

TWO TYPES OF *WH*-INDEFINITES

Abstract

Indefinite expressions in a wide range of languages are morphologically related to *wh*-interrogatives. Although a number of researchers have attempted to characterize the syntactic and semantic properties of *wh*-indefinites in comparison with regular indefinites or *wh*-interrogatives in individual languages, no attempt has been made to provide a unified account based on a systematic comparison among *wh*-indefinite languages. This paper aims to provide such an account on the structure and meaning of *wh*-indefinites from a typological investigation. Specifically, I argue that *wh*-indefinites in the world's languages can be classified into two categories according to their morphology, and the two categories show contrasts in terms of their semantic behaviors. I propose that the sources of existential force for each type of *wh*-indefinites are universal, and that languages differ with respect to the parameters that determine the position and application of the relevant type of existential closure.

Keywords: *wh*-word, indefinite, indeterminate, existential quantifier, scope

1. Introduction

It is well noticed that in a number of languages indefinite expressions are morphologically related to *wh*-interrogatives. Indefinites that share the form with *wh*-words (henceforth *wh*-indefinites) are observed in a wide variety of genetically or geographically unrelated languages, as reported in a typological survey of indefinites by Haspelmath (1997). The similarity in the forms between interrogatives and indefinites has led many linguists to raise questions including the following: why do interrogatives and indefinites share the same form? Can we find a single semantic representation that can apply to both interrogative and indefinite expressions? Do *wh*-indefinites have the same meaning with genuine indefinites that are not morphologically related to *wh*-words? What is the role of *wh*-morphology in forming the semantic representation of *wh*-indefinites? A number of researchers have attempted to answer these questions by characterizing the properties of *wh*-indefinites in comparison with regular indefinites or *wh*-interrogatives

29 in individual languages (Cheng 1991 for Chinese, Postma 1994 for Dutch, Kuroda 1965 for Japanese,
 30 Chung 1996 for Korean, Yanovich 2005 for Russian, among others). However, no attempt has been made
 31 yet to provide a unified account based on a systematic comparison among *wh*-indefinite languages.

32 In this paper, I aim to provide a unified analysis that applies to the structure and meaning of *wh*-
 33 indefinites based on a typological investigation. In particular, I argue that *wh*-indefinites in the world's
 34 languages can be placed into one of two groups, depending on whether they have exactly the same form as
 35 interrogatives (bare *wh*-indefinites; BWIs henceforth) or they involve a certain affix attached to the
 36 interrogative form to explicitly mark an indefinite reading (complex *wh*-indefinites; CWIs henceforth)¹.
 37 The lists in (1) and (2) provide examples of *wh*-indefinites that belong to each group. Both types of *wh*-
 38 indefinites are found in a number of languages in the world².

- 39
 40 (1) Examples of BWIs 'what/something'
- 41 a. *shenme* (Chinese)
 - 42 b. *ti* (Classical Greek)
 - 43 c. *wat* (Dutch)
 - 44 d. *was* (German)
 - 45 e. *mues* (Korean)

¹ The term 'bare *wh*-indefinites' is adopted from Bruening (2007). For what he called '*wh*-indefinites in combination with particles', I am using the term 'complex *wh*-indefinites' for ease of reference.

² Languages can be divided into groups according to what type of *wh*-indefinites they allow. Some languages such as Chinese and Japanese allow only one type, and some other languages such as Korean and Russian allow both. All logical possibilities of the occurrence of BWIs and CWIs within a language are attested in the world's languages, as illustrated in the following table.

	BWIs	no BWIs
CWIs	Korean	Japanese
no CWIs	Chinese	English

Typology of *wh*-indefinites

Bruening (2007) argues that English also should be considered as a *wh*-indefinite language because of the existence of CWIs such as *somewhere* or *somehow*. However, English is different from canonical *wh*-indefinite languages in that not all bare *wh*-expressions in English can combine with the indefinite marker to yield an indefinite reading (e.g. **somewho* is ungrammatical, and *somewhat* does not mean the indefinite 'something'). Although we can call English as a partially *wh*-indefinite language, in this paper I will focus on languages that have a productive and systematic inventory of *wh*-indefinites.

46 f. *čto* (Russian)

47

48 (2) Examples of CWIs³

49 A. ‘what’ + indefinite marker = ‘something’

50 a. *nani* + *-ka* (Japanese)

51 b. *mues* + *-inka* (Korean)

52 c. *ce* + *-va* (Romanian)

53 d. *čto* + *-to* (Russian)

54 B. indefinite marker + ‘what’ = ‘something’

55 e. *irgend-* + *was* (German)

56 f. *vala-* + *mi* (Hungarian)

57 g. *ein-* + *hvað* (Icelandic)

58 h. *n+e-* + *što* (Serbian)

59

60 I will show that the same type of *wh*-indefinites share the same syntactic and semantic properties regardless
61 of what language they belong to, and argue that what differs from language to language is certain parameters
62 that determine the details of how the meaning is derived compositionally.

63 The rest of the paper is organized as follows. The next two sections will compare the contrasting
64 properties of BWIs and CWIs. I will first discuss the case of BWIs and their distributional restrictions in
65 Section 2, and move on to CWIs and discuss their similarities with regular indefinites in Section 3. Section
66 4 will present a case study of Korean *wh*-indefinites, which makes an apparent exception to the typology
67 introduced in the previous sections, and provide an account for it. Section 5 provides the semantic
68 representation of *wh*-indefinites based on the previous sections. Section 6 concludes the paper and identifies
69 future work.

70

³ Whether the additional morphology is a prefix or a suffix does not seem to make a difference in the meaning of a CWI. The meaning of the affix itself varies from language to language, and sometimes it is not even clear what they mean. I will not attempt to investigate the meaning of such affixes in this paper and will simply gloss them as IND (indefinite marker) in the examples in this paper.

71 2. Bare *wh*-indefinites (BWIs)

72 Cross-linguistically, BWIs are restricted in terms of the contexts in which they can appear. The specific
73 contexts that allow BWIs vary from language to language, but they can be classified roughly into two types.
74 In some languages, BWIs must obey syntactic requirements that they should be inside a certain maximal
75 projection. In other languages, BWIs exhibit semantic restrictions requiring them to be accompanied by
76 certain types of expressions. The two kinds of restrictions on BWIs are described in detail in the following
77 sections.

78

79 2.1. Syntactic restrictions

80 BWIs in some languages exhibit restrictions regarding their position in the sentence. For instance,
81 Haspelmath (2002) points out that BWIs cannot appear at the beginning of a sentence in Classical Greek or
82 in German, as illustrated in (3) and (4). In these examples, the BWI must appear at the end of the sentence
83 as in (3)-a and (4)-a. If it is moved to the beginning of the sentence, its indefinite reading is not available
84 anymore. In that case, the sentence either becomes ill-formed as in (3)-b or receives an interrogative reading
85 (4)-b. Note that regular indefinites can appear at the beginning of the same sentence as shown in (4)-c.

86

87 (3) Classical Greek (Hapelmath 1997: 170)

a. *Ēlthen tis*
came who
'Someone came.'

88

b. **Tis ēlthen*
who came
(Intended meaning: 'Someone came.')

89

90 (4) German (Haspelmath 1997: 171)

⁴ The sentence (3)-b can receive an interrogative reading if the *wh*-word is stressed.

Tis ēlthen
who came
'Who came?'

91 a. *Da kommt wer*
here come who
'Someone is coming.'

92 b. *Wer kommt da*
who come here
'Who is coming?'

93 c. *Jemand kommt da*
someone come here
'Someone is coming.'

93

94 Bruening (2007) observes a similar restriction on bare *wh*-indefinites in Passamaquoddy. As illustrated in
95 (5), the *wh*-pronoun *wen* 'who' is interpreted as an indefinite when it remains in situ (a) but as an
96 interrogative if it is initial in the clause (b).

97

98 (5) Passamaquoddy (Bruening 2007:153)

a. *Itom wen-il nemiy-a-t?*
say.3 who-OBV IC.see-DIR-3CONJ⁵
'Did he say he saw someone?'

99

b. *Wen-il itom nemiy-a-t?*
who-OBV say.3 IC.see-DIR-3CONJ
'Who did he say he saw?'

100

101 Postma (1994) presents a more specific claim concerning positional restrictions on BWIs in German and
102 Dutch, namely that they must be inside of VP. In German, *wh*-words are interpreted as indefinites only if
103 they are generated VP-internally as in (6)-a. If they are generated externally to VP as an adjunct, an
104 indefinite reading is not available, as shown in (6)-b. In Dutch, BWIs cannot be scrambled out of VP, as
105 illustrated in (7). Note that regular indefinites can be scrambled out of VP as in (8). Postma also points out

⁵ OBV: obviative third person, IC: initial change (ablaut), DIR: direct voice, 3: proximate third person, CONJ: conjunct inflection (subordinate clauses, *wh*-questions) (Bruening 2007: 149).

106 that German does not allow an indefinite reading for *wie* ‘how’, which is in line with his claim because *wie*
107 as an argument is external to VP.

108

109 (6) German (Postma 1994: 192)

a. *Er hat wo gewohnt*

he has where lived

‘He has lived somewhere.’

110

b. **Er hat das Buch wo gekauft*

he has the book where bought

‘He has bought the book somewhere.’

111

112 (7) Dutch (Postma 1994: 193)

a. *Jan heeft [VP snel wat opgeschreven].*

John has quickly what written

113

b. **Jan heeft wat [VP snel opgeschreven].*

John has what quickly written

‘John has quickly written down something.’

114

115 (8) Dutch (Postma 1994: 193)

a. *Jan heeft [VP snel iets opgeschreven].*

John has quickly something written

116

b. *Jan heeft iets [VP snel opgeschreven].*

John has something quickly written

‘John has quickly written down something.’

117

118 In sum, the data we have seen so far indicate that BWIs in certain languages are restricted configurationally.

119 To explain these restrictions, several researchers have argued that BWIs in those languages are variables

120 that lack quantificational force of their own, and their existential reading is derived when they are bound

121 by existential closure at VP (Cheng 1991, Postma 1994, Ha 2004)⁶. The basic idea stems from the semantics
122 of regular indefinites proposed by Heim (1982) and Diesing (1990). According to this line of analysis, the
123 rule of existential closure applies only at a certain level such as VP. Indefinites outside the domain of
124 existential closure cannot receive an existential reading, but end up receiving a generic reading (in the case
125 of regular indefinites) or an interrogative reading (in the case of *wh*-indefinites).

