# The Nature of Indeterminate Expressions in Chinese and Korean: Focused on *Wh*-phrases in Conditionals

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**ABSTRACT**

In this paper, we argue that indeterminates in so-called bare *wh*-conditionals of Chinese are not ordinary indefinites but *wh*-indefinites. Thus, they are subject to overt ATB-fashion *wh*-movement, with its tail copy ultimately being realized rather than being licensed via unselective binding by the universal operator, as proposed in Cheng and Huang (1996). We ascribe the co-varying interpretation between the two *wh*-indefinites in the two antecedent and consequent clauses to the property of the covert form of subordinate conjunction, which can only unify identically interpreted conjoined elements. On the other hand, Korean *wh*-indefinites are not subject to overt *wh*-movement but enter into Agree with the Q marker for their licensing. Thus, in the Korean counterpart of bare *wh*-conditionals, the *wh*-indefinite in the antecedent clause is referred back to by the anaphoric expression in the subsequent clause that serves as an E-type pronoun, such as a demonstrative (plus the *wh*-indefinite) or a null argument. It is to be underscored that, owing to the lack of overt *wh*-movement, the two *wh*-indefinites in Korean cannot be anaphorically linked via ATB *wh*-movement.

**Keywords:** indeterminates, bare *wh*-conditional, (c)overt *wh*-movement, ATB *wh*-movement, co-varying, subordinating conjunction

## 1. Introduction

It is generally accepted that both Chinese and Korean are *wh*-in-situ languages, and *wh*-phrases in the two languages are ambiguously interpreted, that is, either as an interrogative *wh*-expression or an indefinite expression. This is why these

expressions are often called indeterminate expressions. In the current work, we study the featural properties and the licensing mechanisms of such indeterminate expressions in the two languages, comparing their behaviors mainly in conditional constructions and furthermore in *wh*-constructions in general.

We are going to make the following claims. First, contra the generally accepted view, Chinese indeterminate expressions (at least sometimes) undergo overt movement to be licensed as [+wh] interrogative elements (cf. Cheng & Huang, 1996; Liu, 2016, 2018a, 2018b; Huang, 2018), while the Korean counterparts remain in situ and get licensed via Agree (cf. Tsai, 1994; Watanabe, 1992; Saito, 2017). Second, Chinese indeterminate expressions in *wh*-conditionals undergo ATB *wh*-movement (cf. Bruening & Tran, 2006; Cheung, 2006). Third, indeterminate expressions in Chinese move, but the tail of the chain gets pronounced. So we argue that Korean is a genuine *wh*-in-situ language, while Chinese is not: Chinese behaves more like English in some important respects.

## 2. Chinese *Wh*-conditionals and Their Korean Counterparts

As in the examples of (1), Chinese has an interesting conditional construction, called bare conditionals (Cheng and Huang, hereafter C & H, 1996) or *wh*-conditionals (Liu, 2016, 2018a, 2018b; Huang, 2018), that lacks subordinator IF.

(1) a. **shei**　　xian lai,　　　**shei** (jiu)　　　xian chi.
　　　Who　　first come,　　who (then)　　　first eat
　　　'(If) x comes first, (then) x eats first.' ='Whoever comes first eats first.'
　　b. ni　　yao　　**shenme**, wo (jiu)　　mai **shenme**　gei　ni.
　　　You　want　what,　I　(then)　buy what　　give　you
　　　'(If) you want x, (then) I will buy x for you.'
　　　'Whatever you want, I will buy it for you.'

Two identical forms of *wh*-expressions appear both in the antecedent and the consequent clauses. Since C & H (1996), a considerable volume of literature has discussed the construction. The two (i.e., one in the antecedent clause and the other in the consequent clause of the construction) are interpreted as if they are variables bound by the same operator such that they co-vary in their reference, as indicated in the English translations.[1)]

C & H (1996) claim that Chinese bare *wh*-conditionals bear an implicit necessity operator just as English conditionals do (Heim, 1982) and that both indeterminate expressions in bare conditionals are unselectively bound by the null universal quantifier, as schematically represented below:

(2)  ∀x. P(x)→Q(x)

They also claim that, when the subordinator is overtly realized like *ruguo*, the conditional takes an E-type pronoun licensing pattern that is realized as an overt pronoun or a covert pronoun (pro), as exemplified in (2) below.

(3) **ruguo** ni    kandao *shei*, quing  jiao  {*shei*/*ta*/[e]} lai    jian   wo
     if    you  see    who   please tell  who/him/pro  come  see    me
     'If you see someone, please ask him/her to come see me.'
                                 (modified from C & H, 1996: 127, their (23a~c))

They claim that this type of construction with a *wh*-word in the consequent clause is ungrammatical, while the one either with overt pronoun *ta* or with pro in it is well-formed.

Cheung (2007) reports, however, attributing the observation to Leung (2006) and Pan & Jiang (2015), that in the bare *wh*-conditionals the *wh*-indeterminate in the consequent clause can be phonologically suppressed, contra C & H (1996):

(4) (=Cheung, 2007, p. 151, her (3))
     a. *shei*  xiang  qu  Beijing, [e] dei/bixu/yiding-yao  dao wo zheli baodao.
        who  want   go              must                to   me here register
        'If X wants to go to Beijing, X must register with me.'

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1) Contra C & H (1996), Gu (2009) reports that *wh*-conditionals can have a definite reading in addition to the universal reading, as in the example in (i) below.

  (i)  nei    (yi) ben shu dazhe,  zhangsan jiu  hui  mai nei   (yi) ben shu.
     which   one CL book on-sale Zhangsan then will  buy which one CL book
     'Zhangsan will buy the book that is on sale.'/ 'Zhangsan will buy whichever book is on sale.'

In a context where a unique reference can be established, (i) picks out the unique on-sale book and is a felicitous answer to a *wh*-question ('which one of these books is Zhangsan going to buy?').

b. *shei* xian qu Beijing, [e] qing dao wo zheli baodao.
  who want go please to me here register
  'If X wants to go to Beijing, please register with me.'
c. *shei* xihuan *shei*, *shei* yinggai shuo chulai.
  who like who who should say out
  'If X likes Y, X should voice out.'

As pointed out by Cheung (2007), the above data cannot be easily accounted for by unselective binding analyses. Furthermore, Pan & Jiang (2015) report that IF (*ruguo/yaoshi*) conditionals may host a *wh*-indeterminate in the consequent clause at least in certain contexts.[2]

(5) (=Pan & Jiang, 2015, p. 165, their (7))
  a. **ruguo** *shei* yao zhe po-chang, jiu rang *shei*
    if who want this broken-factory then let who
    dao bangongshi lai zhao wo.
    to office come find me
    'Whoever wants this broken factory, let him/her come to my office to see me.'
  b. hai shuo: Xiangshan meiyou liangpian xiangtong de hongye,
    also say not-have two same DE maple-leave
    **ruguo** shei zhaodao le, *shei* jiu shi zui xingfu de ren.
    if who find PERF who then be most happy DE person
    'Also said: there are no two maple leaves in Xiangshan that are exactly the same. If anyone/someone finds them, then s/he will be the happiest person.'

