

***Wh*-indefinites**

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Abstract

This chapter investigates an indefinite reading of so-called *wh*-words in Korean and reviews arguments regarding their historical development, typological observation, grammatical properties, and processing strategies.

1 Introduction

Interrogative words in Korean can be used as indefinites as well. For example, the interrogative pronoun *nwukwu* ‘who’ can also mean ‘someone’, which renders a sentence such as (1) ambiguous.

- (1) *Pakk-ey nwuka iss-ni?*
 out-LOC who.NOM exist-INT¹
 (i) ‘Who is out there?’
 (ii) ‘Is there someone out there?’

The indefinite use of interrogative words in Korean is quite versatile, as shown in Table 1. Bare interrogative words can be used as existential quantifiers, as in (1), and a particle can be attached to the interrogative word to indicate a certain type of indefinite meaning: *-inka* for existential, *-ina* for universal, *-to* for negative polarity, and *-itun(ci)* for free choice.^{2 3}

¹ Ambiguous *wh*-words are simply glossed as their interrogative meaning (e.g. *nwukwu* ‘who/someone’ glossed as “who”) for ease of notation.

² The initial vowel *i* in the indefinite marker tends to be dropped after a vowel.

³ Although universal quantifiers are not generally considered indefinite, the *wh-ina* series is included here because it shares some properties of free-choice indefinites, such as a tendency to appear in modal contexts, even though it is not completely incompatible with episodic contexts. Therefore, Yun (2011) argues that *wh-ina* appears in the process of grammaticalization from free choice to universal, following the argument in Haspelmath (1995) that free-choice indefinites may diachronically evolve into universals.

Table 1. Versatile uses of *wh*-words in Korean

Interrogative	Existential	Universal	Negative polarity	Free choice
<i>nwukwu</i> 'who'	<i>nwukwu-(nka)</i> 'someone'	<i>nwukwu-na</i> 'everyone'	<i>nwukwu-to</i> '(not) anyone'	<i>nwukwu-tun</i> 'anyone'
<i>mwues</i> 'what'	<i>mwues-(inka)</i> 'something'	<i>mwues-ina</i> 'everything'	<i>mwues-to</i> '(not) anything'	<i>mwues-itun</i> 'anything'
<i>eti</i> 'where'	<i>eti-(nka)</i> 'somewhere'	<i>eti-na</i> 'everywhere'	<i>eti-to</i> '(not) anywhere'	<i>eti-tun</i> 'anywhere'
<i>encey</i> 'when'	<i>encey-(nka)</i> 'sometime'	<i>encey-na</i> 'always'	? <i>encey-to</i> '(not) anytime'	<i>encey-tun</i> 'anytime'
<i>ettehkey</i> 'how'	<i>ettehkey-(nka)</i> 'somehow'	? <i>ettehkey-na</i> 'in every way'	<i>ettehkey-to</i> '(not) in any way'	<i>ettehkey-tun</i> 'in some way'
<i>enu (N)</i> 'which N'	<i>enu N-(inka)</i> 'some N'	<i>enu N-ina</i> 'every N'	<i>enu N-to</i> '(not) any N'	<i>enu N-itun</i> 'any N'
<i>etten (N)</i> 'what kind of N'	<i>etten N-(inka)</i> 'some kind of N'	<i>etten N-ina</i> 'every kind of N'	<i>etten N-to</i> '(not) any kind of N'	<i>etten N-itun</i> 'any kind of N'
<i>mwusun (N)</i> 'what N'	<i>mwusun N-(inka)</i> 'some N'	<i>mwusun N-ina</i> 'every N'	<i>mwusun N-to</i> '(not) any N'	<i>mwusun N-itun</i> 'any N'

Since the term “*wh*-words” generally indicates interrogative pronouns used to build constituent questions, a distinctive term might be desirable to indicate words that are ambiguous between an interrogative reading and an indefinite reading. One such term is “indeterminates,” which Kuroda (1965) suggested as an umbrella term to indicate regular indefinite expressions such as *someone* and *something* in English and *wh*-words in Japanese, which can be used to create various indefinite expressions.⁴ Alternatively, one can use the term “*wh*-indeterminates” to exclusively indicate ambiguous *wh*-words in order to distinguish them from genuine indefinites that are not morphologically related to interrogatives (Yun, forthcoming). For ease of notation, however, this chapter uses the simple term “*wh*-words” to indicate any words that have the same form as interrogative pronouns. This chapter also uses the terms “*wh*-interrogatives” and “*wh*-indefinites” when

⁴ Shimoyama (2006: 143) provides the inventory of Japanese *wh*-indefinites, which is close to that of Korean *wh*-indefinites but lacks bare *wh*-indefinites.

necessary, for clearly distinguishing between the interrogative and indefinite uses of *wh*-words.

The versatile uses of *wh*-words in Korean have provided many interesting research topics, including their historical development, syntactic properties, compositional semantics, comparison with genuine indefinites that are not related to interrogatives, prosodic characteristics, and processing mechanisms, many of which still necessitate further research. This chapter does not introduce all the topics regarding *wh*-indefinites but rather focuses on bare *wh*-indefinites as in (1), which triggers pertinent questions such as why the indefinite marker is optional and how speakers can process ambiguous bare *wh*-words. The remainder of this chapter is organized as follows: Section 2 presents an overview of *wh*-indefinites from both diachronic and synchronic perspectives to elucidate the fundamental question of why interrogatives and indefinites share the same form. Section 3 addresses bare *wh*-indefinites and their puzzling behaviors and discusses how they are distinguished from their counterparts with an explicit indefinite marker. Section 4 discusses how speakers resolve the interrogative-indefinite ambiguity during sentence processing.