126

127 2.2. Semantic restrictions

128 Some languages exhibit restrictions on BWIs in terms of the semantic contexts in which they can occur.
129 For instance, it is well known that *wh*-words in Chinese have indefinite readings only when they co-occur
130 with certain expressions (Cheng 1991, Li 1992, Lin 1998, Aldridge 2007, among others). The range of
131 those licensing expressions is very wide and it is not easy to characterize them in terms of a single semantic
132 property. At first glance, the licensing contexts for BWIs seem to coincide with the contexts where negative
133 polarity items (NPIs) are allowed, such as negation, conditionals, and polar questions as illustrated in (9).
134 Besides the traditional NPI contexts, however, there are additional cases where BWIs are allowed, such as
135 (a) non-factive verbs *yiwei* ‘think’, *renwei* ‘think’, *cai* ‘guess’, *xiwang* ‘hope’, or (b) adverbs expressing
136 tentativeness or uncertainty: *dagai/keneng* ‘probably’, *haoxiang* ‘seem’, *sihu* ‘seem’, *de yangzi* ‘the
137 appearance of’, *yexu* ‘perhaps’, or (c) circumstantial *le*, as illustrated in (10). To generalize all these
138 environments, Li (1992) suggests that Chinese *wh*-indefinites are allowed only when the truth value of the
139 sentences is not positively fixed.

140

⁶ This argument was first suggested by Cheng (1991) to explain the indefinite reading of *wh*-words in Chinese, and it was also pursued by Postma (1994) for German and Dutch, as well as by Ha (2004) for Korean. As we will see later, however, Chinese is not a language that fits into this line of argument, and the analysis of Korean must be revised to some extent to accommodate the exceptional data. Note that these previous analyses are inadequate not because the argument itself has a logical flaw but because they are based on the incorrect generalization on the data.

141 (9) BWI-licensing expressions in Chinese (Li 1992)⁷

142

143 a. Negation

Ta bu xihuan shenme.

he not like what

‘He doesn’t like anything.’

144

145 b. Yes/no-question

Ta xihuan shenme ma?

he like what Q

‘Does he like something?’

146

147 c. A-not-A question

Ta xi-bu-xihuan shenme?

he like-not-like what

‘Does he like something?’

148

149 d. *If*-clause

Yaoshi ta xihuan shenme ...

if he like what

‘If he likes anything ...’

150

⁷ The list of abbreviations used in this paper is given below:

NOM: nominative	ACC: accusative	LOC: locative
TOP: topic	FOC: focus	NEG: negation
PRS: present	PST: past	PRG: progressive
DCL: declarative	Q: interrogative	INT: intimate
CL: classifier	REL: relativizer	COMP: complementizer
HON: honorific	IND: indefinite	

The original glosses are used for the examples cited from other studies; in those cases the relevant abbreviations are given in separate footnotes.

151 (10) BWI-licensing expressions in Chinese (Li 1992)

152

153 a. Non-factive verbs

Wo yiwei ni xihuan shenme (dongxi).

I think you like what thing

‘I think that you like something.’

154

155 b. Expressions of tentativeness or uncertainty

Ta keneng xihuan shenme.

he probably like what

‘He probably likes something.’

156

157 c. Circumstantial *le*

Ta zuo (le) shenme le.

he do LE what LE

‘He did something⁸.’

158

159 Russian also exhibits similar restrictions on BWIs. They must co-occur with certain expressions in the
160 sentence, as illustrated in (11).

161

162 (11) BWI-licensing expressions in Russian (Yanovich 2005: 321)

163 a. Particles forming yes/no-questions

Ne prixodil li kto?

not came Q who

‘Did anyone come?’

164

⁸ Lin (1998) argues that the circumstantial/inferential *le* functions as a BWI-licensor because it involves a certain kind of modality in that the speaker infers something must have happened solely on the basis of his/her observation of the environment, without witnessing the event or changing state. The modality can be expressed explicitly in translation, e.g. ‘It seems he did something (a la Lin 1998)’ or ‘He must have done something (a la Dong 2009)’.

165 b. *If*-clauses

Esli kto pridet zovi menja

if who come call me

‘If anyone comes, call me.’

166

167 c. Subjunctive clauses

Petja zipper dver’ čtoby kto vošel.

Petja locked the door that.SUBJ who not come in

‘Petja locked the door in order that anyone cannot come in.’

168

169 d. Epistemic operators

Možet, kto prixodil

It may be that who came

‘It may be that someone came.’

170

171 To account for such restrictions, it has been proposed that BWIs in these languages require certain lexical
172 licensors (e.g. Yanovich 2005 for Russian, Dong 2009 for Mandarin Chinese). The licensors seem to be
173 determined by the lexicon rather than by the semantic properties because they do not form any stable natural
174 class cross-linguistically, or even within a language. For instance, Yanovich (2005) points out that Slovene
175 and Byelorussian allow BWIs in imperatives while Russian does not. He further mentions that in Russian,
176 *možet* ‘it-may-be’ can license BWIs while *dolžno byt’* ‘it-is-likely’ cannot, even though both are epistemic
177 operators bearing similar meanings. There is a certain tendency for most licensors to involve some kind of
178 modality, but for the moment it seems reasonable to assume that licensors are lexically determined until a
179 better generalization is made.

180

181 2.3. Generalized restrictions

182 As we have seen so far, a bare *wh*-word can be interpreted as indefinite only if it is licensed properly;
183 otherwise the sentence containing them is interpreted as a *wh*-question or simply ill-formed. In languages
184 such as German and Dutch, BWIs are restricted in terms of their position in the sentence. In languages such

185 as Chinese and Russian, BWIs are restricted in terms of co-occurrence with other expressions. Note,
186 however, that BWIs in Chinese/Russian-type languages also involve a certain kind of structural restriction:
187 a BWI is required to be within the scope of its licensing expression. In Chinese, for instance, the BWI is
188 allowed in the object position of the verb but not in the subject position, even though negation is a licenser
189 of BWIs in Chinese, as shown in (12). Li (1992) states this restriction in terms of c-commanding because
190 the negation c-commands the object but does not c-command the subject.

191
192 (12) Chinese (Li 1992:135)

a. *Ta bu xihuan shenme ren.*
he not like what person
'He does not like someone.'

193
b. *Shenme ren bu xihuan ta.*
what person not like he
'Who does not like him?'
(It cannot mean 'Someone does not like him.')

194
195 Therefore, setting aside the lexical restrictions in Chinese/Russian-type languages, we can make the cross-
196 linguistic generalization that a BWI must be in the scope of a certain licenser. In German/Dutch-type of
197 languages, the licenser is existential closure that applies to a *wh*-indefinite inside VP. In Chinese/Russian-
198 type languages, the licenser is a lexically determined expression, which presumably introduces existential
199 closure for the BWI.

200 With this background, let us now consider a noteworthy remark on a general restriction on BWIs.
201 While most previous studies have focused on the cases in individual languages, Bruening (2007) has
202 suggested a typological generalization as follows:

203
204 (13) Scope restriction of BWIs (Bruening 2007:160)

205 Bare *wh*-indefinites may never take widest scope, nor have a specific reading.

206

207 If we interpret ‘widest scope’ as ‘sentential scope’, the statement in (13) correctly characterizes all BWIs
208 we have seen so far. First, this statement seems to hold for languages that have lexical licensors for BWIs
209 because all lexical licensors identified so far are scope-bearing elements such as negation and modal
210 expressions, and BWIs must be within the scope of their lexical licensors. Note that this does not mean that
211 BWIs cannot take wide scope over other elements in general. A long-distance-scope reading should be
212 available as long as it is interpreted within the scope of the licensor. For instance, a modal expression such
213 as *haoxiang* ‘it seems’ is a licensor of BWIs in Mandarin Chinese, while universal quantifiers are not; thus
214 a scope configuration such as [seem > some > all] is possible in the following example:

215
216 (14) Chinese

217 *Haoxiang tamen dou chiguo shenme.*

seem they all ate what

‘It seems they all ate something.’

(seem > some > all: It seems that there is a certain something that all of them ate.)

218
219 For languages that have structurally determined licensors, BWIs cannot take sentential scope because they
220 cannot be interpreted outside VP. Of course, it is still possible in theory that BWIs take wider scope than
221 other elements within VP. Such a case has not been found yet, though. For instance, Postma (1994) suggests
222 that BWIs in Dutch can only take the narrowest scope. In (15), the BWI *wat* ‘what/something’ cannot take
223 scope over the universal quantifier *alle boeken* ‘all books’, regardless of the surface word order.

224
225 (15) Dutch (Postma 1994: 192)

226 a. *Jan heeft wat in alle boeken geschreven*

John has what in all books written

‘John has written something in all books’ (all > some, *some > all)

227

228

b. *Jan heeft iets in alle boeken geschreven*

John has something in all books written

‘John has written something in all books’ (all > some, *some > all)

229

230 Thus, it seems that Bruening’s generalization holds for all BWIs we have seen so far. The restrictions on

231 BWIs discussed in this section can be summarized as follows:

232

233 (16) Generalized restrictions on BWIs:

234 a. BWIs must be in the scope of their licensors.

235 b. BWIs cannot take sentential scope.

236

237 3. Complex *wh*-indefinites (CWIs)

238 Unlike BWIs, which are restricted syntactically and semantically, CWIs seem to occur relatively freely. It

239 is especially noticeable that CWIs pattern together with regular indefinite expressions that are not

240 morphologically related to interrogatives.

241

242 3.1. Parallels between CWIs and regular indefinites

243 It seems that CWIs do not exhibit any restrictions that BWIs have. For instance, BWIs cannot appear at the

244 beginning of simple declarative sentences, as illustrated in (17), regardless of whether the given language

245 has syntactic or semantic restrictions on BWIs. On the other hand, CWIs can occur in this context, as shown

246 in (18). Note that this difference between BWIs and CWIs is observed within a single language (e.g. Russian)

247 as well as across languages (e.g. German vs. Japanese).

248

249 (17) BWIs

250 a. German

***Wer** kommt da

who come here

(Intended meaning: ‘Someone is coming.’)

251
252 b. Russian
 ***Kto** vose v komnatu
 who come into the room
 (Intended meaning: ‘Someone came into the room.’)

253
254 (18) CWIs
255 a. Japanese
 Dare-ka-ga heya-ni haittekita.
 who-IND-NOM room-LOC came into
 ‘Someone came into the room.’

256
257 b. Russian
 ***Kto-to** vose v komnatu (Yanovich 2005: 311)
 who-IND come into the room
 ‘Someone came into the room.’

