6 concludes the paper.

## 2. Restrictions on the distribution of WH-phrases (Chung 2008)

Chung (2008) observes that, although both a WP and its question ending (QE) in Korean can be overt or covert, the combination of an overt QE and a covert WP leads to an ungrammatical status, as summarized in (1) and exemplified in (2) through (6) below.

(1)

|          | Overt QE | Covert QE |
|----------|----------|-----------|
| Overt WP | √ (I)    | √ (II)    |
| Covert WP | * (III)  | √ (IV)    |

**<Pattern I: overt WP and overt QE>**

(2) Mary-ka  nwukwu-lul    manna-ess-no?
    M.-NOM who-ACC        meet-PST-QE$_{wh}$
    'Who did Mary see?'

**<Pattern II: overt WP and covert QE>**

(3) A:  Mary-ka    John-ul    manna-ess-ta.
        M.-NOM    J.-ACC    meet-PST-DE
        'Mary saw John.'

B:    encey [~~Mary-ka    John-ul    manna-ess-no~~]?

when    M.-NOM    J.-ACC    meet-PST-QE$_{wh}$

'When (did Mary see John)?'

**&lt;Pattern III: covert WP and overt QE&gt;**

(4) A1: Mary-ka    nwukwu-lul    manna-ess-no?

M.-NOM    who-ACC    meet-PST-QE$_{wh}$

'Who did Mary see?'

B1: Mary-ka    Tom-ul    manna-ess-ta.

M.-NOM    Tom-ACC    meet-PST-DE

'Mary saw Tom.'

A2: kulemyen,    Sue-nun    *(nwukwu-lul)    manna-ess-no?

then    S.-TOP    who-ACC    meet-PST-QE$_{wh}$

(Intended) 'Then (who) did Sue see?'

**&lt;Pattern IV: covert WP and covert QE&gt;[1]**

(5) A:    Mary-ka    John-kwa    kyelhonha-ess-ta.

M.-NOM    J.-with    marry-PST-DE

'Mary got married to John.'

B:    kulem,    Sue-nun    [~~nwukwu-wa    kyelhonha-ess-no~~]?

then    S.-TOP    who-with    marry-PST-QE$_{wh}$

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[1] This pattern seems to require the presence of a contrastive topic marker: (5B) and (6), for example, are ungrammatical with a nominative marker instead of the topic marker. Bum-Sik Park (p. c.) suspects that these examples may not involve a full sentence structure as special sentence fragments. Notice, however, case-marked elements can precede the contrastive-topic-marked element:

(i)A1: John-i    sakwa-lul    Mary-eykey encey cwu-ess-ni?

J.-NOM    apple-ACC M.-DAT    when give-PST-QE

'When did John give Mary apples?'

B:    ecey.

yesterday

'Yesterday.'

A2: kulem, Bill-i    sakwa-lul    Mary-eykey-nun?

then    B.-NOM apple-ACC M.-DAT-TOP

(Intended) 'Then, when did Bill give Mary apples?'

To the extent that sentence fragments with case-marked elements involve a syntactic structure, Pattern IV may have a full-fledged sentence structure. No matter how the construction turns out to be, discussions in this paper will not be subtantially affected, as this paper mainly addresses the restriction on Pattern III.

'Then (to whom did) Sue (get married)?'

(6) [Mary-ka      e manna-n]   salam-un   [n̶w̶u̶k̶w̶u̶-̶i̶-̶n̶-̶k̶o̶]? (Chung 2001)
    M.-NOM        meet-PNE   man-TOP   who-be-PRES-QE_wh
    '(Who is) the man that Mary saw?'

When it comes to embedded wh-questions, the distribution is far more restricted. Embedded wh-questions must carry an overt QE. (In fact, all other clausal types also require a mood marker to be overtly realized.) The overt QE requires an overt WP to be overtly present in an embedded interrogative clause, as the following discourse example illustrates:

(7) A: na-nun  Chelswu-ka    nwukwu-lul   manna-ess-nunci
      I-Top   Ch.-NOM      who-ACC      meet-PST-QE_wh
      al-n-ta.
      know-PRES-DE
      'I know who Chelswu met.'
   B: kulem,  (ne-nun)    Yengi-ka *(nwukwu-lul)   manna-ess-nunci-t
      then     you-TOP    Y.-NOM    who-ACC    meet-PST-QE_wh-also
      al-na?
      know-QE_yes/no
      (Intended) 'Then, do you also know who Yengi met?'