2 Interrogative-indefinite words

An immediate question regarding ambiguous *wh*-words arises as to why interrogative and indefinite words share the same form. To elucidate this question, this section presents a brief overview of the historical development and linguistic typology of *wh*-indefinites.

2.1 History of wh-indefinites

Historically, *wh*-words in Korean used to allow an interrogative reading only. According to the literature, most *wh*-indefinites emerged in the eighteenth century (C.-S. Suh 1989; C.-M. Suh 1989; C.-Y. Kim 2000) but a small number of *wh*-indefinites appeared as early as the sixteenth century (J.-H. Park 2007: 144). It seems that the indefinite use of *wh*-words was fully developed by the end of the nineteenth century at the latest; as Underwood (1890: 47) states “All Korean interrogatives have also an indefinite sense: hence, what would be

two classes in English, form but one in Korean.”⁵ C.-H. Kim (2000) conducted an extensive study on the historical change of *wh*-words, tracking when each *wh*-indefinite item started to appear in the Korean literature, as summarized in Table 2. A notable observation in that study was that the emergence of an indefinite reading was consistently preceded by the emergence of an indirect question reading for each *wh*-word. C.-H. Kim reported that *wh*-words had not occurred in an embedded question in the Korean literature until the seventeenth century, arguing that Korean *wh*-indefinites originated from indirect questions. This supports the clausal analysis of *wh*-indefinites: they originally had clausal structures but have undergone grammaticalization and are now used as nominals (C.-M. Suh 1987; C.-S. Suh 1990; Chung 1996; J.-M. Yoon 2005).

Table 2. Emergence of new *wh*-constructions in Korean (excerpt from C.-H. Kim 2000: 133-134, Table 9)

Base form	Emergence of new constructions involving the base form (o: indirect question, x: indefinite)							
	1752	1777	1782	1790	1892	1895	1896	1917
<i>nwukwu</i> ‘who’		o			x			
<i>mwues</i> ‘what’				o			x	
<i>eti</i> ‘where’			o	x				
<i>encey</i> ‘when’							o x	
<i>ettehkey</i> ‘how’						o	x	
<i>way</i> ‘why’								o
<i>enu</i> N ‘which N’		o	x					
<i>etten</i> N ‘what kind of N’		o	x					
<i>mwusun</i> N ‘what N’	o		x					

⁵ The description of interrogative and indefinite pronouns in Underwood (1890) does not include *way* ‘why’, which is rarely used as an indefinite (‘for some reason’) even in contemporary Korean.

When *wh*-words were exclusively used as interrogatives, indefinite meanings were expressed by the indefinite pronoun *amwu* (*amo* in the old form) (C.-M. Suh 1987). The inventory of the *amwu*-indefinite series is quite similar to the current *wh*-indefinite series shown in Table 1, most of which are still available in contemporary Korean (e.g. *amwuna* and *amwuto* ‘anyone’) except for an existential series (e.g. **amwu(nka)* ‘someone’). Interestingly, although *amwu* in contemporary Korean lacks an interrogative reading, it used to appear in embedded constituent questions as an interrogative phrase (J.-H. Park 2007).

Table 3. Historical change of *wh*-series and *amwu*-series

		Until 19C	After 19C
Matrix Interrogative	<i>wh</i>	✓	✓
	<i>amwu</i>	*	*
Embedded Interrogative	<i>wh</i>	*	✓
	<i>amwu</i>	✓	*
Complex Indefinite	<i>wh</i>	*	✓
	<i>amwu</i>	✓	✓
Bare Indefinite	<i>wh</i>	*	✓
	<i>amwu</i>	✓	*

Table 3 demonstrates that the *wh*- and the *amwu*-series have been in complementary distribution, except that in contemporary Korean, both the *wh*- and *amwu*-series can be used to express indefinite meanings. However, the meaning of *wh*-indefinites and that of *amwu*-indefinites in contemporary Korean do not seem the same (C. Lee et al. 2000; Kim and Kaufmann 2006; Choi 2007). For example, Choi (2007) argues that *amwu* has a domain-widening effect, such as the English *any* (Kadmon and Landman 1993), whereas a *wh*-indefinite has no such an effect. The domain-widening effect of *amwu* can explain why it often conveys a condescending connotation that the corresponding *wh*-indefinite

lacks, as illustrated in (2). Whereas the universal expression *nwukwuna* involves a contextually salient set of people in its semantic representation, *amwuna* extends the set to include people who would not generally be considered qualified to enter college.

- (2) a. *Nwukwuna* *ku* *tayhak-ey tuleka-l swu iss-ta.*
 everyone that college-LOC enter-MOD-DECL
 ‘Everyone can enter that college.’
 b. *Amwuna* *ku* *tayhak-ey tuleka-l swu iss-ta.*
 anyone that college-LOC enter-MOD-DECL
 ‘(Just) Anyone can enter that college.’