258
259 In this sense, CWIs pattern together with regular indefinites. As shown in (19), regular indefinites can
260 appear freely in the same environments.

261
262 (19) Regular indefinites

263
264 a. German
 Jemand kommt da
 someone come here
 ‘Someone is coming.’

265

266 b. Chinese

Youren jin le fangjian

someone enter LE room

‘Someone came into the room.’

267

268 Furthermore, CWIs and regular indefinites can escape scope islands, while BWIs cannot. In the following
269 examples, the BWI *shenme ren* ‘someone’ in Chinese cannot take scope outside of the *if*-clause (20), while
270 the CWI *dare-ka* ‘someone’ in Japanese can take scope over the *if*-clause (21). Since the issue of scope
271 islands is crucial to identify the interpretation of regular indefinites, it will be dealt with in more detail in
272 the next section.

273

274 (20) BWI (Chinese)

275

Yaoshi shenme ren lai, Mei hui hen gaoxing.

if what-person come Mei will very happy

‘If someone comes, Mei will be very happy.’ (if > some, *some > if)

276

277 (21) CWI (Japanese)

278

Dare-ka-ga kutu-to Mei-wa sugoku yorokobu-daroo.

who-IND-NOM come-if Mei-TOP very happy-will

‘If someone comes, Mei will be very happy.’ (if > some, some > if)

279

280 3.2. The scope problem of indefinites

281 It has been known since 1970s (e.g. Rodman 1976) that semantic scope configuration and syntactic
282 movement exhibit similar restrictions. As illustrated in the paired sentences in (22) and (23) (from Reinhart
283 1997), a quantified NP can take wide scope when a *wh*-constituent can be extracted from the same position.
284

- 285 (22) a. A doctor will interview **every new patient**.
286 b. **Which patients** will a doctor interview <e>?
287 (^{OK} every > a)

- 288
289 (23) a. A doctor will examine the possibility [that we give **every new patient** a tranquilizer].
290 b. ***Which patients** will a doctor examine [the possibility that we give <e> a tranquilizer]?
291 (* every > a)

292
293 This correlation between covert scope-taking operations and overt movement supports the view that
294 quantifiers undergo invisible syntactic movement. Then the semantic scope of NPs is restricted by syntactic
295 constraints on movement, such as island constraints (Ross 1967) preventing extraction from occurring
296 across syntactic ‘islands’ such as relative clauses or *if*-clauses. However, not all NPs obey such restrictions,
297 as illustrated in the contrast between (24) and (25). The sentence in (24) shows that an *if*-clause constitutes
298 a scope island, since the universal quantifier *everyone* cannot take scope over *if*. However, an indefinite
299 expression such as *someone* can escape scope islands as shown in (25).

- 300
301 (24) If everyone comes to the party, Mary will be happy.
302 (if > every, *every > if)

- 303 (25) If someone comes to the party, Mary will be happy.
304 (if > some, some > if)

305
306 To explain the exceptional scope-taking property of existential/weak quantifiers such as *a man* or *someone*,
307 Fodor and Sag (1982) propose that those indefinites are ambiguous between referential and quantificational
308 expressions. According to them, the apparent scope ambiguity in sentences like (25) is in fact not due to
309 the scope interaction, but due to the lexical ambiguity of the indefinite expression. As evidence for this
310 argument, Fodor and Sag claim that indefinites can take the narrowest scope (as quantificational) or widest
311 scope (as referentials), but they cannot take intermediate scope because there is no way to construe such a
312 reading. One of their examples is given below (26). The sentence in (26) can mean that each teacher heard
313 that “a student of [the speaker] has been called before the dean” (i.e. the narrowest-scope reading for *a*
314 *student*), or that there is a certain student, namely John, such that each teacher heard that “John had been

315 called before the dean” (i.e. a widest-scope reading for *a student*), but cannot mean that each teacher heard
316 about potentially different students of the speaker, as Teacher 1 heard that “John had been called before the
317 dean” and Teacher 2 heard that “Bill had been called before the dean” and so on (i.e. an intermediate-scope
318 reading for *a student*).
319

320 (26) No intermediate scope of indefinites (Fodor & Sag 1982: 374)

321 *Each teacher overheard the rumor [that a student of mine had been called before the dean].*

322 a. each > relative clause > **a** (NS: narrow scope)

323 b. *each > **a** > relative clause (IS: intermediate scope)

324 c. **a** > each > relative clause (WS: wide scope)

325

326 However, a number of researchers have objected to this lexical ambiguity view of indefinites, pointing out
327 that intermediate readings for the existential quantifiers become available when appropriate contexts are
328 given (Abusch 1994, Reinhart 1997, Winter 1997, Kratzer 1998, among others). Some of the examples are
329 listed below, in which intermediate readings of indefinites are even preferred over narrow- or wide-scope
330 readings.

331

332 (27) Intermediate-scope reading for indefinites

333 a. *Every gambler will be surprised if **one** horse wins.* (Abusch 1994)

334 b. *Every one of them moved to Stuttgart because **a** woman lived there.* (Abusch 1994)

335 c. *Every linguist has looked at every analysis that solves **some** problem.* (Winter 1997)

336 d. *Every country’s security will be threatened if **some** building is attacked by terrorists.*

337 (Winter 1997)

338

339 Thus, instead of lexical ambiguity, a number of researchers have argued that the source of free scope for
340 indefinites comes from the fact that indefinites involve a choice function (CF) in their semantic
341 representation (Reinhart 1997, Winter 1997, Kratzer 1998, Matthewson 1999). Among the variations of the
342 Choice Function analysis, let us start with the version of Reinhart (1997) and Winter (1997). The basic
343 assumptions of their approach are stated in (28).
344

- 345 (28) Assumptions for the Choice Function analysis (Winter 1997:409)
- 346 a. Indefinites lack quantificational force of their own. They are basically predicates.
- 347 b. An indefinite NP in an argument position, however, ends up denoting an individual. This is because
- 348 its semantics involves a free function variable that assigns an individual to the restriction predicate.
- 349 c. This function variable is existentially closed, together with the restriction that it is a choice function:
- 350 a function that chooses a member from any non-empty predicate it gets. This quantificational
- 351 procedure can apply at any compositional level.

352

353 According to Reinhart (1997) and Winter (1997), the scope configuration of an indefinite is decided

354 depending on at which level the choice function variable introduced by that indefinite is existentially closed.

355 The semantic representations in (29) illustrate how the two different scope readings of the sentence in (25)

356 are derived via a choice function. In (29)-a, existential closure appears within the conditional clause; thus

357 the indefinite receives a narrow-scope reading. If existential closure takes scope over the conditional as in

358 (29)-b, a wide-scope reading is given to the indefinite. Note that in both readings the representation of the

359 indefinite remains inside the conditional clause, which is a scope island. Thus the choice function analysis

360 enables a wide-scope reading of indefinites without any movement violating island constraints.

361

362 (29) If **someone** comes to the party, Mary will be happy.

363 a. NS: if > some

364 $\exists f [CH(f) \wedge [comes-to-the-party'(f(person))]] \rightarrow happy'(Mary')$

365 b. WS: some > if

366 $\exists f [CH(f) \wedge [comes-to-the-party'(f(person)) \rightarrow happy'(Mary')]]$

367

368 In this sense, the choice function analysis treats all scope readings of indefinites equally, according to the

369 level of existential closure. (30) illustrates how the choice function analysis derives the narrow, intermediate,

370 and wide-scope readings of indefinites in a unified way.

371

372 (30) Every linguist has looked at every analysis that solves **some problem**.

373 (Winter 1997:431)

374 a. NS: Every linguist has looked at every analysis.

375 $\forall x[\text{linguist}'(x) \rightarrow \forall y[\text{analysis}'(y) \wedge \exists f[\text{CH}(f) \wedge \text{solve}'(f(\text{problem}'))(y)] \rightarrow \text{look-at}'(y)(x)]]$

376 b. IS: For every linguist x there is a problem y such that x has looked at every analysis that solves y .

377 $\forall x[\text{linguist}'(x) \rightarrow \exists f[\text{CH}(f) \wedge \forall y[\text{analysis}'(y) \wedge \text{solve}'(f(\text{problem}'))(y) \rightarrow \text{look-at}'(y)(x)]]]$

378 c. WS: There is a problem x , such that every linguist has looked at every analysis of x .

379 $\exists f[\text{CH}(f) \wedge \forall x[\text{linguist}'(x) \rightarrow \forall y[\text{analysis}'(y) \wedge \text{solve}'(f(\text{problem}'))(y) \rightarrow \text{look-at}'(y)(x)]]]$

380

381 Kratzer (1998), however, opposes the view that all scope readings for indefinites are derived by the same
382 mechanism. She brings particular attention to the peculiar property of indefinite NPs modified by *a certain*
383 discussed in Hintikka (1986). While *a certain* indefinites pattern with other indefinites in that they can
384 escape scope islands, their scope configuration is further erratic in that they can only take widest scope in
385 some environments, such as negation:

386

387 (31) *a certain* indefinites and negation (Kratzer 1998: (12))

388 a. Richard does not have time to date a certain woman, but he sends her flowers.

389 b. *Richard does not have time to date a woman, but he sends her flowers.

390

391 Unlike Reinhart and Winter, Kratzer claims that a choice function variable is not bound by a local existential
392 operator but left free, and that its value is determined by the context later. Consequently, a choice function
393 indefinite necessarily receives the widest-scope reading. According to her, *a certain* indefinites are always
394 choice function indefinites, and their default scope reading is the widest one. On the other hand, other
395 indefinites such as *a/some* NPs are ambiguous between choice function indefinites that take widest scope
396 and quantifier phrases that are subject to scope restrictions. In a sense, Kratzer's proposal can be thought
397 of a cross between the lexical ambiguity analysis and the choice function analysis. Like Fodor and Sag, she
398 assumes that indefinites are ambiguous, but in her theory the wide-scope interpretation is due to a choice
399 function rather than a referential interpretation.

400 Note that choice function indefinites do take scope that is narrower than the widest scope in some
 401 cases as shown in (32). Kratzer attributes such an apparent narrow-scope reading to a ‘parameterized’
 402 choice function, i.e. a choice function parameterized with an implicit argument against the other scope-
 403 bearing expression. In (32), for example, the choice function variable for *a certain date* has each individual
 404 as an implicit argument and picks a date from the set of all dates that is specific to this argument, which is
 405 the man’s wife’s birthday. Since such parameterization is impossible for non-quantificational expressions
 406 such as negation, choice function indefinites cannot be interpreted in scope of negation, as previously
 407 illustrated in (31).