(6) (=Pan & Jiang, 2015, pp. 166-167, their (9))
  a. *shei* **yaoshi** fandui ta, *shei* jiu shi women de diren.
    who if against him who then be our DE enemy
    '(If) Whoever is against him, then s/he will be our enemy.'

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2) As will be discussed presently, unlike in (5) and (6) of Chinese, their counterparts of Korean do not allow the two *wh*-phrases in the antecedent and consequent clauses to co-vary.

b. **yaoshi** *shei* neng faming yizhong dianshi xinxi    caiji   de diannao,
   if    who can  invent one-CL TV    information collect DE computer
   wo    hui   gei   *ta*      yi-da-bi         qian.
   I     will   give  him/her  a-large-lump-sum money
   'Whoever can invent a kind of computer that collects information from
   TV broadcasting, I will give him/her a large lump sum of money.'

Now let us see how *wh*-indeterminate expressions behave in Korean conditionals.
Direct or literal translations of (1a) and (1b) into Korean do not convey a co-variant
reading. For example, the two instances of *nwu-ka* in (7a) or of *mwues-ul* in (7b)
do not refer to the same entities.

(7) a. **nwu**-ka      mence o-myen, **nwu**-ka      mence mek-nun-ta.
      Who-Nom  early  come-if, who-Nom early    eat-Pres-DEC
      '(If) someone comes first, (then) someone eats first.'
    b. (ney-ka)  **mwues**-ul wenha-myen, nay-ka **mwues**-ul sacwu-keyss-ta.
      You-Nom what-Acc want-if      I-Nom what-Acc buy;give-will-DEC
      'If you want something, I will buy something for you.'

To get the intended co-varying reading, the *wh*-indeterminate in the consequent
clause has to be suppressed or replaced by an overt/null pronoun, as in (8).

(8) a. nwu-ka      mence o-myen, **e/ku-ka**      mence mek-nun-ta.
      Who-Nom early    come-if, e/he-Nom early  eat-Pres-DEC
      '(If) someone comes first, (then) someone eats first.'
    b. (ney-ka)     mwues-ul wenha-myen, nay-ka **e/kukes-ul** sacwu-keyss-ta.
      You-Nom  what-Acc want-if      I-Nom e/it-Acc  buy;give-will-DEC
      'If you want something, I will buy something for you.'

In this sense, Korean conditionals behave more like *ruguo* or *yaoshi* conditionals
in Chinese, but, not exactly because Korean conditionals never allow *wh*-indeterminates
with a co-varying reading.

So the issue is why (bare) *wh*-conditionals in Chinese, but not in languages like
Korean, require/allow (depending on the speakers, e.g. Cheng & Huang, 1996 vs.
Pan & Jiang, 2015) the isomorphic forms of co-variant *wh*-indeterminates in the
antecedent and the consequent clauses.

## 3. Some Other Relevant Variations between Chinese vs. Korean

Before providing our proposals, we discuss some more relevant variations between the two languages in section 3.

### 3.1. *Wh*-conditionals and the novelty condition

First, we discuss the facts in relation to the so-called Novelty Condition. As noted in the literature, C&H's (1996) indefinite analysis of *wh*-indeterminates faces a problem with the Novelty Condition, which states that indefinite NPs must not have the same referential index as any NP to its left, as in (9).

(9) The Novelty Condition (Heim, 1982)
    Indefinite NPs must not have the same referential index as any NP to its left.

To circumvent the novelty condition problem, Chierchia (2000) proposes an Indefinite Pronoun Analysis of the *wh*-indeterminate in the consequent clause. Note that a pronoun can be used as a discourse anaphor, as in the example in (10), where indefinite expression *a man* in the consequent clause cannot, but pronoun *he* can, be anaphoric to *a man* in the antecedent clause.

(10) If a man$_i$ comes first, {*a man$_i$/he$_i$} eats first.

As pointed out by Bruening & Tran (2006) and Crain & Luo (2011), however, *wh*-indeterminates are subject to Binding Theory (BT)(C), not to BT(B), as shown in the following examples:[3]

(11) (=Bruening & Tran, 2006, their (10))
    a. *shei* yaoshi shuo *ta/*shei* xihuan wo meimei, wo jiu zou *shei*.
       who  if    say  he/*who  like   my sister  I  then hit  who
       'If X says that he likes my sister, I hit X.'
    b. ***shei*** yaoshi jinlai bu qiaomen, wo jiu gaosu *shei ta/*shei* hen lumang.
       who    if    enter Neg knock  I  then tell  who he/*who  very rude
       'If X enters without knocking, I tell X that he's very rude.'

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3) One might argue that these sentences are irrelevant, because the existence of *yaoshi* rules out the possibility that these sentences are not bare *wh*-conditionals. Notice, however, that *wh*-indeterminates are present both in the antecedent and consequent clauses.

As shown in the examples in (11), *wh*-indeterminate expressions cannot be bound by the same form of *wh*-indeterminates, neither in the antecedent clause nor in the consequent clause. Thus they conclude that *wh*-phrases in Chinese are not pronouns, but they rather stand as R-expressions.

By contrast, Korean *wh*-indeterminates are subject to the Novelty Condition. For example, *wh*-phrases in the consequent clauses in (7), repeated below, do not have an anaphoric interpretation.

(7) a. **nwu**-ka    mence o-myen, **nwu**-ka    mence mek-nun-ta.
      who-Nom    early come-if, who-Nom early   eat-Pres-DEC
      '(If someone comes first, (then) someone eats first.'
   b. (ney-ka)    **mwues**-ul wenha-myen, nay-ka **mwues**-ul sacwu-keyss-ta.
      you-Nom    what-Acc  want-if       I-Nom what-Acc buy;give-will-DEC
      'If you want something, I will buy something for you.'

These examples show that unlike their counterparts in Chinese, *wh*-indeterminate expressions in Korean are subject to the Novelty Condition, and they behave like indefinite expressions.[4]

According to Cheung (2007), the same is true in Chinese, when the *wh*-indeterminate expressions in bare *wh*-conditionals are replaced by their counterpart indefinite NP's, as shown in (12). Note that the two occurrences of *yi-ge nanren* in the example cannot refer to the same person.

(12) (=Cheung, 2007, p. 152, her (9))
     * ni    xihuan *yi-ge    nanren*$_i$, wo jiu  da  *yi-ge    nanren*$_i$.
       you   like    one-CL man    I  then  hit  one-CL man
       (Intended) 'If you like a man$_i$, I hit him$_i$.'

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4) Jong-Un Park (pers. comm.) provides the following example, which appears to produce a
co-varying reading of the *wh*-phrases:

(i) [**nwukwu-tunci** mence   o-myen], [**nwukwu-tunci**   mence   mek-nun-ta]
    who-ever       early    come-if who-ever       early    eat-Pres-Ded
    (Lit.) 'Whoever comes first, whoever eats first.'