2.2 Typology of *wh*-indefinites

Wh-indefinites appear not only in Korean but also in many other languages in the world. Their distribution is not limited to a specific geographic region or language family. *Wh*-indefinites are found in a wide variety of language families all over the world, including Indo-European (e.g. Latin, Classical Greek, German, Dutch, and Russian), Sino-Tibetan (e.g. Chinese and Vietnamese), Austronesian (e.g. Indonesian and Acehnese), and isolated languages such as Korean, Japanese, and Basque (Aldridge 2007; Bruening 2007; Haspelmath 1997). In fact, most of the world’s languages have *wh*-indefinites. Haspelmath (1997: 174) reports that 64 of the 100 languages from his extensive typological study of indefinites have *wh*-indefinites, and Bhat (2004: 227) remarks that many of the languages classified as having genuine indefinites in Haspelmath’s study may also allow *wh*-indefinites in some restricted contexts.

The extremely wide distribution of *wh*-indefinites in the world’s languages suggests that the interrogative-indefinite polysemy cannot be accidental, but rather reflects the general conceptual affinity between them, such as “lack of information” (Bhat 2004). Since interrogatives and indefinites are basic concepts in human language, *wh*-indefinites deserve an in-depth investigation for developing a fundamental understanding of the semantic universals and their relationships in the human mind. Korean provides a

particularly compelling case for testing theories of *wh*-indefinites for several reasons. First, it has one of the richest inventories of *wh*-indefinites, as shown in Table 1. Not all *wh*-indefinite languages allow all their *wh*-words to have indefinite uses, and some languages allow only some of their interrogative words to have an indefinite reading. For example, in Dutch, *wat* ‘what’ can have an indefinite reading but *wie* ‘who’ cannot (Postma 1994: 189); in Chinese, a *wh*-phrase with *na* ‘which’ cannot be interpreted as an indefinite (Cheng 1991: 114). In Korean, by contrast, almost every interrogative phrase can have an indefinite reading.⁶ In addition, Korean allows both bare and complex forms of *wh*-indefinites to be used. The following section focuses on the existential use of *wh*-words that can be achieved by both bare and complex forms and investigate the role of the indefinite marker.

3 Overt indefinite marker *-inka*

As shown in (1), an existential reading of *wh*-words can be expressed by bare *wh*-words. However, the apparently same reading can be expressed by a complex form of *wh*-words combined with an indefinite marker. In contrast to the ambiguous sentence in (1), the sentence in (3) is unambiguously a yes-no question because of the explicit indefinite marker *-(i)nka* attached to the *wh*-word *nwukwu*.

- (3) *Pakk-ey nwukwu-nka-ka iss-ni?*
 out-LOC who-IND-NOM exist-INT
 ‘Is there someone out there?’

Why, then, is the indefinite marker optional? Are there any differences in the meanings of the two forms of *wh*-indefinites? This section compares the bare and complex forms of *wh*-indefinites (henceforth BWIs and CWIs, respectively) and reviews relevant hypotheses posited in the literature.

⁶ An exception is *way* ‘why’, which appears as indefinite only in limited contexts.

3.1 Ignorance implication due to *-inka*

The first hypothesis to consider is that BWIs and CWIs are simply different forms of the same construction with the same meaning. Some previous studies posit that a CWI including an explicit indefinite marker *-inka* is the base form of indefinites in Korean, and a BWI is its phonologically reduced form (C.-S. Suh 1989; Chung 1996). However, it has been observed that CWIs cannot appear in contexts in which the speaker is expected to know which entity satisfies the existential proposition expressed by the *wh*-indefinite, whereas the corresponding BWIs can (Im 1998; Yi 2000; Yoon 2005; A. Kang 2015). For instance, in the conversation in (4), the response with the CWI *nwukwunka* (B') sounds awkward without a special context because it is unlikely that the speaker came with the intention to meet with someone whom he or she could not specify.

- (4) A: *Yeki mwusun il-lo osyesseyo?*
 here what matter-by came
 ‘What brought you here?’
- B: *Nwukwu manna-le wasseyo.*
 who meet-to came
 ‘I came to meet someone.’
- B': *#Nwukwu-nka manna-le wasseyo.*
 who-IND meet-to came
 ‘#I came to meet someone (that I don't know).’

Note that in this example, the response with the BWI *nwukwu* (B) is appropriate. The speaker may use the BWI to conceal the identity of the person referred to. The observation that ignorance implication is obligatory only for CWIs suggests that BWIs in Korean are not simply a contracted form of CWIs.

3.2 Scope configuration with respect to negation

Another notable difference between BWIs and CWIs is their scope configurations relative to negation. There are three types of negation in Korean, which show different scope-taking properties (Sells 2001): (i) lexical negation with inherently negative predicates such as *eps-* ‘not exist’ or *molu-* ‘not know’, (ii) short-form negation in which the negative adverb *an* precedes the predicate, and (iii) long-form negation in which the predicate is followed by a complex predicate *-ci anh-*. Different types of negation have been argued to exhibit different scope configurations with respect to quantificational NPs (QNPs); that is, QNPs can take scope under negation only when the negation is long form (C.-H. Cho 1975; J. Suh 1989; H.-H. Park 1998; Hagstrom 2000).⁷ The sentences in (5) illustrate that a quantifier must take scope over negation when a negative predicate (5a) or short-form negation (5b) is involved, whereas long-form negation allows scope ambiguity (5c). Taking the example of ‘Three people didn’t come’, a narrow-scope reading of the QNP ‘three people’ (NEG > three) indicates that it is not the case that three people came, and a wide-scope reading of the QNP ‘three people’ with respect to negation (three > NEG) indicates that there exist three people who did not come. The former is true if and only if fewer than three people came, but the latter can be true even if five people came as long as the specific three people did not come.