408
 409 (32) *a certain* indefinites and universal quantification (Kratzer 1998:(10))

- 410 a. Each husband had forgotten a certain date - his wife’s birthday.
 411 (each > a certain)
 412 b. $\forall x (\text{husband}(x) \wedge \text{had forgotten}(x, f(x, \text{date})))$

413
 414 The intermediate-scope reading in (30) can be explained in the same vein, as shown in (33). In this reading,
 415 the indefinite *some problem* is interpreted outside the relative clause. Since it escapes the scope island, its
 416 semantic representation cannot be a quantifier but should involve a choice function. However, it does not
 417 take widest scope because the choice function is parameterized against the universal quantifier *every*
 418 *linguist*.

419
 420 (33) Every linguist has looked at every analysis that solves **some problem**.

421 IS: For every linguist x , $f(x, \text{problem})$ selects a problem such that x has looked at every analysis that
 422 solves the problem.

423 $\forall x[\text{linguist}'(x) \rightarrow \forall y[\text{analysis}'(y) \wedge \text{solve}'(f(x, \text{problem}'))(y) \rightarrow \text{look-at}'(y)(x)]]$

424
 425 Table 1 summarizes the analyses of the different scope readings of indefinites discussed in this section so
 426 far. In this table, IS (intermediate-scope reading) indicates a reading in which the indefinite takes scope
 427 outside a scope island but still inside another quantificational expression.

428

	WS	IS	NS
Fodor & Sag (1982)	referential	(does not exist)	quantificational
Reinhart (1997)	CF	CF	CF
Kratzer (1998)	CF	parameterized CF	quantificational

429 Table 1. Scope configurations of indefinites.

430

431 3.3. Semantic analyses on CWIs

432 Since CWIs and regular indefinites pattern together, it seems natural to conclude that they have the same
433 semantic representations. Indeed, many previous studies have adopted a choice function analysis (e.g. Ha
434 2004 for Korean, Yanovich 2005 for Russian, and Yatsushiro 2009 for Japanese) for the semantic
435 representation of CWIs, suggesting that the additional morphology after the *wh*-word in a CWI is an explicit
436 choice function marker. The details of the analysis vary depending on which specific choice function
437 analysis is adopted. However, it seems the most suitable analysis of CWIs as choice functions is the one
438 proposed by Kratzer (1998) in that it correctly predicts the relative scope configuration of negation and
439 CWIs. Recall that in her analysis, choice function indefinites cannot take scope within the immediate scope
440 of negation. If CWIs are necessarily interpreted as choice function variables as explicitly indicated by the
441 morphology, they are expected to scope over negation. This expectation seems to hold, at least for the
442 languages considered so far. A detailed analysis on the semantic interpretation of CWIs will be presented
443 in Section 5.

444

445 (34) Japanese

446

Kare-wa nani-ka-o tabe-nakatta.
he-TOP what-IND-ACC eat-NEG.PST.DCL
‘He didn’t eat a certain thing.’ (IND > NEG)
*‘He didn’t eat anything.’ (NEG > IND)

447

448 (35) Russian (Yanovich 2005:313)

449

Petja ne zametil kogo-to iz svoix odnoklassnic.

Petja NEG has.noticed who-IND of his girl-classmates

‘There is a girl from his class that Petja did not notice.’ (IND > NEG)

*‘Petja did not notice any of the girls in his class.’ (NEG > IND)

450

451 4. The two types of *wh*-indefinites in Korean

452 So far, we have seen the different distributions of BWIs and CWIs: BWIs can occur in more restricted
453 environments compared to CWIs. Those differences are cross-linguistically observed, even within a
454 language that has both types of *wh*-indefinites (e.g. see Yanovich 2005 for Russian data). Korean is one of
455 the languages that have both types of *wh*-indefinites. However, Korean *wh*-indefinites constitute an
456 apparent exception to the distributional generalization that holds for other languages, since none of the
457 restrictions on BWIs described in the previous section is attested for Korean BWIs. This section introduces
458 the data illustrating the exceptional properties of Korean BWIs and attempts to provide a proper account
459 for the data.

460

461 4.1. Apparent exception to the typology

462 In Korean, none of the restrictions presented so far holds for BWIs, and it seems that BWIs and CWIs
463 simply pattern together. First, Korean BWIs are not subject to any syntactic restrictions. Recall that BWIs
464 in other languages cannot appear at the beginning of the sentence, as illustrated in Section 2.1. In Korean,
465 however, both BWIs and CWIs can appear at the beginning of a sentence.

466

467 (36) BWI

*Nuka Minho-lul tayly-ess-ta.*⁹

who.NOM Minho-ACC hit-PST-DCL

‘Someone hit Minho.’

468

⁹ The Yale Romanization system is adopted for the transcription of the Korean data in this paper.

469 (37) CWI

Nuku-nka-ka Minho-lul tayly-ess-ta.
who-IND-NOM Minho-ACC hit-PST-DCL
'Someone hit Minho.'

470

471 Also, we saw that BWIs in German and Dutch cannot be placed out of the verb phrase in Section 2.1.

472 However, in the following Korean sentences the object *wh*-indefinite is scrambled over the subject, whether

473 the *wh*-indefinite is a BWI or a CWI.

474

475 (38) BWI

Nuku-lul Minho-ka tayly-ess-ta.
who-ACC Minho-NOM hit-PST-DCL
'Minho hit someone.'

476

477 (39) CWI

Nuku-nka-lul Minho-ka tayly-ess-ta.
who-IND-ACC Minho-NOM hit-PST-DCL
'Minho hit someone.'

478

479 Furthermore, BWIs are not subject to any semantic restrictions, either. While Bruening's generalization

480 introduced in Section 2.3 states that BWIs cannot take the widest scope in the sentence, it is possible for

481 Korean BWIs. The *wh*-indefinite can take scope over negation in both examples below.¹⁰

482

¹⁰ As far as I am aware, Ha (2004) is the only attempt at analyzing the scope configuration of *wh*-indefinites in Korean before this work, but he claims that BWIs in Korean cannot scope over negation, other quantifiers, or *if*-clauses. However, almost every Korean speakers I have consulted did accept the widest scope reading of BWIs against other scope bearing elements, and many of them even preferred a wide scope reading of BWIs in general. For the relative scope configuration against negation, for example, 32 out of 39 consultants preferred a wide scope reading of BWI.

483 (40) BWI

*Minho-ka **nwukwu-lul** an cohaha-n-ta.*

Minho-NOM who-ACC NEG like-PRS-DCL

‘Minho doesn’t like someone.’

484

485 (41) CWI

*Minho-ka **nwukwu-nka-lul** an cohaha-n-ta.*

Minho-NOM who-IND-ACC NEG like-PRS-DCL

‘Minho doesn’t like someone.’

486

487 In addition, while only CWIs are known to be able to escape scope islands in other languages as shown in
488 Section 3.1, both BWIs and CWIs can escape scope islands in Korean. The *wh*-indefinite can be interpreted
489 outside of the *if*-clause in both examples below.

490

491 (42) BWI

***Nuka** phathi-ey o-myen Minho-ka cohaha-l ke-ta.*

who.NOM party-LOC come-if Minho-NOM happy-will-DCL

‘If someone comes to the party, Minho will be happy.’

492

493 (43) CWI

***Nuku-nka-ka** phathi-ey o-myen Minho-ka cohaha-l ke-ta.*

who-IND-NOM party-LOC come-if Minho-NOM happy-will-DCL

‘If someone comes to the party, Minho will be happy.’

494

495 The above examples seem to suggest that BWIs and CWIs simply pattern together in Korean. Thus, one
496 might conclude that the two types of *wh*-indefinites have an identical semantic representation in this
497 language. Indeed, many researchers who have studied *wh*-indefinites in Korean have considered that a BWI
498 is merely a contracted form of the corresponding CWI (C.-S.Suh 1989, D.-H.Chung 1996, Y.-J.Jang 1999).
499 However, a closer scrutiny reveals that there are in fact differences between them.

500
501 4.2. Ignorance implication of CWIs

502 Several researchers have observed that a CWI sounds strange in the context where the speaker is expected
503 to know which individual satisfies the existential proposition expressed by the CWI (H.-B. Im 1998, S.-W.
504 Yi 2000, J.-M. Yoon 2005). For instance, let us consider the conversation in **Error! Reference source not**
505 **found.** The response with the CWI *nwukwunka* ‘someone’ sounds somewhat odd because it is unlikely
506 that the person B came to the current place with the intention to meet someone who s/he cannot specify.

507
508 (44) Ignorance implication of CWI

A: *yeki mwusun il-lo w-ass-ni?*
here what.kind.of matter-by come-PST-Q
‘What brought you here?’

509
B: *nwukwu manna-le w-ass-e-yo.*
who meet-to come-PST-INT-HON
‘I came to meet someone.’

510
B: *#nwukwu-nka manna-le w-ass-e-yo.*
who-IND meet-to come-PST-INT-HON
‘#I came to meet someone (that I don’t know).’

511
512 Note that in the above example, the response of B with the BWI is perfectly fine. The speaker may choose
513 to use BWIs to conceal the identity of what is said from the listener when s/he consider it is not important
514 in the given discourse, but the speaker may know what it is. The fact that only CWIs involve an ignorance
515 implication further suggests that BWIs are not just a contracted form of CWIs in Korean.

516
517 4.3. Scope configuration relative to negation

518 BWIs and CWIs also exhibit different properties in terms of their scope configuration relative to negation.
519 There are three types of negation in Korean (Sells 2001): (i) inherently negative predicates such as *eps-* ‘not
520 exist’ or *molu-* ‘not know’, (ii) short-form negation in which the negative adverb *an* precedes the predicate,
521 and (iii) long-form negation in which the predicate is followed by a complex predicate *-ci ahn-*. Different

522 types of negation have been argued to exhibit different scope properties: i.e., only the long-form type can
523 adjust the scope of negation (Sohn 1999). For instance, (45) illustrates that negation must scope over a
524 quantifier when it involves a negative predicate (a) or short-form negation (b), while the sentence with long-
525 form negation allows scope ambiguity (c).