We note, however, that a pronoun or a definite description can mediate the relation of the two
universal-like *wh*-phrases, as follows:

(ii) [**nwukwu-tunci**  mence o-myen], [{ku-ka/ku salam-i}       **nwukwu-tunci** mence mek-nun-ta]
     who-ever        early come-if he-Nom/that person-Nom who-ever      early eat-Pres-Ded
     (Lit.) 'Whoever comes first, he/that person, whoever it is, eats first.'

Thus the apparent co-varying reading in (i) is not caused by repetition of the two *wh*-phrases,
but rather by an E-type pronoun strategy.

By contrast, at least some set of bare nominals in Korean are not subject to the Novelty Condition. Consider the following examples, where the underlined bare nominals may refer to the identical entities.[5]

(13) a. Cheli-ka    <u>catongcha</u>-ul    wenha-myen,
        Ch.-Nom   car-Acc          want-if
        (kulem)    nay-ka <u>catongcha</u>-ul  sacwu-keyss-ta.
        then       I-Nom car-Acc          buy;give-will-Dec
        'If Cheli wants a car, I will buy (him) (a/the) car.'
    b. nongpwu-ka <u>tangnakwui</u>-lul      kaci-myen,
        farmer-Nom donkey-Acc            have-if
        nongpwu-ka pothong        <u>tangnakwui</u>-lul      ttayli-n-ta.
        farmer-Nom usually          donkey-Acc        beat-Pres-Dec
        'If a farmer has a donkey, (the) farmer usually beats (the) donkey.'
    c. <u>phyenci</u>-ka o-myen,    apeci-ka      mence    <u>phyenci</u>-lul ilk-nun-ta.
        letter-Nom come-if    father-Nom early      letter-Acc read-Pres-Dec
        'If a letter arrives, Father reads the letter first."
    d. <u>haksayng</u>-i    mence o-myen, <u>haksayng</u>-i    mence mek-nun-ta.
        student-Nom early   come-if student-Nom   early   eat-Pres-Dec
        If a student comes first, (the) student eats first.'

When accompanied by a numeral classifier, however, the resulting indefinite nominals do not co-vary, as shown in (14), where a floating numeral quantifier is associated with the preceding nominals. Pre- or post-nominal numeral classifiers seem to behave in the same way, as we see in the examples of (15).

(14) a. apeci-ka       <u>chayk-ul      han kwen</u>      sacwu-myen,
        father-Nom   book-Acc    one CL        buy-if
        Cheli-ka      <u>chayk-ul      han kwen</u>    ilk-nun-ta.
        Ch.-Nom     book-Acc    one CL        read-Pres-Dec
        'If his father buys (him) a book, Cheli reads a (different) book.'
        #'If his father buys (him) a book, Cheli reads the book.'

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b.  haksayng-i    han myeng  mence         o-myen,
    student-Nom one CL    early          come-if
    haksayang-i      han myeng      sang-ul  pat-nun-ta.
    student-Nom    one CL reward   receive-Pres-Dec
    'If a student comes first, a student receives a prize.'
    #'If a student comes first, the student receives a prize.'

(15) a.  apeci-ka    {han kwen-uy chayk-ul/chayk han kwen-ul}sacwu-myen,
         father-Nom  one CL-Gen  book-Acc/book one CL-Acc buy-if
         Cheli-ka {han kwen-uy  chayk-ul/chayk han kwen-ul} ilk-nun-ta.
         Ch.-Nom one CL-Gen   book-Acc/book one CL-Acc   read-Pres-Dec
         'If his father buys (him) a book, Cheli reads a (different) book.'
         #'If his father buys (him) a book, Cheli reads the book.'
     b.  {han myeng-uy haksayng-i/haksayng han myeng-i} mence o-myen,
          one CL-Gen    student-Nom/student one CL-Nom early   come-if
         {han myeng-uy haksayng-i/haksayng hanmyeng-i} sang-ul pat-nun-ta.
          one CL-Gen   student-Nom/student oneCL-Nom reward receive-Pres-Dec
          'If a student comes first, a student receives a prize.'
          #'If a student comes first, the student receives a prize.'

To avoid the Novelty Condition problem, Crain and Luo (2001) propose that bare
*wh*-conditionals are sort of an equational statement, citing examples like (16), where
the post-copula nominal is an indefinite expression, but does not suffer from the
Novelty Condition.

(16) (=Crain & Luo, 2011, p. 172, their (16))
      A man who drinks alcopops is a man who gets a hangover.

The equation sentence is indeed immune from the novelty condition, and this
analysis may account for the novelty condition problem.
    There is some discrepancy, however, between bare conditionals and equational
statements. Notice that Chinese bare *wh*-conditionals must contain isomorphic
*wh*-indeterminates in the antecedent and consequent clauses.

(17) (adopted from Crain & Luo, 2011, p. 166, their (3))
     shei xian lai, {shei/* shenme ren/* tongyang de ren}  xian chi.
     *who first come who/    what    person/ the-same DE person  first eat*

The antecedent clause in (17) contains *wh*-indeterminate *shei* 'who'. So the consequent clause should also contain *shei*. Expressions like *shenne ren* 'what person' and *tongyang de ren* 'the same person' are not allowed, even if they are semantically very close to *shei*. In contrast, isomorphic forms are not required in equational statements, as exemplified below.

(18) a.  The Morning Star is the Evening Star.
     b.  <u>A man</u> who drinks alcopops is <u>the one/the same person</u> who gets a hangover.

In fact, equational statements sound tautological, if pre- and post-copula elements are exactly the same.

3.2. Distribution of WHY (and other exclusively interrogative expressions) in (bare) *wh*-conditionals

Another discrepancy between Chinese and Korean lies in the fact that adverbial adjunct WHY is allowed in Chinese *wh*-conditionals, whereas it is not in Korean conditionals. Compare (19) and (20) below.

(19) ni   *wishenme* xihuan  Zhangsan, wo jiu   *wishenme* taoyan ta.
     you why      like    Z.        I   then why      dislike him
     'The reason you like Zhangsan is the reason why I dislike him.'

(cited from Huang 2018)

(20) *ney-ka    *way*    John-ul cohaha-myen,
      you-Nom  why     J.-Acc  like-if
      na-nun   *way/ku iyu-lo*     ku-lul    silheha-n-ta.
      I-Top    why/the reason-for      he-Acc   dislike-Pres-DEC
     '(Intended) The reason you like John is the reason why I dislike him.'