- (5) a. *Sey myeng-i epsta.*
 three CL-NOM not.exist
 ‘Three people are not here.’ (three > NEG, *NEG > three)
- b. *Sey myeng-i an wassta.*
 three CL-NOM NEG came

⁷ Some studies assume that quantifiers can take free scope with respect to negation, regardless of the type of negation (Song 1982; Baek 1998; J.-B. Kim 2000). An experimental study by Han et al. (2007) on the relative scope configuration of universal quantifiers and negation reports a bimodal distribution in the responses of participants, arguing that there are two grammars: one that allows free scope of QNPs only with respect to long-form negation and another that does not exhibit such a restriction. This chapter presents an argument based on the restricted scope configurations of QNPs and will leave topics regarding divergent judgments for further research.

‘Three people did not come.’ (three > NEG, *NEG > three)

c. *Sey myeng-i oci anhassta.*
three CL-NOM come NEG

‘Three people did not come.’ (three > NEG, NEG > three)

Interestingly, the relative scope configuration between *wh*-indefinites and negation seem independent of the type of negation: BWIs can take free scope, whereas CWIs cannot be in the scope of negation, regardless of the type of the negation. The examples in (6)-(8) illustrate this point. With lexical negation, the BWI sentence in (6a) can mean that the house is not well-equipped (NEG > some) or that something missing in the house (some > NEG), but the CWI sentence in (6b) can mean only the latter. With short-form negation, (7a) can mean that either the speaker came empty-handed (NEG > some) or he or she forgot to bring a particular thing (some > NEG); however, (7b) can mean only the latter. Finally, both the sentences in (8a) and (8b) can mean that he does not eat a certain thing (some > NEG), and they can be followed by the question ‘What do you think it is?’; by contrast, only (8a) can have an additional reading that he does not eat well in general (NEG > some).⁸

(6) a. *Cip-ey mwe-ka epsta.*
house-LOC what-NOM not.exist
‘There isn’t something/anything in the house.’ (some > NEG, NEG > some)

b. *Cip-ey mwe-nka-ka epsta.*
house-LOC what-IND-NOM not.exist
‘There isn’t something in the house.’ (some > NEG, *NEG > some)

⁸ A reviewer remarked that a wide-scope reading of CWIs contradicts the non-specificity of CWIs, as shown in (4B’). This is not a contradiction, though, because specificity does not necessarily coincide with wide-scope configuration. Enc (1991) presents a detailed discussion on specificity and explains how it is independent of scope relations.

(7) a. *Na mwe an kacyewasse.*
 I what NEG brought
 ‘I didn’t bring something/anything.’ (some > NEG, NEG > some)

b. *Na mwe-nka an kacyewasse.*
 I what-IND NEG brought
 ‘I didn’t bring something.’ (some > NEG, *NEG > some)

(8) a. *Ku-nun mwues-ul cal mekci anhnunta.*
 he-TOP what-ACC well eat NEG
 ‘He does not eat something/anything.’ (some > NEG, NEG > some)

b. *Ku-nun mwues-inka-lul cal mekci anhnunta.*
 he-TOP what-IND-ACC well eat NEG
 ‘He does not eat something.’ (some > NEG, *NEG > some)

The tables in (9) summarize possible scope configurations relative to negation for quantificational NPs, BWIs, and CWIs, as discussed thus far. The crucial implication of the presented data is twofold. First, CWIs must take scope over negation. As discussed subsequently, this supports the choice function approach of CWIs. Second, BWIs can always take scope under or over negation, even in contexts where quantificational NPs cannot. As shown in the next section, this property can be explained effectively by the view that Korean BWIs have both referential and quantificational readings.

(9) Scope configuration relative to negation

a. Quantificational NPs (QNPs)

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

Long	✓	✓
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b. Bare *wh*-indefinites (BWIs)

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

c. Complex *wh*-indefinites (CWIs)

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

3.3 Semantic analysis

The different scope-taking properties of the presented BWIs and CWIs call for a formal analysis that distinguishes the two types of *wh*-indefinites. To the best of my knowledge, Ha (2004) is the first study to argue that BWIs in Korean should be formally distinguished from CWIs by their scope-taking properties. More specifically, Ha argues that BWIs indicate *variables*, whereas CWIs introduce *choice functions* in semantic representation. Although this argument is based on judgments that deviate from what is suggested in Section 3.2, I take this analysis as a starting point of the discussion to review the variable analysis and choice function analysis of indefinites.