Although the WP in (7B) seems to be potentially retrievable from the previous discourse, its suppression leads to an ungrammatical status.

To sum up, WPs and QEs may or may not be overtly realized in Korean wh-questions but the correlative relation between the two does not entertain entire freedom. The combination in Pattern III, i.e., the combination of an overt QE and a covert WP, is prohibited, while all other three patterns are acceptable in Korean syntax in the matrix. In the embedded context, Pattern I is uniquely acceptable due to the requirement of overt presence of a mood marker in the embedded context.[2]

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[2] This generalization has to be modified when more than one WP is involved. See Section 5 (or Chung 2008) for a brief discussion on additional wh-phrase effects.

## 3. Ellipsis analyses fail

Ellipsis analyses fail to account for the contrast between Pattern III vs. all the other three patterns. At syntax (at least at LF, if ellipsis is taken as a process of PF suppression), all four patterns have the same syntactic structure (including all the necessary formal features) and so the contrast is unexpected. There is no reason to block the examples of Pattern III. For example, (7) will have the following representation in (7)':[3]

(7)'A:  na-nun    Chelswu-ka nwukwu-lul manna-ess-nunci al-n-ta.
        I-TOP     Ch.-NOM    who-ACC    meet-PST-QE$_{wh}$ know-PRES-DE
        'I know who Chelswu met.'

   B:   kulem, (ne-nun)    Yengi-ka    (~~nwukwu-lul~~)  manna-ess-nunci-to
        then   you-TOP     Y.-NOM      who-ACC       meet-PST-QE$_{wh}$-also
        al-na?
        know-QE$_{yes/no}$
        (Intended) 'Then, do you also know who Yengi met?'

(7B)' will bear no problem, as no violation occurs at the relevant level of wh-licensing.

In addition, ellipsis analyses make an incorrect prediction as to the examples like (8) below, where the null argument is associated with a saturated WP:

(8) Mary-ka     [**mwues**]$_i$-ul sa-ess-nunci     molu-ciman,   na-to **e**$_i$
    M.-NOM      what-ACC     buy-PST-QE$_{wh}$   not;know-but,  I-also
    sa-ko.siph-ta.
    buy-want-DE
    'I do not know the book what Mary bought, but I would like to buy it, too.'

WPs can be suppressed as far as no wh-reading is required. If e$_i$ in (8) were an instance of ellipsis (PF suppression) and formally equivalent to its antecedent *mwues*$_i$,

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[3] (7B)' is the representation due to an NP/DP ellipsis analysis. I do not discuss a VP ellipsis analysis, as this analysis will bear exactly the same problems pointed out in this section.

except for the phonetic features, then the whole sentence would be expected to be ungrammatical as there is no appropriate QE for the (elided) WP to be linked to.[4]

To sum up, ellipsis analyses do not properly account for the unavailability of Pattern III discussed in Section 2. They face an additional problem with respect to the distribution of a null argument linked to a saturated wh-phrase.


## 4. (Flexible) topic analyses fail, too

It will be shown in this section that topic analyses do not straightforwardly account for the unavailability of Pattern III discussed in Section 2. At first glance, sentences like (4A2) seem to be easily ruled out under a topic analysis, as a WP in Korean cannot usually function as a topic (a *nun*-marked phrase) due to the informational characteristics.[5] One might attribute the lack of Pattern III to the anomaly of the information structure: WPs (sort of new information as focus) cannot be topic (sort of old information).

There seems to be, however, no *a priori* reason to rule out a topic-marked WP. A *nun*-marked phrase can contain a wh-expression, as exemplified below:

(9) [[e **mwues**-ul   kaci-n]      salam-**un**]] pihayngki-lul tha-l.swu.eps-ni?
        what-ACC   carry-PNE   man-TOP    plane-ACC    ride-cannot-QE
    (Lit) 'the man that carries what cannot ride a plane?'

It is worth noting that the *nun*-marked expression in (9) does not necessarily get interpreted as a contrastive topic (unlike the example in footnote 5). Thus it can be analyzed as a topic containing a wh-expression.

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4  One may dodge the problem by saying that the null argument in this context is a sort of e-type pronoun in the sense of Evans (1980), and is different from the typical null argument. But then a unified theory cannot be guaranteed.