Unlike nominal *wh*-expressions, WHY in *wh*-in-situ languages is hardly used as an indefinite expression and is sensitive to syntactic islands. The reason *wh*-adverbial *wishenme* in Chinese is not different (Huang 1982). Nevertheless, it can appear in Chinese *wh*-conditionals, as shown in (19) above. This fact seems to indicate that WHY in the antecedent clause of a *wh*-conditional is licensed in conjunction with the isomorphic wh-element in the consequent clause. In contrast, the reason

*wh*-adverbial *way* in Korean, which is also exclusively used as an interrogative expression, is hardly licensed in conditionals, regardless of the composition of the consequent clause, as shown in (16), due to an island constraint.[6]

Like *way*, *elama-(mankhum)-(i)na* 'how much/many' is also exclusively used as an interrogative expression and it has to be licensed by a question ending. Unlike *way*, however, it is a nominal expression that can be licensed by Agree. Thus, when embedded under the antecedent clause of a conditional, it can be licensed by a question morpheme of the consequent clause, due to Agree, but not by a declarative sentence ending, as shown in (21). In contrast, nominal expression *elma mankhum* (, as opposed to *elama-(mankhum)-(i)na,*) can be indefinitely (as well as interrogatively) used and it can appear in the antecedent clause of a conditional, regardless of the sentence ending type of the consequent clause, as in (22).

(21) pro <u>elma    (mankhum)-(i)na</u>    yeppu-n os-i-myen,
          how;much amount-INA         pretty    closthes-Cop-if
     pwumonimtul-i    e/ku kes-ul    {sacwu-**ni?**/*sacwu-n-**ta**.}
     parents-Nom    e/it-Acc         buy;give-QE/buy-Pres-DEC
     R1: 'How much degree is it such that if they are that degree of pretty clothes,
           parents buy the clothes for the children?'
     R2(Intended): #If they are a certain degree of pretty clothes, parents buy
           them for the children.

(22) pro <u>elma    mankhum</u>    yeppu-n os-i-myen,
          how;much amount        pretty    closthes-Cop-if
     pwumonimtul-i    e/ku kes-ul    {sacwu-**ni?**/sacwu-n-**ta**.}
     parents-Nom    e/it-Acc         buy;give-QE/buy-Pres-DEC
     R1: 'How much degree is it such that if they are that degree of pretty clothes,
           parents buy the clothes for the children?'
     R2: If they are a certain degree of pretty clothes, parents buy them for the
           children.'

## 3.3. Bare nominals in donkey sentences

Thirdly, there is a difference between Korean and Chinese bare nominals in the

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6) We assume, following the tradition of Huang (1982), Choe (1987), and Nishigauchi (1986), that *way* undergoes LF movement to be licensed. Cf. Ko (2005)

context of donkey sentences. When not modified by a demonstrative, bare nominals in Chinese cannot function as a donkey anaphor, as shown in (23). They can be replaced by a pronoun, but not by a null pronoun, as shown in (24). In contrast, bare nominals in Korean can serve as a donkey anaphor just like a definite description, a pronoun, or a null pronoun, as exemplified in (25).[7]

(23) a.  mei-ge    you  lüzi$_i$   de nongfu dou hui da  **[*(na-tou)      lüzi$_i$]**
         every-CL  have donkey DE farmer all  will beat THAT.DEM-CL donkey
         'Every farmer who owns a donkey beats the donkey.'
   b.  **\*mei-ge     you   lüzi$_i$   de nongfu dou hui da   lüzi$_i$**
         every-CL   have donkey DE farmer all will   beat donkey
         'Every farmer who owns a donkey beats donkeys.'

(24) mei-ge    you  lüzi$_i$   de nongfu dou  hui  da    ta$_i$/\*$\emptyset_i$
      every-CL have donkey DE farmer all     will beat \*(it)
      'Every farmer who owns a donkey beats it.'

(25) tangnakwui-lul kaci-n      nongpwu-nun nwukwuna
      donkey-Acc      have-Rel farmer-Top     all
      {ku tangnakwui-lul/tangnakwui-lul/ku kes-ul/ [pro]} ttayli-n-ta
      that donkey-Acc/donkey-Acc/that thing-Acc/pro     beat-Pres-Dec
      'Every farmer who owns a donkey beats the donkey/it/'

With the bare nominal selected, (25) seems to be fully felicitous in a scenario, for example, where every farmer owns one and only one donkey, and he or she beats his or her own donkey. Thus, Korean bare nominals can be anaphorically used in donkey contexts, unlike the Chinese counterparts.


## 4. Licensing Mechanisms for *Wh*-conditionals in Chinese and Korean

As noted above, C&H (1996) take a unselective binding approach to bare *wh*-conditionals in Chinese. But their approach faces several problems. First, it does

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7) One of the reviewers does not agree that (25) conveys a co-variant reading with the bare nominal in the main clause of the donkey sentence. We believe, however, that a co-variant reading is available, at least in a certain context, as stated below.

not account for the Korean counterparts of Chinese bare *wh*-conditionals. If the two *wh*-indeterminates in the antecedent and the consequent clauses were licensed via unselective binding by the universal operator or the Q morpheme, they would be predicted to co-vary, which is not the case in Korean.

(26) a. cheli-ka **mwues-ul** sao-myen,          (Korean)
      Ch.-Nom what-Acc buy-if
      Yengi-ka mence {ku mwues-ul/ku kes-ul/    *mwues-ul/∅} mekepli-ni?
      Y.-Nom early    thatwhat/    that thing-Acc/ what-Acc/∅ eat;away-Q
      'What is it that if Cheli buys it, Yengi eats it away?'
   b. **mwues-ul** khiwu-nun nongpwu-un nwukwuna {ku mwues-ul/ku kes-ul/
      what-Acc raise-Rel farmer-Top all       {that what/that thing-Acc/
      *mwues-ul/∅}    ttayli-ni?
      what/-Acc/∅    beat-Q
      '(Lit.) What is it such that every farmer who raises it beats it?'

The requirement for the isomorphic forms of indeterminate in the antecedent and the consequent clause also constitutes another argument against the unselective binding approach, as unselective binding is not sensitive to the formal identity. The following data from Chinese makes a point:

(27) *****shei** xian lai, **shenme ren** /**tongyang de ren** xian chi.[8]
    who first come what person the-same DE person first eat
                (taken from Crain & Luo (2011, p. 166, their (3))

A third problem with the unselective binding approach has to do with the fact that Chinsese *wh*-indeterminate expressions and non-*wh* bare nominal indefinite expressions behave differently in bare *wh*-conditionals (cf. Saito 2017): Only the former expressions can have a co-variant reading, as was seen in the previous section.

We rather argue that *wh*-indeterminate expressions in bare *wh*-conditionals bear a sort of *wh*-features, thus turning out to be *wh*-phrases. Notice that *wh*-conditionals can occur in matrix or embedded question clauses, as in (28) below. For example,

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8) When indeterminates occur in the subject position of the antecedent clause in *ruguo* 'if'-conditionals, they can be preceded by *you* 'have', indicating that they can have existential force, being construed as quantificational. However, those in the subject position of bare (i.e., *ruguo*-less) *wh*-conditionals cannot be preceded by *you* 'have'. Indeterminates in bare *wh*-conditionals are resistant to being interpreted as quantificational.

(28a) is represented as denoting a matrix question in (28a)'.