First, the concept of indefinites as variables stems from the semantics of genuine indefinites proposed by Heim (1982) and Diesing (1990). According to this line of analysis, indefinites are variables that lack a quantificational force of their own, and their existential reading is derived when they are bound by existential closure, for example, at the verb phrase level. The variable approach was extended to *wh*-words by Cheng (1991) to explain Chinese data, and it was also pursued by Postma (1994) to explain *wh*-indefinites

in German and Dutch. According to the extended variable approach, indefinites outside the domain of existential closure cannot receive an existential reading but instead receive a generic reading (in the case of genuine indefinites) or an interrogative reading (in the case of *wh*-indefinites). Ha (2004) follows this line of approach in analyzing Korean *wh*-words, as illustrated in (10): In (10a), the *wh*-word has moved out of the vP and therefore is not in the scope of existential closure, yielding a *wh*-question reading. In (10b), by contrast, the *wh*-word remains in situ and bound by existential closure; thus, it receives an existential reading.

- (10) a. [Nwu-ka_i [∃x [_{t_i} wa_{vP}]-ass TP]-ni CP]?
 who-NOM come-PST-INT
 ‘Who came?’
- b. [[∃x [Nwu(x)-ka_i wa_{vP}]-ass TP]-ni CP]?
 who-NOM come-PST-INT
 ‘Did someone come?’
 (Ha 2004: 84)

Second, the concept of indefinites as choice functions has been suggested for explaining exceptional wide-scope readings of indefinites out of scope islands, such as conditional clauses (Reinhart 1997; Winter 1997; Kratzer 1998; Matthewson 1999). The basic assumption in this line of approach is that indefinites are basically predicates, but when they appear in an argument position, they involve a free function variable that assigns an individual to the restriction predicate. Ha (2004) suggests that Korean CWIs are choice function indefinites, where the marker *-inka* serves to explicitly mark a choice function. Among the variations of choice function analysis, Ha adopts the analysis by Reinhart (1997), which assumes that the scope configuration of an indefinite depends on the level at which the choice function variable introduced by that indefinite is existentially closed. The simplified semantic representations in (11) roughly illustrate how the two distinct scope readings of the sentence are derived using a choice function. In (11a), existential

closure appears within the conditional clause; thus, the indefinite receives a narrow-scope reading. If existential closure takes scope over the conditional, as in (11b), the indefinite obtains a wide-scope reading. In both readings, the representation of the indefinite itself remains inside the conditional clause. Thus, the choice function analysis enables a wide-scope reading of indefinites without any movement violating island constraints.

- (11) *Nwukwu-nka-ka phathi-ey o-myen*
 who-IND-NOM party-LOC come-if
Con-un hayngpokhal kesita.
 John-TOP happy
 ‘If someone comes to the party, John will be happy.’

a. *if* > *some*

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

b. *some* > *if*

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

(cf. Ha 2004: 94)

However, the analysis by Ha (2004) is not consistent with the data presented in Section 3.2 in two respects: it rules out any wide-scope reading of BWIs and allows a narrow-scope reading of CWIs under negation. Yun (2014) suggests a modified analysis of Ha (2004) to address these concerns. First, the wide-scope reading of BWIs, as in (6)-(8), is attributed to a referential reading. Note that although referential expressions do not take scope, their interpretation is truth-conditionally compatible with the widest scope reading of indefinites. In other words, bare *wh*-words in Korean indeed have restrictions in their scope configuration when they bear an existential quantificational force, but when they receive a referential reading, they can appear to have an exceptional wide-scope reading. This approach is in line with the view that attributes the exceptional wide-scope reading of

certain genuine indefinites to their referential reading (cf. Fodor and Sag 1982; Kratzer 1998). The referential analysis of wide-scope BWIs is further supported by the observation that the occurrence of BWIs is not entirely free in Korean. Since a referential reading is compatible only with the widest scope reading, the analysis predicts that if a bare *wh*-word receives a non-interrogative reading in the position outside the scope of existential closure, it must take the widest scope (i.e. sentential scope). Yun (2014) provides the following examples to demonstrate that this prediction is borne out. First, BWIs necessarily receive a wide-scope reading when they are scrambled, whereas CWIs can take scope freely, as illustrated in (12).

- (12) a. *Motwu-ka nwukwu-lul kitalikoissta.*
 all-NOM who-ACC waiting
 (all > some, some > all)
- b. *Motwu-ka nwukwu-nka-lul kitalikoissta.*
 all-NOM who-IND-ACC waiting
 (all > some, some > all)
- c. *Nwukwu-lul motwu-ka kitalikoissta.*
 who-ACC all-NOM waiting
 (*all > some, some > all)
- d. *Nwukwu-nka-lul motwu-ka kitalikoissta.*
 who-IND-ACC all-NOM waiting
 (all > some, some > all)
 ‘Everyone is waiting for someone.’

Second, BWIs cannot be interpreted in the scope of other quantifiers when they escape syntactic islands. Consider the sentences in (13), in which three distinct readings are available in theory depending on the relative scope configuration of the *wh*-indefinite: i) the narrowest scope [many > if > some] (i.e. many people show an allergic reaction if they eat any food; in other words, many people are simply sensitive), ii) an intermediate scope

[many > some > if] (i.e. many people show an allergic reaction to a certain food if they eat it: for example, Abby is allergic to peanuts, Becky is allergic to eggs, and so on), and iii) the widest scope [some > many > if] (i.e. there is a certain food that many people show an allergic reaction to if they eat it; e.g. milk is a common allergen for many people). These three possible readings are all available for the CWI in (13b), but the BWI in (13a) does not allow an intermediate scope reading. This can be explained if we posit that a BWI must be referential to be interpreted outside the *if*-clause; in that case, it must demonstrate the widest scope reading, not an intermediate one.