526
527 (45) Three types of negation in Korean

528
529 a. Negative predicate

Sey myeng-i eps-ta.

three CL-NOM not.exist-DCL

‘Three people are not here.’ (three > NEG, *NEG > three)

530
531 b. Short-form negation

Sey myeng-i an w-ass-ta.

three CL-NOM NEG come-PST-DCL

‘Three people didn’t come.’ (three > NEG, *NEG > three)

532
533 c. Long-form negation

Sey myeng-i o-ci anh-ass-ta.

three CL-NOM come-REL NEG-PST-DCL

‘Three people didn’t come.’ (three > NEG, NEG > three)

534
535 Interestingly, the relative scope configuration between *wh*-indefinites and negation seem to be independent
536 of the type of negation, as illustrated in the examples (46)-(48). In (46), the BWI sentence (a) can mean that
537 the house is not well-equipped or that there is something missing in the house, but the CWI sentence (b)
538 can only mean the latter. Similarly in (47), (a) can mean either he came empty-handed or he forgot to bring
539 a particular thing, but (b) can only mean the latter. Finally, both sentences in (48) can mean that he does
540 not eat a certain thing and can be followed by a question ‘what do you think it is?’ while only (a) can have
541 an additional reading that he does not eat well in general.

- 542
 543 (46) Lexical Negation
 544
 545 a. BWI
- Cip-ey mwe-ka eps-ta.*
 house-LOC what-NOM not.exist-DCL
 ‘There isn’t something here.’ (some > NEG, NEG > some)
- 546
 547 b. CWI
- Cip-ey mwe-nka-ka eps-ta.*
 house-LOC what-IND-NOM not.exist-DCL
 ‘There isn’t something here.’ (some > NEG, *NEG > some)
- 548
 549 (47) Short-form negation
 550
 551 a. BWI
- Kyay mwe an kaciyewa-ss-e.*
 he what NEG bring-PST-DCL
 ‘He didn’t bring something.’ (some > NEG, NEG > some)
- 552
 553 b. CWI
- Kyay mwe-nka an kaciyewa-ss-e.*
 he what-IND NEG bring-PST-DCL
 ‘He didn’t bring something.’ (some > NEG, *NEG > some)
- 554

555 (48) Long-form negation

556

557 a. BWI

Ku-nun mwues-ul cal mek-ci anh-nun-ta.

he-NOM what-ACC well eat-REL NEG-PRS-DCL

‘He does not eat something.’ (some > NEG, NEG > some)

558

559 b. CWI

Ku-nun mwues-inka-lul cal mek-ci anh-nun-ta.

he-NOM what-IND-ACC well eat-REL NEG-PRS-DCL

‘He does not eat something.’ (some > NEG, *NEG > some)

560

561 The tables in (49) summarize possible scope configurations relative to negation for quantificational NPs,

562 BWIs, and CWIs as discussed so far. The important implication of the above data is twofold. First, CWIs

563 must take scope over negation. This is a property of Kratzer-style choice functions, as we have seen in

564 Section 3.3. Thus I will adopt the choice function analysis of Kratzer (1998) to explain the semantics of

565 Korean CWIs. A detailed analysis will be presented later in Section 5. Second, BWIs can always take scope

566 under negation, even in the contexts where other NPs cannot. As we will see soon, this property can be

567 explained well by the view that Korean BWIs are ambiguous between referential and quantificational

568 readings since referential expressions always elicit the widest-scope interpretation. The details of this view

569 will be discussed in the next section.

570

571 (49) Scope configuration relative to negation

572 a. QNP

Type of Negation	QNP > NEG	NEG > QNP
Lexical	✓	*
Short	✓	*
Long	✓	✓

573

574

b. BWI

Type of Negation	QNP > NEG	NEG > QNP
Lexical	✓	✓
Short	✓	✓
Long	✓	✓

575

576

c. CWI

Type of Negation	QNP > NEG	NEG > QNP
Lexical	✓	*
Short	✓	*
Long	✓	*

577

578 4.4. Lexical ambiguity of BWIs

579 The previous two subsections have shown that, BWIs and CWIs are *not* semantically the same expressions
580 in Korean. Therefore, the argument that Korean BWIs are merely a contracted form of the corresponding
581 CWIs is not tenable. Then, why do Korean BWIs occur in the contexts where BWIs in other languages
582 cannot? This subsection provides a closer examination of the contexts where BWIs can occur and concludes
583 that the seemingly exceptional behaviors of Korean BWIs are due to their ambiguity between referential
584 and quantificational readings. First of all, a Korean BWI can appear in contexts where a typical non-
585 restricted indefinite expression cannot appear. The examples below illustrate the point: the BWI *nwukwu*
586 ‘who/someone’ can occur in an exceptive phrase *X-pakkey eps-* ‘nobody but X’ (50), as a subject
587 complement of the copular verb (51), or as an answer to the question ‘who are you talking about?’ (52).
588 When a BWI is used in those contexts, the speaker is referring to a specific person in mind and often
589 presupposes that the listener also knows that person, but simply does not want to mention the person’s name
590 explicitly or cannot recall the name for the moment. Note that CWIs or regular non-restricted indefinites
591 cannot be used in this way, as the corresponding sentences with CWIs or their English translation with a
592 regular indefinite *someone* are not acceptable.

593

594 (50) a. BWI

Nwukwu-pakkey an w-ass-ta.

who-FOC NEG come-PST-DCL

‘No one but a certain someone came.’

595

596 b. CWI

Nwukwu-nka-pakkey an w-ass-ta.

who-IND-FOC NEG come-PST-DCL

‘#No one but someone came.’

597

598 (51) a. BWI

Pemin-un nwukwu-la-ko imi somwun-i na-ss-ta

criminal-TOP who-be-COMP already rumor-NOM spread-PST-DCL

‘The rumor spread that the criminal is a certain someone.’

599

600 b. CWI

#Pemin-un nwukwu-nka-la-ko imi somwun-i na-ss-ta

criminal-TOP who-IND-be-COMP already rumor-NOM spread-PST-DCL

‘The rumor spread that the criminal is a certain someone.’

601

602 (52)

A: *Cikum nwukwu yaykih-ay?*

now who talk-INT

‘Who are you talking about now?’

603

B: *Nwukwu isscanha.*

who you know

‘A certain someone, you know.’

604

B': #*Nwukwu-nka isscanha.*

who-IND you know

'Someone, you know.'

605

606 Thus, I argue that Korean BWIs can have a referential reading, and that the seemingly exceptional scope
607 reading of Korean BWIs is in fact due to their indefinite-referential ambiguity. This approach is in the same
608 vein as the view that attributes the exceptional wide-scope reading of certain genuine indefinites to their
609 lexical ambiguity (cf. Fodor & Sag 1982, Kratzer 1998).

610 Another evidence for the lexical ambiguity analysis of BWIs comes from the observation that the
611 distribution of BWIs is in fact not entirely free in Korean. Note that although referential expressions do not
612 take scope, their interpretation is truth-conditionally compatible with the widest-scope reading of indefinites.
613 Thus, my analysis predicts that the non-canonical occurrence of BWIs can only have the widest-scope
614 reading when they co-occur with other scope-taking elements. The following examples show that this
615 prediction is borne out. First, BWIs cannot be interpreted in the scope of other quantifiers when they escape
616 syntactic islands as shown in (53). In the (a) sentence in (53), which has three scope-bearing elements, the
617 BWI can take either the narrowest scope [*many* > *if* > **some**] or the widest scope [**some** > *many* > *if*] but
618 not the intermediate scope [**many* > **some** > *if*]. On the other hand, the (b) sentence with a corresponding
619 CWI in (53) allows all three scope configurations.

620

621 (53) a. BWI

Manhun salamtul-i mwe-l mek-umyen

many people-NOM what-ACC eat-if

622

alleci cungsang-ul poi-n-ta.

allergy symptom-ACC show-PRS-DCL

'Many people show allergic reaction if they eat something.'

623

624 b. CWI

Manhun salamtul-i mwe-nka-l mek-umyen

many people-NOM what-IND-ACC eat-if

625

alleci cungsang-ul poi-n-ta.

allergy symptom-ACC show-PRS-DCL

‘Many people show allergic reaction if they eat something.’

626

627 Also, BWIs should have a wide-scope reading when they are scrambled. Recall that Korean allows
628 scrambling of BWIs. When it is scrambled, however, a BWI can only take the surface scope. The sentence
629 with the BWI in (54) only has a wide-scope reading, while the one with the CWI in (55) allows a narrow-
630 scope reading.

631

632 (54) BWI

Nuku-lul Yuna-ka manna-ko sipheha-n-ta.

who-ACC Yuna-NOM meet-REL want-PRS-DCL

‘Yuna wants to meet someone.’

633

634 (55) CWI

Nuku-nka-lul Yuna-ka manna-ko sipheha-n-ta.

who-IND-ACC Yuna-NOM meet-REL want-PRS-DCL

‘Yuna wants to meet someone.’

635

636 The contrast between (54) and (55) might be rather hard to notice because a wide-scope reading is strongly
637 preferred even in the sentence with a CWI in (55) due to the general preference for a wide-scope reading in
638 the scrambled position. However, the contrast becomes clearer when we consider a context that forces a
639 narrow-scope reading of the indefinite. Suppose that there is a dispute in some area and every country
640 dispatched someone to mediate. In such a case, the sentence with a BWI in the scrambled position in (56)

641 sounds odd because it would mean that every country dispatched the same person, while the sentence with
642 the CWI counterpart in (57) is acceptable.

643
644 (56) BWI

#Nuku-lul motun nala-ka phakyenhay-ss-ta.
who-ACC all country-NOM dispatch-PST-DCL
'Every country dispatched someone.'

645
646 (57) CWI

Nuku-nka-lul motun nala-ka phakyenhay-ss-ta.
who-IND-ACC all country-NOM dispatch-PST-DCL
'Every country dispatched someone.'

647
648 4.5. Evidence from other languages

649 To summarize the argument in the previous section, BWIs in Korean are apparently exceptional not because
650 they are completely different from BWIs in other languages but because they have an additional (i.e.
651 referential) reading. A question then arises: is Korean the only language whose BWIs are ambiguous? Are
652 there any other languages in which a non-quantificational usage of BWIs is found? As an answer to this
653 question, this section introduces the so-called placeholder usage of bare *wh*-words.