(28) a. shei xian lai,   shei jiu   keyi  xian chi **ne**?          (Chinese)
        who first come  who then  can   first eat Q
        'Who is the person x such that if x comes first, then x is allowed to eat first?'

   b. Akiu **xiang-zhidao** [shei xian lai,   shei jiu   keyi  xian chi].
        A.  want-know        who first come who then can   first eat
        'Akiu wonders [who is the person x such that if x comes first,
        x is allowed to eat first]'. (taken from Tsai (1994: (32))

(28a)' **Qx [x a person]** Rs [s a situation] if x comes first in s, x is allowed to
        eat first in s.

In fact, we advance the thesis that in Chinse, *wh*-indeterminates undergo overt *wh*-movement, with their tails pronounced. By contrast, in Korean their counterparts get licensed not via overt *wh*-movement, but via Agree. We presently bring forth three arguments supporting this thesis. The first argument concerns a universal WH-QP interaction. Longobardi (1987) notes that the *wh*-phrase extracted out of the *wh*-island cannot reconstruct at LF to the *wh*-island internal position, thus the *wh*-phrase always taking wide scope over the embedded universal QP.

(29) ??Who do you wonder whether every student saw t at the rally?
     'who' > 'every student'; *'every student' > 'who'

The same pattern of WH-QP interaction as in English holds in Chinese (30a-b), but not in Korean (31):

(30) a. Zhangsan xiangxin [mei-ge   xuesheung mai-le  na-ben   shu de shuofa]?
        Z.        believe   every-CL student   buy-Perf which-CL book DE claim
        'Lit. Zhangsan believes the claim that every student bought which book?'
                                                              (Abe, 2017, p. 27)
   b. Ni   xiang-zhidao meigeren shi-bu-shi dou kandao  shenme?
        You want-know   everyone be-not-be all saw       what
        'Lit. You wonder whether everyone saw what?' (Aoun & Li, 1993, p. 84)

(31) sensayngnim-un **[**namhaksayng motwu-ka (kakca) mwues-ul sa-ss-nunka**]**
teacher-Top        male-student all-Nom      each   what-Acc buy-Pst-Q
al-ko sipheha-si-**no**?[9)]
know-be-Q
'Lit. Does Cheli want to know whether every male student bought what?'

The second argument bolstering overt w*h*-movement in Chinese comes from the sensitivity of a *wh*-phrase to a negative weak island. For example, in (32) of German the intervening negative element precludes the *wh*-phrase in-situ from associating with the complementizer (or with the *wh*-phrase in its Spec), as represented schematically in (33):

(32) a.  *Wer  hat niemanden    wo      angetroffen?
          who   has nobody       where   met
     b.  Wer   hat    wo$_1$      niemanden t$_1$    angetroffen?
          who   has    where     nobody        met
          'Who didn't meet anybody where?' (Beck, 1996; Beck & Kim, 1997)

(33) *[ ... wh$_1$ ... [ ... **negative QP** ... [ ... t$_1$ ... ]]]
          ⤒_____⌐  LF movement

The same pattern of behavior as in German is found with the *wh*-phrase in-situ in Korean as in (34a) versus (34b):

(34) a.  *amwuto  mwues-ul sa-ci     anh-ass-ni?
          anyone   what-Acc buy-Nm  not.do-Pst-Q
          'What did on one buy?'
     b.  mwues-ul$_1$ amwuto t$_1$ sa-ci     anh-ass-ni?
          what-Acc anyone        buy-Nm not.do-Pst-Q
          'What did no one buy?'

However, the apparently similar type of *wh*-phrase in-situ in Chinese is not subject to the negative island constraint, as follows:

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9) The judgment of (31) is essentially attributed to Suh (2008), where it is claimed that unlike the question-embedding verb *al-* 'know', *al-ko cip-* 'want to know' as in (31) is not subject to the *wh*-island onstraint in Kyengsang Dialect of Korean.

(35) a. meiyouren gan   gen  shei dajia?
        Nobody  dare   with  who fight
        'Who does nobody dare to fight with?'
    b. henshaoren gan gen     shei dajia?
        Few person dare with    who fight
        'Who do few people dare to fight with?'   (Huang, 1982, pp. 263-267)

We argue that this difference between Chinse and Korean/German in regard to *wh*-phrases in-situ in their (in)sensitivity to the negative island is due to only the former in fact undergoing overt *wh*-movement.

Third, Chinese is also distinguished from Korean in light of *wh*-island effects. When two *wh*-phrases occur in the island-forming question complement of 'know' predicate (which is marked with the two brackets **[ ]** below), in Chinese one of them can take matrix scope, as in (36a), whereas *wh*-phrases in a 'whether' (i.e., *shi-bu-shi*) clause need to be d-linked, as in (36b, c). In Korean this type of *wh*-scoping is not allowed, as in (37).

(36) a. Zhangsan zhidao **[**shei    mai-le    shenme**]**?
        Zhangsan know    who    buy-Perf   what
        '(Lit.) Zhangsan knows who bought what?'   (Huang, 1982)
        (i) Who does Zhangsan know bought what?
        (ii) What does Zhangsan know who bought?
    b. ??Zhangsan zhidao **[**shei shi-bu-shi mai-le    #shenme**]**?
        Zhangsan know    who be-not-be buy-Perf    what
    c. Zhangsan zhidao **[**na-ge ren    shi-bu-shi mai-le    na-ge dongxi**]**?[10)]
        Zhangsan know   which person be-not-be buy-Perf   which thing
        '(Lit.) Who does Zhangsan know whether he bought what/which?'

(37) Cheli-nun **[**nwu-ka    mwue-l    mek-ess-{-nka, -nci}**]**
     Cheli-Top who-Nom   what-Acc   eat-Pst-upQ/upQ
     alko iss-{na, *no}?                    (pQ = **P**olar **Q**-marker;
     know be-pQ/*whQ                        upQ = Polar/Wh **Q**-marker)
     'Lit. Cheli knows who ate what?'
     (i) *Who does Cheli know ate what?
     (ii) *What does Cheli know ate bought?

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10) The matrix scope of *na-ge ren* 'which person' prior to *shi-bu-shi* in this example is obligatory.

In addition, a single *wh*-phrase in the question complement of 'know' predicate takes embedded scope in Chinese and Korean alike, but the single *wh*-phrase in the *whether* clause with *shi-bu-shi* 'be-not-be' of Chinese needs to be d-linked:
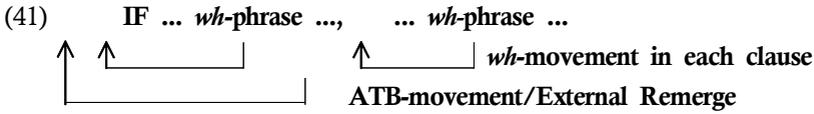
(38) a.  ni      zhidao Zhangsan mai-le      shenme?
         You    know  Zhangsan buy-Perf  what
         'Lit. You know what Zhangsan bought?'
         (i) 'Do you know what Zhangsan bought?'
         (ii) '*What do you know whether Zhangsan bought?'
    b. ??ni     zhidao  Zhangsan shi-bu-shi mai-le      shenme?
         You    know   Zhangsan  be-not-be buy-Perf   what
         'Lit. you know whether Zhangsan bought something/#what?'
         '??What do you know whether Zhangsan bought?'