- (13) a. *Manhun salamtul-i* *mwe-l* *mek-umyen*
 many people-NOM what-ACC eat-if
 alleci cungsang-ul *pointa.*
 allergy symptom-ACC show
- b. *Manhun salamtul-i* *mwe-nka-lul* *mek-umyen*
 many people-NOM what-IND-ACC eat-if
 alleci cungsang-ul *pointa.*
 allergy symptom-ACC show

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

Concerning CWIs, Yun (2014) suggests a choice function analysis in line with Kratzer (1998) that predicts the relative scope configuration of negation and CWIs discussed in Section 3.2. According to Kratzer, a choice function indefinite necessarily takes the widest scope since it is not bound by a local existential operator but contextually determined, and an apparent narrow-scope reading becomes available when the choice function is parameterized with an implicit argument against the other scope-bearing quantificational expression. For example, the CWI *mwenka* in the sentence in (14a) indicates a choice function variable that takes the set of entities and returns one of the entities, as shown in

the formula in (14b). Since this function variable is free and its value is determined by the context, its default reading takes the widest scope. However, the function variable can be compatible with a narrow-scope reading if it is parameterized with an implicit argument against the other scope-bearing quantificational expression ‘everyone’, as illustrated in the formula (14c). Such parameterization is not possible for negation because it does not involve a variable to relativize, as shown in (15). Thus, only a wide-scope reading of CWIs is allowed in a sentence with negation.

- (14) a. *Motwu-ka mwe-nka-lul mekessta.*
all-NOM what-IND-ACC ate
‘Everyone ate something.’
b. $\forall x[\text{person}(x) \rightarrow \text{eat}(f(\text{thing}))]$ (some > every)
c. $\forall x[\text{person}(x) \rightarrow \text{eat}(f(x, \text{thing}))]$ (every > some)
- (15) a. *Keni-ka mwe-nka-lul an mekessta.*
Ken-NOM what-IND-ACC NEG ate
‘Ken didn’t eat something.’
b. $\neg[\text{eat}(\text{Ken}, f(\text{thing}))]$ (some > NEG)

4 Processing ambiguity

The fact that Korean bare *wh*-expressions have their own use as indefinites without any explicit indefinite markers causes ambiguity in sentence processing. For example, without explicit punctuation, the sentence in (16) can mean any of the following: (i) a *wh*-question, (ii) a yes-no question, or (iii) a declarative sentence.

- (16) *Pakk-ey nwuka isse*
out-LOC who.NOM exist
(i) ‘Who is out there?’

- (ii) ‘Is there someone out there?’
- (iii) ‘Someone is out there.’

This three-way ambiguity occurs frequently because neutral sentence endings (e.g. *-e/a*) are preferred over explicit declarative sentence endings (e.g. *-ta*) or interrogative sentence endings (e.g. *-ni*) in contemporary Korean, especially in colloquial speech. A corpus study by Kwon (2002) reports that only 20% of the questions from the corpora investigated involved explicit interrogative endings. Thus, resolving the ambiguity of sentences containing *wh*-words can be a challenging task in Korean language processing. The rest of this section discusses some cues to the meanings of bare *wh*-words, including collocations and prosodic patterns.

4.1 *Morpho-syntactic disambiguating clues*

Let us first consider some collocations that are typically associated with an interrogative reading of *wh*-words (Chung 1996: 249-252), as illustrated in (17). When a *wh*-word appears with an emphatic adverb, such as *totaychey*, the sentence is generally interpreted as a *wh*-question, as in (17a). Furthermore, when a demonstrative *ku* modifies the *wh*-word, the sentence is likely to be interpreted a rhetorical *wh*-question that implies negation, as in (17b), which is a Korean translation of the title of a well-known African-American song “Nobody knows the trouble I’ve seen”.

- (17) a. *Totaychey* *mwusun* *mal-ul* *hanunke-nya?*
 EMPH what word-ACC do-INT
 ‘What on earth are you talking about?’
- b. *Ku* *nwuka* *nauy* *koylowum-ul* *al-kka?*
 DEM who my suffering-ACC know-INT
 ‘Who knows my suffering?’ (= Nobody knows my suffering.)

However, these collocations are not exclusively associated with an interrogative reading, as shown in (18). The *wh*-expression in (18a) is interpreted as an indefinite even though it is collocated with the emphatic adverb *totaychey*. It cannot have an interrogative reading, as indicated by the declarative sentence ending *-ta*. Thus, the emphatic adverb *totaychey* does not force an interrogative reading but simply conveys an emphatic tone to the sentence. The text in (18b) is a Korean translation of the title of a Lord Byron poem that has a missing referent. In this case, *ku nwukwu* ‘(lit.) that who’ indicates the missing referent. Thus, the function of the demonstrative *ku* is not to force an interrogative reading of the *wh*-word with which it is combined, but rather to signal a higher degree of uncertainty of the speaker toward what the *wh*-word indicates, which is compatible with both an interrogative reading and an indefinite reading.