5  For example, a WP in Korean does not bear a topic-marker – *nun* in general:

(i) *nwukwu-nun Suni-ka    manna-ess-no?
      who-TOP      S.-NOM   meet-PST-QE
      (Intended) 'Who did Suni see?'

Sentences like (i) sound unacceptable unless the WP is interpreted as a contrastive topic.

Despite its potential function as a topic, however, a complex nominal expression containing a WP cannot be suppressed, as shown below:

(10)  A1: **[mwues-ul  kaci-n      salam-i]**$_i$   NY-hayng  pihayngki-lul
          what-ACC  carry-PNE  man-NOM  NY-for     plane-ACC
          tha-ess-no?
          ride-PST-QE
          'What is it that the man who carries it rode on the plane for NY?'
      B:  kwenchong.
          'a pistol.'
      A2: #kulem,  e$_i$ lenden-hayng  pihayngki-lul  tha-ess-no?
          then          London-for    plane-ACC      ride-PST-QE
          'What is it that the man who carries it rode on the plane for London?'

Notice that (10A2) is ungrammatical, even when the refential content of e$_i$ can be retrievable from the previous discourse. Thus, a topic analysis of a null argument (or more precisely a variable analysis of a null argument associated with a null topic) seems to be inappropriate.

Even with Hong's (2013) new definition of topic, called a *flexible topic*, which is defined as a sentence initial bare (not −*nun* marked) nominal expression followed by a pause, a topic may contain a WP:

(11)  [[**nwu**-ka      e ssu-n]        chayk] Mary-ka    ilk-ko. iss-ni?
          who-NOM       write-PNE  book   M.-NOM     read-PROG-QE
       (Lit) 'Mary is reading the book who wrote?'

No matter which definition of topic is taken, a topic phrase does not absolutely exclude a WP. Thus, topic analyses do not seem to properly account for the non-availability of Pattern III.

Null arguments linked to a saturated WP will be problematic for the flexible topic analysis as well. Consider (12), which is identical to (8), except for the complexity of the relevant WP, and its possible representations in (12)' below:

(12)   Mary-ka **[nwu-ka    ssu-n   chayk]**$_i$-ul   sa-ess-nunci   molu-ciman,
       M.-NOM who-NOM  wrote   book-ACC  buy-PST-QE$_{wh}$ not;know-but,
       na-to **e**$_i$   sa-ko.siph-ta.
       I-also     buy-want-DE
       (Lit) 'I do not know the book who wrote Mary bought, but I would
       like to buy it, too.'

(12)'  a. Mary-ka **[nwu-ka ssu-n chayk]**$_i$-ul    sa-ess-nunci   molu-ciman,
          **[nwu-ka ssu-n chayk]**$_i$    na-to **e**$_i$     sa-ko. siph-ta.
       b. **[nwu-ka ssu-n chayk]**$_i$ Mary-ka **[nwu-ka ssu-n chayk]**$_i$-ul
          sa-ess-nunci molu-ciman, na-to **e**$_i$ sa-ko. siph-ta.

Neither of the two representations in (12)' is free of problems. The presumed topic in (12a)' (the second instance of *[nwu-ka ssu-n chayk]*$_i$) suffers from a wh-licensing problem as the WP contained in it will not be properly linked to a QE. Furthermore, it cannot be a flexible topic, as it does not take a sentence initial position. The presumed topic in (12b)' (the first instance of *[nwu-ka ssu-n chayk]*$_i$) also suffers from a similar wh-licensing problem. Furthermore it leads to a binding problem, as the second instance of *[nwu-ka ssu-n chayk]*$_i$ will violate the Binding Theory (C).

Topic analyses will also have difficulty accounting for the availability of a multiple null argument construction like the one below:

(13)   A:   Mary$_i$-ka    nwukwu-eykey  chayk$_j$-ul   cwu-ess-ni?
            M.-NOM   who-DAT        book-ACC  give-PST-QE
            'who did Mary give books to?'
       B:   e$_i$ Tom-eykey e$_j$    cwu-ess-ta.
              T.-DAT         give-PST-DE
            'She gave it to Tom.'

For a topic analysis to be tenable, a multiple topic construction should be acceptable. No matter of which definition of topic is taken (topic as a *nun*-marked phrase or as a sentence intial bare element followed by a pause), however, multiple topics do not seem to be possible. For example, neither of the sentences in (14) below can be a natural answer to the question in (13A).