(39) ni-nun  [Cheli-ka     mwue-l    sa-ss-nu-{-nka, -nci}] a{-na, *-no}//
     you-Top  Cheli-Nom what-Acc buy-Pst-upQ/upQ     know-pQ/*whQ
     sa-ss-nunko]   a-na?
     buy-Pst-whQ  know-pQ
     '(Lit.) Do you know where Cheli went?'

In keeping with the thesis that wh-indeterminates in Chinese undergo overt *wh*-movement, we propose an across-the-board (ATB) movement analysis for them in bare *wh*-conditionals. In this analysis, clause-internal *wh*-phrases in the antecedent and the consequent clauses undergo overt *wh*-movement to their clausal peripheries and are then conjoined together via External Remerge (de Vries 2009, Park 2010). This accounts for the mandatorily co-varying phenomenon in Chinese bare *wh*-conditionals. (See also Bruening and Tran 2006, who also take an overt *wh*-movement analysis of bare *wh*-conditionals in Vietnamese, arguing that the *wh*-phrase undergoes sideward movement from a position in the consequent clause to another position in the antecedent clause.)

(40) Basic schema for *wh*-conditionals in Chinese:
     [adverbial clause ⋯ wh ⋯ ] [matrix clause ⋯ $^{\surd}$wh/*ec/*definite NP ⋯ .]

(41)     **IF ... *wh*-phrase ...,     ... *wh*-phrase ...**

 **wh-movement in each clause**

**ATB-movement/External Remerge**

The overt *wh*-movement analysis has the following advantages. First, it accounts for why in bare *wh*-conditionals of Chinese, only *wh*-indeterminates/phrases, but not lexical indefinite expressions allow for co-variant interpretation. This is because the former, but not the latter, are required to undergo overt *wh*-movement in this language.

Second, it accounts for the fact that Chinese *wh*-conditionals do not display the so-called Double Island Effects, as Cheung (2007) reports (cf. Cheung, 2006). Chinese *wh*-phrases in either clause of *wh*-conditionals can appear in islands without giving rise to island violations (the islands are indicated by '**[ ]**' below), as shown in (42) and (43). Those in the Korean counterparts behave in a parallel fashion, as in (44).

(42) Complex NP

    a. ni   xihuan **[shei xie   de shu]**, women jiu   qing   shei lai.
       you like   who write DE book we     then invite  who come
       'Whoever x is s.t. you like the book written by x, we will invite x.'

    b. ni   xihuan shei, women jiu   mai **[shei xie   de shu]**.
      you like   who we     then buy who   write de book
      'Whoever x is s.t. you like x, we'll buy the book written by x.'

(43) Adjunct

    a. ni **[yinwei   shei likai er   shangxin],** wo jiu   piping   shei.
      you because who leave thus sad       I    then criticize who
      'Whoever x is s.t. you are sad because of x's leaving, I'll criticize x.'

    b. ni   taoyan shei, wo jiu   **[yinwei shei likai er   gaoxing]**.
      you dislike who I    then  because who leave thus happy
      'Whoever x is s.t. you dislike x, I'll be happy because of x's leaving.'

(from Cheung 2007)

(44) a. John-i **[nwu-ka       ton-ul          hwumchi-ess-ta-nun]**somwun-ul tulu-myen,
        J.-Nom who-Nom money-Acc stole-Rel                 rumor-Acc hear-if
        Mary-ka ka-se    e/ku-lul cheyphoha-n-ta.
        M.-Nom go-and he-Acc arrest-Pre-Dcl
        'If John hears the rumor that someone stole money, Mary goes to arrest
        that person.'
   b. John-i  nwukwu-lul uysimha-myen, Mary-nun **[e/ku-ka       ton-ul**
        J.-Nom who-Acc       suspect-if       M.-Top   he-Nom   money-Acc
        **hwumchi-ess-ta-nun   somwun-ul]**  mit-nun-ta.
        stole-Rel               rumor-Acc    believe-Pre-Dcl
   'If John suspects someone, Mary believes the rumor that that person stole
   money.'

It is known, however, that the Double Island Effects do show up, in the parasitic
gap (PG) construction of English like (45a) versus (45b):

(45) a. This is the man$_i$ John interviewed t$_i$ [$_{PP}$ before [$_{CP}$ telling [you to meet e$_i$ ]]]
    b. *This is the man who$_i$ I decided to interview t$_i$ [$_{PP}$ [$_{PP}$ without [$_{CP}$ calling you
        [$_{PP}$ before [$_{CP}$ [$_{IP}$ I [$_{VP}$ spoke to e$_i$ ]]]]]]]

We attribute the difference in the presence vs. absence of the Double Island Effects
between English PG constructions and Chinese *wh*-conditionals to the head vs. tail
pronunciation of the chain. Since *wh*-movement in Chinese unlike its counterpart
in English involves overt displacement but tail pronunciation, island effects do not
arise for *wh*-arguments in Chinese bare *wh*-conditionals.
    A third advantage is that the overt movement analysis can capture the argument
vs. adjunct difference. Adjunct *wh*-movement in this construction incurs an island
violation due to the ECP (Lasnik and Saito 1984, 1992), as in (46) versus (47). Even
tail pronunciation (which only rescues Subjacency effects) cannot salvage movement
of a *wh*-adjunct from an island.

(46) ni   weishenme gaoxing,  wo jiu   weishenme shangxin.
     you  why        happy,   I   then  why       sad
     'For whatever reason x such that you are happy for x, I'm sad for x.'

(47) a. *ni   xihuan [weishenme xie de shu], women jiu   weishenme xie   shu.
      you like    why    write  DE book   we   then   why    write book
      '(Lit.) Whatever reason x s.t. you like the book written for x, we will
      write books for x.'
   b. *ni [yinwei ta weishenme likai  er    shangxin], wo jiu  weishenme gaoxing
      you because he why     leave thus sad      I  then     why       happy
      '(Lit.) Whatever reason x s.t. you are sad because he left for x,
         I will be happy for x.' (taken from Cheung, 2007)


## 5. Korean vs Chinese in ATB Movement

Since we take the ATB *wh*-movement approach to co-varying interpretations of
*wh*-phrases in bare *wh*-conditionals of Chinese, it is worth investigating bare *wh*-conditionals in comparison to run-of-the-mill ATB constructions. First, both Korean
and Chinese allow overt ATB-movement, as follows:

(48) etten       soselka$_1$-lul    [[Cheli-ka t$_1$ cohaha]-ko [Yengi-ka t$_1$ silheha]]-ni?
     which     novelist-Acc    Ch.-Nom like-Conj [Y.-Nom      dislike-Q
     'Which novelist does Cheli like and Yengi dislike?'