- (18) a. *Totaychey mwusun mal-ul mos ha-keyss-ta.*
 EMPH what word-ACC NEG do-MOD-DECL
 ‘I can’t say anything at all.’
- b. *Ku nwukwu-eykey*
 DEM who-DAT
 ‘to somebody’

Now, let us consider some clues to an indefinite reading. An indefinite reading is more readily available when the case marker after the *wh*-word is dropped (19b) than when it is maintained (19a). Another cue to an indefinite reading is the use of the discourse marker *com*, as in (19c). It is a short form of the adverb *cokum* ‘a little’ but its distribution is rather similar to a post-nominal particle (Mok 2001) and its function is to add a diminutive meaning to the preceding element. When a *wh*-word is followed by *com*, it is likely to be interpreted as an indefinite. When the dropping of the case marker and the use of *com* are combined, an indefinite reading is even more likely to be obtained, as in (19d).

- (19) a. *Mwel mek-ullay?*

- | | | | | |
|----|-------------|-------------------|-------------------|--|
| | what.ACC | eat-will | | |
| b. | <i>Mwe</i> | <i>mek-ullay?</i> | | |
| | what | eat-will | | |
| c. | <i>Mwel</i> | <i>com</i> | <i>mek-ullay?</i> | |
| | what.ACC | a.little | eat-will | |
| d. | <i>Mwe</i> | <i>com</i> | <i>mek-ullay?</i> | |
| | what | a.little | eat-will | |
- (i) ‘What would you like to eat?’
(ii) ‘Would you like to eat something?’

However, the discourse marker *com* is used in limited contexts and cannot be used in every instance to distinguish the meanings of *wh*-words. It introduces a negative expectation of the speaker (Mok 2001: 94-95) that makes the force of the locution more diminished and tentative. For example, the use of *com* in (19) indicates the speaker’s negative assumption that ‘you might not be willing to eat’. Thus, *com* is often used to soften the tone of a request or an offer because the negative assumption allows a higher degree of optionality in the response and makes the listener feel less pressured about making a positive response. By contrast, a sentence such as that in (20) is awkward when it is uttered without a special context because the role of the negative assumption (i.e. there might be no one out there) in the discourse is unclear here.

- (20) ?*Pakk-ey* *nwukwu* *com* *iss-ni?*
 out-LOC who a.little exist-INT
 (Intended meaning: ‘Is there someone out there?’)

Finally, some dialects of Korean mark the type of a sentence by distinctive sentence-ending forms, which in turn provides a clue to the type of a *wh*-word in the given sentence. In Kyeongsang Korean, *wh*-questions and yes-no questions are marked by the sentence

endings *-no* and *-na*, respectively. Thus, one can derive the meanings of the *wh*-words in (21a) and (21b) as interrogative and indefinite, respectively, from the sentence ending.

- (21) a. *Pakk-ey nwuka iss-no?*
 out-LOC who.NOM exist-INT[+WH]
 ‘Who is out there?’
- b. *Pakk-ey nwuka iss-na?*
 out-LOC who.NOM exist-INT[-WH]
 ‘Is there someone out there?’

However, even in Kyeongsang Korean, an embedded clause ending is ambiguous between [+WH] and [-WH]; thus, a *wh*-word in an embedded question such as that in (22) is still ambiguous. Moreover, *-no* and *-na* cannot be used to finish the polite form of sentences; in polite speech, sentence endings are still ambiguous. In other words, the sentence ending does not provide sufficient information for disambiguating all instances of *wh*-words.

- (22) *Pakk-ey nwuka iss-nunci a-na?*
 out-LOC who.NOM exist-INT know-INT[-WH]
 (i) ‘Do you know who is out there?’
 (ii) ‘Do you know whether there is someone out there?’

To summarize, none of the disambiguating clues introduced in this subsection are decisive. Moreover, the unfavored readings of the suggested data are all available when appropriate prosody is given. The role of prosody in disambiguating *wh*-words is discussed in the following subsection.

4.2 Prosodic disambiguation

As shown thus far, *wh*-words often appear in sentences without any additional elements that can help disambiguation. This can pose a severe challenge in sentence processing, such

as the aforementioned three-way ambiguity. However, native Korean speakers can process potentially ambiguous sentences that contain *wh*-words quite effectively, even when a sentence is uttered in isolation without any apparent context. In a perception study by Jun and Oh (1996), for example, participants listened to questions in isolation that contained a *wh*-word and ended with a neutral ending, yet they could perceive 89% of *wh*-questions and 75% of yes-no questions correctly. This is because prosody helps distinguish different uses of *wh*-words and different sentence types in Korean.⁹

Three main prosodic factors are known to influence disambiguating sentences that contain *wh*-words: (i) prominence of the *wh*-word, (ii) sentence-final intonation, and (iii) prosodic phrasing. First, many studies have stated that a *wh*-word is more prominent than other elements in a sentence when it is interpreted as interrogative, but such a prominence effect does not appear when it is interpreted as indefinite. This claim has been the most commonly adopted explanation for prosodic disambiguation of *wh*-words in the literature on Korean linguistics (Chang 1973; Choe 1985; M.-Y. Kang 1988; C.-S. Suh 1989; Y. Y. Cho 1990; A.-R. Kim 2002). It is also well known outside Korean linguistics; for example, Haspelmath (1997: 171) states that stress is the main factor for disambiguating sentences with interrogative-indefinites in Korean, citing M.-Y. Kang (1988: 188). Note that the definition of ‘prominence’ varies according to study, including “emphatic stress” (Chang 1973; C.-S. Suh 1989), “heavy stress” (M.-Y. Kang 1988), “pitch accent” (Choe 1985), “high pitch” (Y. Y. Cho 1990), and “high pitch accent” (A.-R. Kim 2002). The divergent definitions are probably due to the impressionistic nature of the observations in most of the cited studies. It seems the most relevant phonetic factor for characterizing the prominence of *wh*-interrogatives is pitch, as experimental studies have indicated a greater pitch range and a higher pitch peak of the *wh*-word as the phonetic enhancement of the *wh*-word in *wh*-questions (Jun and Oh 1996; D.-S. Park 2010).