(14)   a. ?*Mary-nun   chayk-un   Tom-eykey cwu-ess-ta.
              M.-TOP     book-TOP   T.-DAT     give-PST-DE
        b. ??Mary   chayk   Tom-eykey cwu-ess-ta.
              M.     book     T.-DAT     give-PST-DE

(14a) is ungrammatical unless the second *nun*-marked element is understood as a contrastive topic. (14b) sounds hardly acceptable. Even when it is judged to be acceptable, the flexible topic analysis faces a theoretical problem. Not being in a sentence initial position, the element like *chayk* in (14b) cannot constitute a (flexible) topic.

## 5. Pro analyses are successful

According to Ahn & Cho (2012) and Ahn (2012), a quantificational phrase (QP) takes the form of [$_{QP}$ NP Q], where Q varies over ALL, EVERY, ONE, **WH**, etc., and a null argument results when pro replaces the NP part, not the whole QP. Then (4) will have the following structure in (15):

(15)   A1: Mary-ka     [$_{QP}$ [$_{NP}$ e ] [$_{Q}$ nwukwu]]-lul  manna-ess-no?
              M.-NOM                      who-ACC       meet-PST-QE$_{wh}$
              Who did Mary see?'
        B1: Mary-ka    Tom-ul      manna-ess-ta.
              M.-NOM   Tom-ACC   meet-PST-DE
              'Mary saw Tom.'
        A2: *kulemyen, Sue-nun [$_{NP}$ pro]   manna-ess-no?
              then        S.-TOP                 meet-PST-QE$_{wh}$
              (Intended) 'Then who did Sue see?'

Notice that there is no expression containing a wh-feature to be linked to the QE in (15A2), an instance of a vacuous operator, which can account for its ungrammatical status of the expression.

Pro analyses also nicely account for the grammatical status of (8), which will be represented as follows:

(16)   Mary-ka [QP [NP  e  ] [Q **mwues**]]-ul sa-ess-nunci      molu-ciman,
       M.-NOM                  what-ACC  buy-PST-QE<sub>wh</sub>   not;know-bu
       na-to [NP pro] sa-ko. siph-ta.
       I-also          buy-want-DE
       'I do not know the book what Mary bought, but I would like to buy
       it, too.'

As it refers back to the NP part of QP (WP in this case), pro does not contain a wh-feature, and there arises no wh-licensing problem at the matrix clause.

So far we have seen that, as far as null arguments associated with a WP, a pro analysis is favored over ellipsis analyses or (flexible) topic analyses. However, there is an issue that needs to be addressed as to a special property of null arguments of WPs which behave differently from null arguments associated with other quantifiers.

According to Ahn and Cho (2012) and Ahn (2012), the so-called sloppy-like reading for a null argument associated with a quantificational expression is produced due to an pragmatic explicature in the sense of Sperber and Wilson (1986). For example, a null argument that refers back to a universal quantifier is represented simply as [NP pro], and it does not bear any quantificational force. Its apparent universal reading may emerge due to a pragmatic explicature, not due to a formal representation of Q. The absence of a formal representation of a quantificational force in a null argument is based on the fact that the quantificational force can be cancelled.

A question that arises as to the lack of Pattern III discussed in Section 2 is why, unlike other QPs, a null argument associated with a WP does do produce such a pragmatically driven reading? In other words, why isn't it possible for sentences like (4A2), for example, to produce a wh-reading due to a pragmatic explicature?

In fact, a null argument associated with a WP does seem to be able to convey a wh-reading, or more precisely a wh-like reading, when an additional WP is present, as noted by Chung (2008):

(17)   ne-nun       nwu-ka      encey ttena-ess-nunci  cosaha-ko,
       you-TOP      who-NOM     when  leave-PST-QE      investigate-and
       ne-nun       (nwu-ka)    etilo ttena-ess-nunci  cosaha-ela.
       you-TOP      (who-NOM)   where leave-PST-QE      investigate-IMP

(Intended) 'You, examine who left when, and you, examine they/who left where.'

The parenthetical element in the second conjunct is interpreted either as the same or a different set of the people denoted by WHO in the previous conjunct, which indicates that the wh-reading *can* be introduced by a pragmatic explicature at least when a multiple wh-question is involved. Thus, we appear to be in a paradoxical situation. To account for the ungrammatical status of the examples like (4A2), it seems to be necessary to assume that a null counterpart of a WP (unlike other quantificational expressions) cannot produce a [+wh] reading via a pragmatic explicature. This assumption, however, fails to account for the additional wh-phrase effects in the examples like (17). How can we overcome this apparently paradoxical situation?