(49) [na-wei zuojia]$_3$ [$_{&P}$ [$_{TP1}$ Zhangsan   xihuan t$_3$] [$_{TP2}$ Lisi bu   xihuan t$_3$ ]]?
     which-CL writer      Z.           like              L.  neg. like
      'Which writer does Zhangsan like but Lisi dislike?' (ATB question)

The sensitivity to island contexts in the following examples renders supporting
evidence showing that ATB extraction in Korean or Chinese can be an instance
of overt movement:

(50) *[enu   cengchiin$_1$-ul] [[Cheli-ka [ t$_1$ kongkyekha-n  chayk-ul] cohaha-ko]
     which politician-Acc Ch.-Nom      attack-Rel      book-Acc like-Conj
     [Yengi-ka [ t$_1$ onghoha-nun chayk-ul]   silheha]]-ni?
      Y.-Nom       advocate-Rel book-Acc    dislike-Q
     'Which politician is it such that Cheli likes a book that attacks him/her and
     Yengi dislikes a book that advocates him/her?'

(51) *na-wei    zuojia₁ [ Zhangsan xihuan [ t₁ xie ] de shu,
     which-CL writer    Z.        like        write De book
     Lisi  bu   xihuan [ t₁  xie ]   de  shu ]?
     L.   neg. like           write  De book
     'For which writer x, such that Zhangsan likes the books that x wrote but
      Lisi dislikes the books that x wrote?'

However, the two languages diverge in terms of the syntactic operation involved.
Korean relies on scrambling to extract the shared element from the two conjuncts.
In contrast, Chinese relies on topicalization to do so (Pan 2011). This contrast is
evident, given the fact that unlike in Korean, the ATB-extracted element needs to
be topicalized, thus needing to be d-linked.

(52) mwues₁-ul [[Cheli-ka t₁ cohaha]-ko [Yengi-ka t₁  silheha]]-ni?
     what-Acc   Ch.-Nom  like-Conj    Y.-Nom       dislike-Q
     'What does Cheli like and Yengi dislike?'

(53) *[shenme]₃ [&P [TP1 Zhangsan xihuan t₃] [TP2 Lisi   bu   xihuan t₃ ]] ?
          what         Z.         like          L.     neg. like
     'Which writer does Zhangsan like but Lisi dislike?'

To boot, Chinese and Korean differ in (non)-existence of 'non-identity' for the
ATB-moved element. For instance, in English the *wh*-element *where* extracted from
the two conjuncts can be interpreted sloppily as denoting two different cities:

(54) a.  Where did Mary spend her vacation and Bill decide to live?
                                              (adapted from Munn, 1993, 1999)
     b.  Mary spent her vacation <u>in Paris</u> and Bill decided to live <u>in Toronto</u>.

The same pattern of interpretation as in English obtains in Korean (55). Unlike
in English and Korean, in Chinese the ATB-moved element *nanei-ge chengshi* 'which
city' in (56a) does not allow for sloppy interpretation, resisting the answer in (56b):

(55) [enu    tosi-eyse], [[Cheli-ka      hyuka-lul      ponay-ko     sipheha-ko],
     which city-in     Ch.-Nom    vacation-Acc spend-to     want-Conj
     [Yengi-ka unthoy     hwu-ey  sal-ki-lo  kyelsimha-yss]]-ni?

Y.-Nom   retirement   after   live-to   decide-Pst-Q

'What city does Cheli want to spend his vacation in and Yengi want to live in?'

(56) a.   nanei-ge   chengshi, Zhangsan   xiang   qu   dujia,
      which-CL city     Z.        want   go   vacation
      Lisi   xiang   qu   dingju?
      L.     want   go   live
      'Which city does Zhangsan want to spend his vacation in (but) Lisi want
      to live in?'
   b. # Zhangsan xiang   qu   Bali,  Lisi   xiang   qu   Lundun.
        Z.       want   go   Paris L.     want   go   London
        'Zhangsan wants to go to Paris; Lisi wants to go to London.'

With this background on ATB movement, we go on to compare the two *wh*-phrases in-situ in coordinate clause with those in bare *wh*-conditionals in Chinese. As noted by Pan (2011), unlike the latter as in (58), the former as in (57) do not co-vary.

(57) Zhangsan   chi shenme,   Lisi chi shenme?
     Z.          eat what      L.   eat what
     (i) 'What does Zhangsan eat; and what does Lisi eat?'
                                            (Parallel question reading)
     (ii) ?? 'For every x, x a thing, such that (if) Zhangsan eats x, (then) Lisi eats x.'
                                            (Conditional construal)
(58) (ruguo)   Zhangsan chi shenme,   Lisi *(jiu)   chi shenme?
      if       Z.          eat what     L.   then    eat what
     (i) * 'What does Zhangsan eat; and what does Lisi eat?'
                                            (Parallel questions reading)
     (ii) 'For every x, x a thing, such that (if) Zhangsan eats x, then Lisi eats x.'
                                            (Conditional construal)

This contrast points to the fact that the two *wh*-phrases in coordinate structure as in (57) are referentially independent, while those in subordinate structure as in (58) are referentially dependent. We attribute this contrast between coordinate and subordinate structure in referential (in)dependency to the different type of the covert conjunction that External Remerge employs to unify the two *wh*-phrases overtly
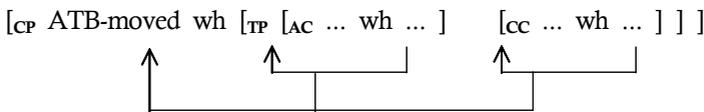
extracted from the two different clauses in Chinese. On the one hand, the coordinate structure as in (57) uses the coordinate type of covert conjunction which can unify two sloppily interpreted *wh*-phrases. By contrast, the subordinate structure as in (58) uses the subordinate type of covert conjunction that can only unify two identically interpreted *wh*-phrases.

Note that in Korean where overt *wh*-movement is lacking, conditionals do not allow for co-varying interpretation between the two *wh*-phrases in the antecedent and the consequent clauses.[11)] However, note that unlike in (55) where the ATB‑moved *wh*-phrases from the two clauses of coordinate structure is construed sloppily, its counterpart from the conditional of subordinate structure as in (59b) only allows non-sloppy, identical interpretation:

(59) a. Cheli-ka mwues-ul sao-myen, Yengi-ka (*mwues-lul) socwung-hi pokwanha-ni?
　　　　Ch.-Nom what-Acc buy-if　　Y.-Nom what-Acc carefully　keep-Q
　　　　　'(Lit) If Cheli buys what, Yengi keep what?'
　　　b. mwues$_1$-ul, [Cheli-ka t$_1$ sao-myen], [Yengi-ka t$_1$ socwunghi pokwanha]-ni?
　　　　what-Acc Ch.-Nom　buy-if　　　Y.-Nom　carefully　keep-Q
　　　　'What does Yengi keep if Cheli buys (it)?'

Before leaving the section, we point out the parallelism between bare *wh*-conditionals in Chinese and subject PG constructions in English.[12)] We repeat the schematic structure of bare *wh*-conditionals in (60).