654 Ganenkov et al. (2010) report that in certain Northeast Caucasian languages such as Udi and Agul,
655 *wh*-pronouns can be used as placeholders, i.e., “hesitation markers whose use is motivated by production
656 difficulties on the side of the speaker.” In such a case, the speaker knows that there exists a specific
657 expression that is appropriate for the utterance but cannot recall it in the moment, so he or she replaces the
658 expression with a *wh*-pronoun. The target expression can appear after the *wh*-placeholder if the speaker
659 successfully recalls it in the end as in (58), but not necessarily, as in (59).
660

661 (58) Agul (Ganenkov et al. 2010: 99)

na-s aB-a-a zun,

who-DAT say-IPF-PRS I

662

me we jazna q'ulban-a-s=na ...

DEM your:SG brother_in_law Qurban-O-DAT=ADD¹¹

‘Then I tell [WHOM], your brother-in-law Qurban and ...’

663

664 (59) Udi (Ganenkov et al. 2010: 99)

bur=e=q-sa lül-in-aχun t : e he c : oroj-e-s-a.

begin=3SG=ST-PRS pipe-O-ABL DEM what flow-LV-INF-DAT¹²

‘This [WHAT] begins to flow from the pipe.’

665

666 Cheung (2011) also discusses a placeholder usage of *wh*-expressions in Chinese, in which the exact
667 reference is not uttered due to momentary retrieval problem (60) or to avoid direct mentioning of the
668 reference for some pragmatic reasons (61). Especially, he notices that the placeholder *wh*-words do not
669 require any licenser, while BWIs in Chinese do require an appropriate licenser as we have seen in Section
670 2.2 in this paper.

671

672 (60) Cantonese (Cheung 2011)

HoizoeK me la!

switch.on what SP

675 ‘Switch on [WHAT]!’ (what = router)

676

677 (61) Mandarin (Cheung 2011)

Na ge shei yijing you nanyou le.

DEM CL who already have boyfriend SP

680 ‘That [WHO] has already got a boyfriend.’

681

¹¹ IPF: imperfective stem, ADD: additive particle

¹² ST: detached part of verbal stem, O: oblique, ABL: ablative, LV: light verb, INF: infinitive

682 The ‘placeholder usage’ of *wh*-words provides evidence that the non-interrogative bare *wh*-words are not
683 limited to the homogeneous function (i.e. existential quantification) in many languages. Note that a
684 referential reading is naturally derived when such a *wh*-word replaces a proper noun. Finding more
685 instances of non-canonical usage of bare *wh*-words in other languages is a worthy case for future research.

686

687 5. Semantics of *wh*-indefinites

688 Based on the observations so far, this section provides the semantic interpretations of *wh*-indefinites and
689 how the meaning of the sentences that contain *wh*-indefinites are derived compositionally. I will first
690 present the semantics of Korean *wh*-indefinites because it has both types of *wh*-indefinites and focusing on
691 the case in a single language will make the exposition easier, and then show how it applies to the cases in
692 other languages.

693 As a starting point, I adopt the Alternative Semantics approach (Hamblin 1973, Rooth 1985) for
694 the semantic representation of bare *wh*-words, since it provides a neat account of how different readings
695 (i.e. indefinite and interrogative) are derived from the same root. Let us first consider the original analysis
696 of Hamblin (1973) on English questions. Seeking a way to incorporate questions into Montague’s grammar,
697 Hamblin suggests that interrogative words of English denote sets of individuals. For instance, *who* and *what*
698 denote the set of humans and the set of non-humans, respectively. For a unified account of interrogatives
699 and indicatives, he further suggests that non-interrogative expressions denote a unit set, e.g. *Mary* denotes
700 the set whose only member is Mary. Some examples of denotations in Hamblin semantics are presented
701 below.

702

703 (62) Denotations in Hamblin semantics¹³

704 a. *wh*-words

705 $\llbracket who \rrbracket^g = \{x: person(x)\}$

706 $\llbracket what \rrbracket^g = \{x: thing(x)\}$

707

¹³ All Logical Forms in this section are presented in the notation of Heim & Kratzer (1998).

708 b. ordinary words

709 $\llbracket \text{Mary} \rrbracket^g = \{m\}$

710 $\llbracket \text{John} \rrbracket^g = \{j\}$

711 $\llbracket \text{person} \rrbracket^g = \{\lambda x. \text{person}(x)\}$

712 $\llbracket \text{dances} \rrbracket^g = \{\lambda x. \text{dance}(x)\}$

713

714 In this semantics, Functional Application is defined as in (63) so that each member of the set denoted by
715 one node applies to each member of the set denoted by the other node. Consequently, a question denotes a
716 set of propositions, while an assertion denotes a singleton set that contains only one proposition. For
717 instance, if Mary, John, and Kenneth are all the people in the context, the interrogative sentence “*Who*
718 *dances?*” denotes the set of propositions $\{\text{dance}(m), \text{dance}(j), \text{dance}(k)\}$, while the indicative sentence
719 “*Mary dances.*” denotes the singleton set $\{\text{dance}(m)\}$, as illustrated in (64).

720

721 (63) Functional Application (cf. Hamblin 1973:49)

722 If α is a branching node and $\{\beta, \gamma\}$ is the set of α 's daughters

723 and $\llbracket \beta \rrbracket^g \subseteq D_{\langle \sigma, \tau \rangle}$ and $\llbracket \gamma \rrbracket^g \subseteq D_\sigma$,

724 $\llbracket \alpha \rrbracket^g = \{y(z) \in D_\tau : y \in \llbracket \beta \rrbracket^g \wedge z \in \llbracket \gamma \rrbracket^g\}$

725

726 (64) Derivations

727 a. $\llbracket \text{who dances?} \rrbracket^g$

728 $= \{f(x) : f \in \llbracket \text{dances} \rrbracket^g \wedge x \in \llbracket \text{who} \rrbracket^g\}$ (FA)

729 $= \{\text{dance}(x) : x \in \{\lambda y. \text{person}(y)\}\}$

730 b. $\llbracket \text{Mary dances.} \rrbracket^g$

731 $= \{f(x) : f \in \llbracket \text{dances} \rrbracket^g \wedge x \in \llbracket \text{Mary} \rrbracket^g\}$ (FA)

732 $= \{\text{dance}(m)\}$

733

734 5.1. *Wh*-interrogatives

735 The view that *wh*-words denote sets of alternatives has been adopted by a number of researchers to account
736 for indeterminate *wh*-words that are ambiguous between interrogative and indefinite readings (Ramchand

737 1997 for Bengali; Hagstrom 1998, Shimoyama 2006, Yatsushiro 2009 for Japanese; Lin 1996, Dong 2009
738 for Chinese, among others). I will also adopt the basic idea that a *wh*-word denotes a set of alternatives but
739 deviate a little from the framework in Hamblin (1973) as follows, mainly for expository purposes.

740 First, I will keep the ordinary semantic representations for non-*wh* words, instead of singleton set
741 representations, in order to maintain systematic distinctions between questions and assertions. In the
742 original analysis by Hamblin (1973), all types of sentences denote sets, and assertions are distinguished
743 from questions in that they denote sets that contain only one element. However, the cardinality of the set
744 does not seem strong enough to establish a definite distinction between questions and assertions because a
745 question that has only one possible answer would not be distinguished from an assertion in the semantic
746 representation¹⁴.

747 Second, I will assign a new semantic type for *wh*-words following Yatsushiro (2009)¹⁵, to avoid
748 conceptual confusion due to the common practice of regarding one-place predicates as sets of individuals
749 (Heim & Kratzer 1998: 24). In this practice, an intransitive verb denotes the set of individuals that it is true
750 of. For instance, $\llbracket \textit{dances} \rrbracket$ can be defined as the set of people who dance. In this sense, $\llbracket \textit{person} \rrbracket$ is the
751 set $\{x \in D_e : \textit{person}(x)\}$, which happens to be the same as $\llbracket \textit{who} \rrbracket$. Of course we could stick to the
752 denotations of one-place predicates as functions from individuals to truth-values, but it would be more
753 desirable to avoid any potential confusion by establishing a concrete distinction between alternative sets
754 and ordinary sets. One way to achieve this goal is to establish a different semantic type for alternative sets
755 as follows:

756
757 (65) Semantic type for alternative sets (Yatsushiro 2009: 152)

758 For any type σ , σ/t is the type of sets of entities of type σ .

759

760 Based on the above two assumptions, denotations of some Korean words are given below:

¹⁴ Hamblin (1973) argues that if a question has only one answer, the answer must be a tautology. He further argues that tautological answers should be excluded in semantics, and as a result a singleton set should always indicate an assertion, not a question. Although this argument is sound, keeping separate denotations for questions and assertions will obviate theory-external stipulations in the semantics. In fact, Hamblin himself suggested the possibility of establishing separate semantic rules for questions and assertions (Hamblin 1973:48) and noted that either account is tenable.

¹⁵ Yatsushiro proposes the new semantic type to explain the structural restrictions on the *wh*-indefinite marker *mo* in terms of type mismatch.

761			
762	(66)	Denotations	
763	a.	<i>wh</i> -words	
764		$\llbracket \textit{nwukwu} \rrbracket^g = \{x: \textit{person}(x)\}$	type: e/t
765		$\llbracket \textit{mwe} \rrbracket^g = \{x: \textit{thing}(x)\}$	type: e/t
766			
767	b.	ordinary words	
768		$\llbracket \textit{Minji} \rrbracket^g = \{m\}$	type: e
769		$\llbracket \textit{Junho} \rrbracket^g = \{j\}$	type: e
770		$\llbracket \textit{salam} \rrbracket^g = \lambda x. \textit{person}(x)$	type: $\langle e, t \rangle$
771		$\llbracket \textit{chwumchwe} \rrbracket^g = \lambda x. \textit{dance}(x)$	type: $\langle e, t \rangle$
772		$\llbracket \textit{cohahay} \rrbracket^g = \lambda y. \lambda x. \textit{like}(x)(y)$	type: $\langle e, \langle e, t \rangle \rangle$
773			

774 The rule of functional application should be modified to accommodate the new semantic type as follows:

- 775
- 776 (67) Functional Application (based on Yatsuhiko 2009:153)
- 777 If α is a branching node and $\{\beta, \gamma\}$ is the set of α 's daughters,
- 778 $\llbracket \alpha \rrbracket$ is defined as follows:
- 779 a. If $\llbracket \beta \rrbracket^g$ is of type $\langle \sigma, \tau \rangle$ and $\llbracket \gamma \rrbracket^g$ is of type σ , $\llbracket \alpha \rrbracket^g$ is of type τ :
- 780 $\llbracket \alpha \rrbracket^g = \llbracket \beta \rrbracket^g(\llbracket \gamma \rrbracket^g)$
- 781 b. If $\llbracket \beta \rrbracket^g$ is of type $\langle \sigma, \tau \rangle$ and $\llbracket \gamma \rrbracket^g$ is of type σ/t , $\llbracket \alpha \rrbracket^g$ is of type τ/t :
- 782 $\llbracket \alpha \rrbracket^g = \{\llbracket \beta \rrbracket^g(z): z \in \llbracket \gamma \rrbracket^g\}$
- 783 c. If $\llbracket \beta \rrbracket^g$ is of type $\langle \sigma, \tau \rangle/t$ and $\llbracket \gamma \rrbracket^g$ is of type σ , $\llbracket \alpha \rrbracket^g$ is of type τ/t :
- 784 $\llbracket \alpha \rrbracket^g = \{y(\llbracket \gamma \rrbracket^g): y \in \llbracket \beta \rrbracket^g\}$
- 785 d. If $\llbracket \beta \rrbracket^g$ is of type $\langle \sigma, \tau \rangle/t$ and $\llbracket \gamma \rrbracket^g$ is of type σ/t , $\llbracket \alpha \rrbracket^g$ is of type τ/t :
- 786 $\llbracket \alpha \rrbracket^g = \{y(z): y \in \llbracket \beta \rrbracket^g \wedge z \in \llbracket \gamma \rrbracket^g\}$

787

788 Now we can derive the denotation of a *wh*-question such as (68), as illustrated in (69). The thick lines in

789 the derivational tree (70) indicate how the alternative set introduced by the *wh*-word expands to bigger

790 constituents. It will keep expanding until the topmost level of the sentence, and consequently, the sentence
 791 ends up having the type t/t .