There seem to be two possible explanations available. One is to say that the usual WP-QE licensing relation (a formal licensing condition) is to be kept intact, while QE is subject to an additional constraint. Chung (2008) claims that WPs and their QE argree but at different levels: WPs at syntax, while QE at PF. This is a very similar idea of a PF suffix analysis of QE, along the lines of Lee (2009) and Jung (2012, 2013): QE as a PF suffix requires to be attached to an intonation phrase containing a WP. Jung (2012, 2013) observes that QE should be in the same intonation phrase containing a WP in Busan Dialect. In Pattern III, which has an overt QE without an overt WP, QE cannot be properly licensed, which accounts for the unavailability of the pattern. Sentences like the example in (17) are legitimate as there is an (additional) overt WP to be linked to the QE, satisfying the usual WP-QE licensing condition as well as the additional condition for QE.

However, there is a flaw with this approach. It is because it sounds dubious to assert that a PF condition like the one for QE, i. e. the PF suffix analysis of QE, is sensitive to a syntactic structure.[6] Notice that the associated WP has to be in the scope domain of QE. Furthermore it is yet to be tested whether the same intonation phrase condition applies to standard Korean as well as Busan Dialect. It appears that a pause may be inserted between a WP and its corresponding QE when there lies a long distance between them. Thus a new analysis free of these problems is called

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6   This is pointed out to me by Hee-Don Ahn (p. c.).

for.

The other conceivable explanation is to keep the usual licensing condition for the wh-construction, while viewing the parenthetical element in (17) does not produce a real wh-reading.[7] Sentences like (17) are legitimate as they satisfy the usual wh-licensing condition: The QE can be linked to the overt WP (the additional WP). The null argument, i.e., the parenthetical element in (17), is a pro, which replaces the NP part of the associated DP, and its apparent wh-reading produced, i.e. the reading where the null element refers to a different set of people from the set of people denoted by the apparent antecedent *nwukwu* 'who' in the preceding conjunct, is attributed to the sloppy-like reading associated with a null argument, just as a null argument associated with other quantifiers is able to produce a quantifier-like reading. An immediate question that can be raised is then why the sentences like (4A2) are unacceptable. It is because the usual WP-QE licensing condition remains unsatisfied, as the null argument does not bear a real wh-feature, though they potentially may have a wh-like reading, an instance of the so-called sloppy-like reading, due to the pragmatic explicature.

# 6. Conclusion

We have seen that, based on the distributional restrictions on the null arguments associated with WPs, a pro based analysis is favored over ellipsis or topic analyses.

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[7] This is in fact the explanation pursued in Ahn and Cho (2013), based on Chung's (2008) observation on right dislocated construction with a multiple wh-question: WPs can undergo right dislocation, when an additional WP (an identical or different WP) remains at the host clause, as exemplified below:

(i) a. *(nwu-ka)   o-ess-ni,        nwu-ka?
       who-NOM   come-PST-QE   who-NOM
       'Who came?'
   b. {*Tom-i/nwu-ka}      $e_i$   manna-ess-ni, nwukwu$_i$-lul?
       T.-NOM/who-NOM          see-PST-QE   who-ACC
       'Who did Tom meet?/Who saw what?'

Under a multi-clausal analysis of the right dislocated construction (Chung 2009, 2012, Yoon and Lee 2009), the host clauses violate the usual WP-QE licensing condition in case there is no WP there. In contrast, an additional WP saves the structure, as there will be no violation of the condition. Notice that the null counterpart of the WP in (ia) or the null argument $e_i$ in (ib), which is associated with the WP in the pivot, does not bear a wh-feature, as it is a pro.

According to the pro analysis, a null argument associated with a WP cannot bear a wh-feature, leading to a violation of the usual WP-QE licensing condition, which accounts for the lack of Pattern III (the combination of an overt QE and a covert WP) in a language like Korean. The presumed wh-reading for a null argument associated with a WP in a multiple wh-question is in fact not due to the wh-feature of the null argument, but due to the so-called sloppy-like reading, a phenomenon that applies to other general quantifiers. The current paper does not claim, however, that every instance of null arguments is represented as pro across the board. Further research is yet to be conducted for a general theory of null arguments.

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