(60) Post-ATB-moved bare *wh*-conditionals in Chinese:
　　　[$_{CP}$ ATB-moved wh [$_{TP}$ [$_{AC}$ ... wh ... ]　　[$_{CC}$ ... wh ... ] ] ]
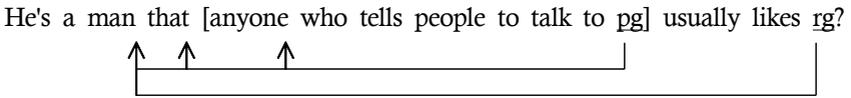


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11) Alternatively, a possible analysis for the absence of the co-varying construal between *wh*-indeterminates in Korean conditionals is that Korean conditionals are assimilated to Chinese *ruguo* or *yaoshi* conditionals, but not to Chinese bare conditionals. Such semantically-functioning operators as -*tamyen* 'if' in Korean and their counterparts *ruguo* and *yaoshi* in Chinese in these conditionals serve as a barrier precluding *wh*-indeterminates from undergoing overt *wh*-movement that is in need for the co-varying interpretation between them.

12) One of the reviewers suspects that the Korean example in (59b) has the structure in (60). Notice, however, that Korean ATB movement of a *wh*-indeterminate expression is an instance of scrambling, as stated above, while the Chinese counterpart is an instance of movement to the licensing position, most likely the SPEC of CP.

The example with a PG in the subject in English, taken from Chomsky (1986), is represented schematically, as in (61):
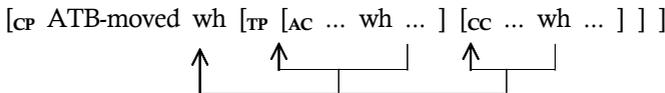
(61) Subject PGs in English:
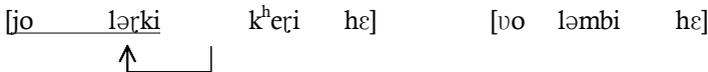 He's a man that [anyone who tells people to talk to pg] usually likes rg?

The parallelism between the two constructions at issue is striking. The two chains are combined together. Since the two chains are not in coordinate structure, the ATB-moved, shared element from them is referentially identical. Of course, the difference between them is that unlike in Chinese bare *wh*-conditionals, both the PG as well as the real gap (rg) in English PG constructions is realized as null because of the tail copy deletion.

We also note the parallelism between bare *wh*-conditionals in Chinese and correlatives in Hindi:

(62) **Post-ATB-moved bare *wh*-conditionals in Chinese**:
 [$_{CP}$ ATB-moved wh [$_{TP}$ [$_{AC}$ ... wh ... ] [$_{CC}$ ... wh ... ] ] ]

(63) **Correlatives in Hindi:**
 [jo  ləɽki  kʰeɽi hɛ]   [ʋo ləmbi  hɛ]

 which girl.F.Sg standing.F.Sg be.Prs.3.Sg that tall.F.Sg be.Pres.3.Sg
 'Which girl is standing, that/she is tall' (from Dayal 1996)

In Hindi, *wh*-elements take the *wh*-in-situ strategy. Because of the absence of overt *wh*-movement in this language, if the *wh*-element instead of the demonstrative occurred in the matrix clause, it would not undergo ATB movement with the relativizer *which girl* at the periphery of the correlative clause. Despite this difference, Hindi correlatives have great resemblance to Chinese *wh*-conditionals, in that the demonstrative in the matrix clause as an E-type pronoun co-varies with the *wh*-phrase at the periphery of the correlative clause. It is to be underscored that overt *wh*-movement or *wh*-in-situ in the matrix clause is a critical factor in deriving the Chinese type of *wh*-conditionals or Hindi type of correlatives.[13]

## 6. Chinese vs. Korean Regarding Indeterminates

We would like to note that Korean and Chinese diverge as regards indeterminates. First, Chinese has indefinites that have the exactly same form as interrogatives (i.e., *wh*-indefinites), thus both of them being called indeterminates. For example, *shenme* 'what/something' in Chinese are used either as run-of-the-mill indefinites or *wh*-indefinites. By contrast, Korean/Japanese distinguish *wh*-indefinites and non-*wh*-indefinites. In particular, in Korean the latter can be marked explicitly by attaching a certain affix (i.e., ¬*n-ka*) to the interrogative form. Thus, in Korean *mwues* 'what' and *mwues-nka* 'something' are distinguished in form, though the former can also be used as indefinites.

Bruening (2007, p. 159) compares these two types of indeterminates in a number of languages and presents the following generalization: "(i) Chinese type of indeterminates that do not include additional morphology for non-*wh*-indefinites are precluded from taking wide scope and in fact usually take only narrowest scope. However, (ii) Korean/Japanese type of indeterminates that do include additional morphology for non-*wh*-indefinites may take wide scope and may even be interpreted referentially (as specific indefinites)," the quoted part of which is taken from Yun (2019).

On top of the difference between Chinese and Korean in the morphological composition of indeterminates, the two languages differ in regard to the availability of morphological case marker on them. In Korean, the morphological case marker immediately empowers the indeterminate to readily serve as a *wh*/non-*wh* indefinite, thereby the Novelty Condition disallowing the second occurrence of the case-marked indeterminate from co-varying with its first occurrence.

By contrast, in Chinese the absence of morphological case marker cannot readily enable the indeterminate to serve as a *wh*/non-*wh* indefinite. Thus, both the first and the second occurrence of the case-less, bare indeterminate await another

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13) In English, the following examples which correspond to bare *wh*-conditionas in Chinese are a little degraded but acceptable (The judgment of them being attributed to Michael Barrie (per comm.)).

(i)    a. ?I wonder which book if you read, you will understand right away.
      b. ?I wonder what if you pick, you'll get.

      Though we do not have a good answer to why they are degraded (probably because 'what' moves out of the adjunct island formed by the subordinator 'if', the availability of overt *wh*-movement in English predicts that the *wh*-element can be extracted in the ATB fashion from the antecedent and the consequent clauses of conditionals in this language.

licensing device such as overt *wh*-movement.


## 7. Conclusion

In this paper we have argued that indeterminates in bare *wh*-conditionals of Chinese are not run-of-the-mill indefinites, but *wh*-phrases. Thus, instead of being licensed via unselective binding by the universal operator as argued in Cheng and Huang (1996), they undergo overt ATB-fashion *wh*-movement, ultimately its head copy being not realized (but its tail copy being realized). We attributed the co-varying interpretation between the two *wh*-phrases to the property of the covert form of subordinate conjunction that can only unify identically interpreted conjoined elements. By contrast, Korean *wh*-phrases do not rely on overt *wh*-movement, but on Agree with the Q marker for their licensing. Thus in the Korean counterparts of bare *wh*-conditionals, the *wh*-phrase in the antecedent clause is referred back to by the anaphoric expression that serves an E-type pronoun-like function, such as a demonstrative (plus the *wh*-indefinite) or a null argument. But unlike that in Chinese, the *wh*-phrase in Korean cannot serve as an anaphoric expression. It is to be stressed that but for the lack of overt *wh*-movement, the two *wh*-phrase in Korean cannot be anaphorically related via ATB *wh*-movement.

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