792
 793 (68) *Wh*-question

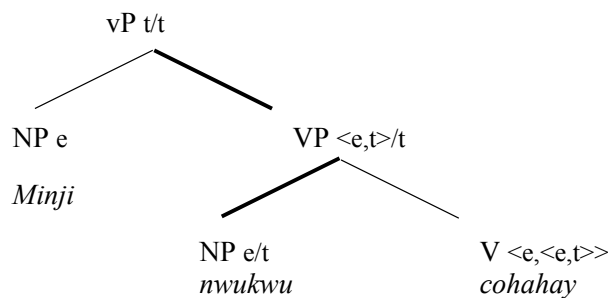
Minji-ka nwukwu-lul cohahay
 Minji-NOM who-ACC like
 ‘Who does Minji like?’

794
 795 (69) Semantic derivation of *wh*-question¹⁶

796 a. $\llbracket nwukwu cohahay \rrbracket^g$
 797 $= \{ \llbracket cohahay \rrbracket^g(z) : z \in \llbracket nwukwu \rrbracket^g \}$ (FA-b)
 798 $= \{ \lambda x. like(z)(x) : z \in \{x : person(x)\} \}$

799 b. $\llbracket Minji nwukwu cohahay \rrbracket^g$
 800 $= \{ y(\llbracket Minji \rrbracket^g) : y \in \llbracket nwukwu cohahay \rrbracket^g \}$ (FA-c)
 801 $= \{ like(z)(m) : z \in \{x : person(x)\} \}$

802
 803 (70) Derivational tree for *wh*-question¹⁷



812
 813 On the other hand, the denotation of assertions without *wh*-words such as (71) is derived in the conventional
 814 way, as shown in (72). As illustrated in the derivational tree in (73), assertions end up having the type t .

¹⁶ For simplicity, case markers are ignored in the semantic component.

¹⁷ I assume that the subject of a sentence in Korean is generated in Spec-vP instead of Spec-VP (cf. Nakayama & Koizumi 1991 for Japanese, which has a similar syntactic structure with Korean). Accordingly, the position of the existential closure for BWIs that will be discussed in the next subsection should be at the vP-level instead of the VP-level, deviating a little from the configuration suggested in earlier works.

815 Thus, the semantics proposed in this section clearly distinguishes questions and assertions by their semantic
 816 types.

817
 818 (71) Assertion

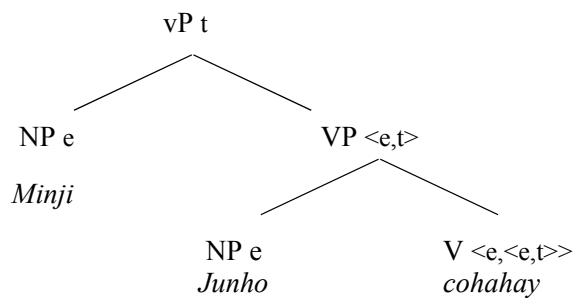
Minji-ka Junho-lul cohahay
 Minji-NOM who-ACC like
 ‘Minji likes Junho.’

819
 820 (72) Semantic derivation of assertion

821 a. $\llbracket \text{Junho cohahay} \rrbracket^g$
 822 $= \{ \llbracket \text{cohahay} \rrbracket^g (\llbracket \text{Junho} \rrbracket^g) \}$ (FA-a)
 823 $= \lambda x. \text{like}(j)(x)$

824 b. $\llbracket \text{Minji Junho cohahay} \rrbracket^g$
 825 $= \{ \llbracket \text{Junho cohahay} \rrbracket^g (\llbracket \text{Minji} \rrbracket^g) \}$ (FA-a)
 826 $= \text{like}(j)(m)$

827
 828 (73) Derivational tree for assertion



837
 838 5.2. BWIs

839 Now let us turn to the question of how indefinite readings of *wh*-words are derived. As suggested in the
 840 previous sections, I assume that languages that allow indefinite readings of *wh*-words introduce a certain
 841 operator that determines the quantificational force of the *wh*-word. If the *wh*-word is not bound by an
 842 appropriate operator, it receives an interrogative reading by default.

843 In the case of BWIs in Korean, I assume that the relevant operator is an existential propositional
 844 quantifier (cf. Kratzer and Shimoyama 2002):

845
 846 (74) Existential propositional quantifier for alternative sets
 847 $[[\exists_p \alpha]]^g = \exists_p [p \in [[\alpha]]^g] \ \& \ p=1$ if α is of type t/t , otherwise $[[\alpha]]^g$.

848
 849 This existential operator is located at the VP-level and applies to an alternative set of propositions. (78)
 850 illustrates how the denotation of an indicative sentence with a BWI such as (75) is derived. The dotted line
 851 in the derivational tree in (77) indicates that the existential operator blocks the alternative set from
 852 expanding further than the vP-level. Note that the *wh*-question in (68) and the assertion with the BWI in
 853 (75) consist of exactly the same words in the same order. This suggests that the application of the existential
 854 operator should be optional because otherwise only the indefinite reading would be available for the
 855 sentence. The optionality of the existential closure seems to establish a parameter for the typological
 856 variation of *wh*-indefinites, as we will see later in this section.

857
 858 (75) BWI
 859

Minji-ka nwukwu-lul cohahay
 Minji-NOM who-ACC like
 ‘Minji likes someone.’

860
 861 (76) Semantic derivation with a BWI (cf. (69))

862 $[[\exists_p [_{VP} \textit{Minji nwukwu cohahay}]]]^g$
 863 $= \exists_p [p \in \{\textit{like}(z)(m) : z \in \{x : \textit{person}(x)\}\} \wedge p = 1]$

864

865 (77) Derivational tree for BWI

866

867

868

869

870

871

872

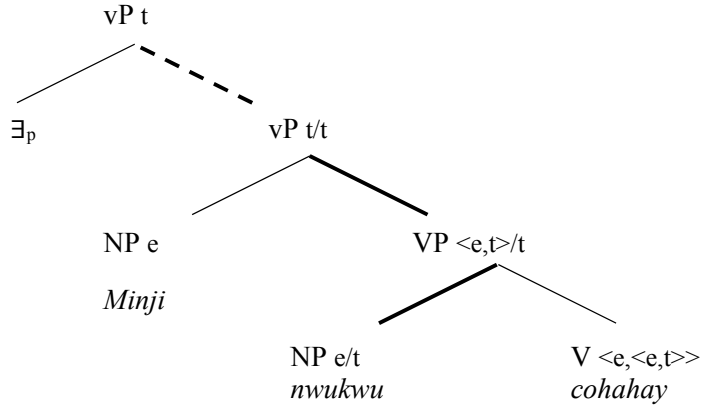
873

874

875

876

877 5.3. CWIs



878 In the case of CWIs, I assume that the additional morpheme attached to the *wh*-word marks a choice
 879 function over the set of alternatives (cf. Yanovich 2005). The semantics of such a choice function is
 880 specified below:

881

882 (78) Choice function for alternative sets

883 f_{ACF} is an Alternative Choice Function if $f_{ACF}(\llbracket \alpha \rrbracket^g) \in \llbracket \alpha \rrbracket^g$,

884 for all α such that $\llbracket \alpha \rrbracket^g \in D_{\sigma/t}$.

885

886 (79) Indefinite marker as ACF

887 $\llbracket -(i)nka \rrbracket^g = \lambda \alpha. f_{ACF}(\alpha)$

888

889 As we have seen in Section 3.2, there are variations on the choice function approach to indefinites in the
 890 literature, especially regarding how choice function variables are bound. I basically adopt a Kratzer-style
 891 analysis because Korean CWIs take obligatory wide scope over negation, as mentioned in Section 4.3.
 892 However, one specific assumption needs to be revised to accommodate the semantics of CWIs. Kratzer
 893 argues that choice function variables remain open in the formula and their value is determined by context
 894 so that they pick an individual known to the speaker. This seems to hold for choice function indefinites in

895 English, as illustrated in the dialogue in (80). In this dialogue, A left an anonymous comment on B's
896 Facebook. It is obvious that B certainly has a specific person in her mind such that if A is that person, she
897 is willing to marry him.

898
899 (80) *a certain* indefinite in English

900 A: Will you marry me?

901 B: Depends on who this is... if it is *a certain someone*, then yes.

902

903 On the other hand, the corresponding sentence with a CWI in Korean in (81) sounds strange because the
904 CWI *nwukwunka* 'someone' involves an implication that the speaker does not know who the person is, as
905 discussed in Section 4.2. The same sentence with a BWI is fine as shown in (82), since it can be rescued by
906 a referential reading of the BWI.

907

908 (81) CWI in Korean

909

Manyak ikey nwukwu-nka-la-myen kyelhonha-keyss-ta
by.any.chance this.NOM who-IND-DCL-if marry-will-DCL
'#If this is someone (that I don't know), I will marry him.'

910

911 (82) Referential BWI in Korean

912

Manyak ikey nwukwu-la-myen kyelhonha-keyss-ta
by.any.chance this.NOM who-DCL-if marry-will-DCL
'If this is the person (that I have in my mind), I will marry him.'

913

914 Therefore, I posit explicit existential closure at the highest level for the choice function variables for Korean
915 CWIs, instead of leaving them free and counting on the speaker to provide a value for them¹⁸. The meaning

¹⁸ In this sense, CWIs in Korean are similar to the indefinites in St'át'imcets discussed in Matthewson (1999). Matthewson argues that non-polarity indefinites in St'át'imcets obligatorily take wide scope and adopts a Kratzer-style analysis of indefinites such that the semantic representation of indefinites involves choice functions. Unlike Kratzer, however, she posits existential closure at topmost level because the wide-scope indefinites in St'át'imcets are not specific.

916 of the sentence with a CWI in (83) can be derived as in (84). Note that the alternative set stops expanding
 917 at a very early point due to the choice function marker, as depicted in the derivational tree in (85). Since
 918 the local choice function operator blocks expansion, CWIs can never receive an interrogative reading.

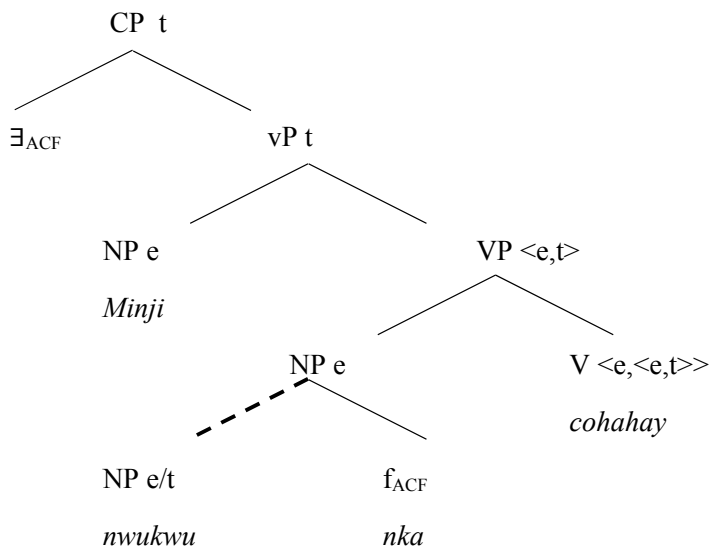
919
 920 (83) CWI

Minji-ka nwukwu-nka-lul cohahay
 Minji-NOM who-IND-ACC like
 ‘Minji likes someone.’

921
 922 (84) Semantic derivation with a CWI

- 923 a. $\llbracket nwukwu-nka \rrbracket^g$
 924 $= f_{ACF}(\llbracket nwukwu \rrbracket^g)$
 925 $= f_{ACF}(\{x: person(x)\})$
- 926 b. $\llbracket nwukwu-nka cohahay \rrbracket^g$
 927 $= \llbracket cohahay \rrbracket^g(\llbracket nwukwu-nka \rrbracket^g)$ (FA-a)
 928 $= \lambda y. like(f_{ACF}(\{x: person(x)\}))(y)$
- 929 c. $\llbracket Minji nwukwu-nka cohahay \rrbracket^g$
 930 $= \llbracket nwukwu-nka cohahay \rrbracket^g(\llbracket Minji \rrbracket^g)$ (FA-b)
 931 $= like(f_{ACF}(\{x: person(x)\}))(m)$
- 932 d. $\exists f_{ACF} \llbracket Minji nwukwu-nka cohahay \rrbracket^g$
 933 $= \exists f_{ACF} [like(f_{ACF}(\{x: person(x)\}))(m)]$
 934

935 (85) Derivational tree for CWI



936

937 So far, we have seen different mechanisms to derive the semantics of each type of *wh*-indefinite. This
 938 analysis can also provide an account for why in certain contexts BWIs and CWIs are not equally acceptable.
 939 For instance, let us consider the scrambled sentences in the previous examples, repeated below:

940

941 (86) BWI

#*Nuku-lul motun nala-ka phakyenhay-ss-ta.*
 who-ACC all country-NOM dispatch-PST-DCL
 ‘Every country dispatched someone.’

942

943 (87) CWI


Nuku-nka-lul motun nala-ka phakyenhay-ss-ta.
 who-IND-ACC all country-NOM dispatch-PST-DCL
 ‘Every country dispatched someone.’

944


945 The indefinite reading of the CWI in (87) is guaranteed even in the dislocated position due to the local
 946 application of the choice function variable, which is bound by the existential closure at the topmost level
 947 as shown in (88). On the other hand, an indefinite reading is not available for the sentence in (86) because

948 the BWI outside of VP cannot be bound by the existential operator at VP, as illustrated in (89). In fact, the
 949 sentence in (86) is unacceptable because the *wh*-word fails to receive any interpretation; a *wh*-interrogative
 950 reading is excluded by the declarative sentence ending *-ta*, and a referential reading is odd in the given
 951 context.

952
 953 (88) CWI

954 $[[\exists_{\text{ACF}} [\text{CP } \textit{Nwukwu-nka-lul} \exists_{\text{p}} [\text{VP } \textit{motun nala-ka phakye\textit{nhay-ss-ta}]]]]]^{\text{g}}$
 955 

956
 957 (89) BWI

958 $[[\exists_{\text{ACF}} [\text{CP } \textit{Nwukwu-lul} \exists_{\text{p}} [\text{VP } \textit{motun nala-ka phakye\textit{nhay-ss-ta}]]]]]^{\text{g}}$
 959 

960
 961
 962 5.4. Typology of *wh*-indefinite semantics

963 Table 2 summarizes the different mechanisms for deriving the existential force of BWIs and CWIs in
 964 Korean as discussed so far. While both types of *wh*-indefinites involve a certain form of existential
 965 quantification over the alternative set indicated by *wh*-words, BWIs receive the indefinite reading as a result
 966 of direct existential quantification over the alternative set, while CWIs do so as a result of somewhat indirect
 967 existential quantification via a choice function. As a consequence, CWIs can occur in a wider range of
 968 context than BWIs.

969

	1. Source of existential force	2. Position of existential closure	3. Application of existential closure
BWIs	Existential quantification for the alternative set	vP-level	Optional
CWIs	Choice Function for the alternative set	Topmost level	Obligatory

970 Table 2. Parameters for *wh*-indefinites in Korean

971

972 This analysis of *wh*-indefinites in Korean can be extended to other languages. Based on the typological
973 observation presented so far in this paper, I propose that the sources of existential force for each type of
974 *wh*-indefinites are universal, and that languages differ with respect to the parameters that determine the
975 position and application of the relevant type of existential closure.

976 The parameter setting for the semantics of CWIs seems relatively constant cross-linguistically. The
977 application of existential closure must be obligatory at the topmost level because an expression that has the
978 form of a CWI is always interpreted as indefinite, not interrogative. On the other hand, there is much more
979 variation in the case of BWIs. For instance, in some languages including German and Dutch (Type 1), the
980 existential operator for BWIs is active at the vP level. In other languages including Chinese and Russian
981 (Type 2), a similar existential operator is active at the level of certain lexical items. It also differs from
982 language to language whether the application of the existential operator is optional or obligatory. For
983 example, the application of the Alternative existential quantifier should be optional in Chinese because a
984 *wh*-interrogative reading is still available in the BWI-licensing contexts, as exemplified in (90). On the
985 other hand, it is obligatory in German; the sentence in (91) cannot be a *wh*-question¹⁹.

986
987 (90) Chinese

Ta bu xihuan shenme
he not like what
'He does not like something.' : possible
'What does he not like?' : possible

988
989 (91) German

Da kommt wer
here come who
'Someone is coming.' : possible
'Who is coming?' : impossible

990
991 The following summarizes what have been discussed in this section.

¹⁹ The sentence can have an interrogative reading only as an echo question.

- 992
 993 (92) Semantic typology of *wh*-indefinites
 994 a. Bare *wh*-words denote sets of alternative individuals.
 995 b. BWIs involve existential quantification over the alternative set (cf. Kratzer & Shimoyama 2002,
 996 Yanovich 2005, Dong 2009).
 997 c. CWIs involve a choice function that applies to the alternative set (cf. Ha 2004, Yanovich 2005,
 998 Yatsushiro 2009). The explicit indefinite marker introduces the choice function variable.
 999 d. The above conditions are universal. Languages may differ on the parameters that determine the
 1000 position and application of the relevant type of existential closure for BWIs and CWIs. Table 3
 1001 summarizes the parameter settings of *wh*-indefinites attested in this paper.
 1002

	1. Source of existential force	2. Position of existential closure	3. Application of existential closure
BWIs (Type 1)	Existential quantification for the alternative set	vP level	Obligatory
BWIs (Type 2)		lexicon	Optional
CWIs	Choice Function for the alternative set	Topmost level	Obligatory

1003 Table 3. Parameters for *wh*-indefinites in the world's languages

1004

1005 6. Conclusion

1006 In this paper, I have argued that *wh*-indefinites in the world's languages can be classified into two groups
 1007 according to their forms, namely BWIs (bare *wh*-indefinites) and CWIs (complex *wh*-indefinites), and that
 1008 the morphological difference between the two groups causes the difference in their semantic interpretation.
 1009 While a number of languages have been investigated in this paper to develop this argument, Korean seems
 1010 to make an exception to this typological generalization because BWIs seem to behave in the same way with
 1011 CWIs at first glance. However, I have shown that Korean BWIs and CWIs are in fact systematically
 1012 different and that the apparent overlaps between them is due to the referential homonyms of Korean BWIs.

1013 A remaining question is why BWIs are subject to more restrictions compared to CWIs cross-
 1014 linguistically. Notice that BWIs are restricted not only in terms of the contexts where they can occur, but
 1015 also in terms of the number of languages that allow them. Haspelmath (1997) points out that while both

1016 types of *wh*-indefinites are observed in a wide variety of languages, CWIs are more common than BWIs in
1017 the sense that the former appear in more languages. A possible explanation for the restricted use of BWIs
1018 is that BWIs are harder to process than CWIs because they are potentially ambiguous due to a possible
1019 interrogative interpretation. Interestingly, such ambiguity in the case of bare *wh*-words can often be
1020 resolved by prosody. In many languages, *wh*-words exhibit a different prosody pattern depending on
1021 whether they are intended to be interpreted as interrogative or indefinite. The prosodic properties of bare
1022 *wh*-words that facilitate this disambiguation in spoken language will remain as the topic of future work.

1023

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