⁹ The prosody pattern varies according to dialect. For example, see Jun (1993) for South Cheolla Korean, H.-S. Lee (2008) for North Kyeongsang Korean, and H.-K. Hwang (2011) for South Kyeongsang Korean. Unless otherwise specified, the data in this chapter are from Seoul Korean, which is generally regarded as standard Korean.

Second, sentence-final intonation provides some clues to the interpretation of *wh*-words because it can signal the sentence type. In particular, yes-no questions are clearly distinguished from other types of sentences by the sharp rising contour at the end of the sentence (Martin 1951; K.-M. Lee et al. 1984; C.-S. Suh 1989; Hur 1991; I. Lee and Ramsey 2000; C.-H. Kim 2000; Kwon 2002). However, the choice of sentence-final intonation is rather complicated because it is also influenced by the speaker's emotion or attitude (H.-Y. Lee 1997: 109-115).

Finally, prosodic phrasing is also relevant to the interpretation of *wh*-words (Y. Y. Cho 1990; H.-Y. Lee 1990; Jun 1993; Jun and Oh 1996; Yun 2013). Whereas the other two prosodic factors (i.e. prominence of the *wh*-word and sentence-final intonation) are relatively easy to observe without any particular theoretical assumption, understanding prosodic phrasing requires some background information about the prosodic system of Korean. Following a basic assumption in the autosegmental-metrical theory, in which intonation contour is described by a sequence of tones that represent two abstract pitch levels, high (H) and low (L) (Pierrehumbert 1980), Jun (1993) proposes that tonal events delimit a prosodic grouping of words in Korean. The diagram in (23) indicates the typical tonal pattern of an accentual phrase (AP) in Seoul Korean proposed by Jun (1993). The basic AP tonal pattern LHLH (or HHLH if the first syllable in the AP starts with a tense or aspirated obstruent) is fully realized when an AP consists of four or more syllables: The first two tones fall on the first two syllables, and the final two tones on the final two syllables. If an AP consists of fewer than four syllables, the intermediate tones may be deleted.

- (23) Typical tonal pattern of an accentual phrase (AP) in Seoul Korean (Jun 1993)
- | | | | | | |
|------------|---|---|-----|---|---|
| AP tones: | L | H | | L | H |
| Syllables: | σ | σ | ... | σ | σ |

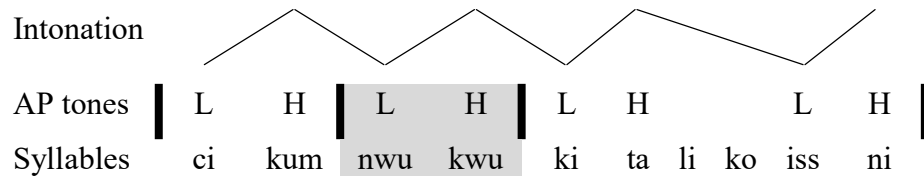
According to this model, the two readings of *wh*-words are associated with distinct AP tonal patterns, which in turn yield distinct intonation contours. The diagrams in (24)

illustrate this point. The prosody pattern in (24a) associates with a yes-no question reading ‘Are you waiting for someone now?’, whereas the prosody pattern in (24b) associates with a *wh*-question reading ‘Who are you waiting for now?’ As shown in (24a), the AP boundary after the *wh*-word is deleted in a *wh*-question reading, which leads to the change of the AP tones after the *wh*-word: namely, deletion of the tones. The actual intonation contour would be a smoother curvy line with potential down-steps, but the stylized representation of intonation contour in (24) provides sufficient information for illustrating perceptually salient tonal changes. Note that in this stylized intonation contour, the crucial difference due to distinct phonological phrasing appears in the post-*wh* area, not in the *wh*-area. Thus, we can refer to the phrasing effect in *wh*-questions as *post-wh dephrasing*.

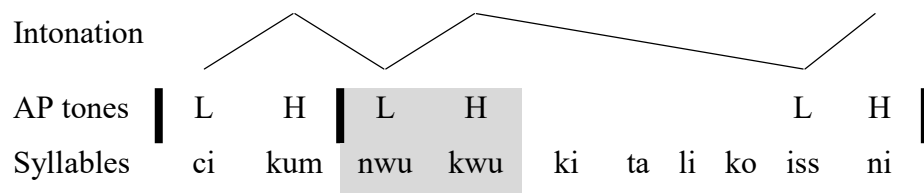
- (24) Distinctive AP tonal patterns depending on the meaning of the *wh*-word
(shaded area: *wh*-word; thick vertical lines: AP boundaries)

Cikum nwukwu kitalikoissni?
now who wait

- a. [-WH] ‘Are you waiting for someone now?’



- b. [+WH] ‘Who are you waiting for now?’



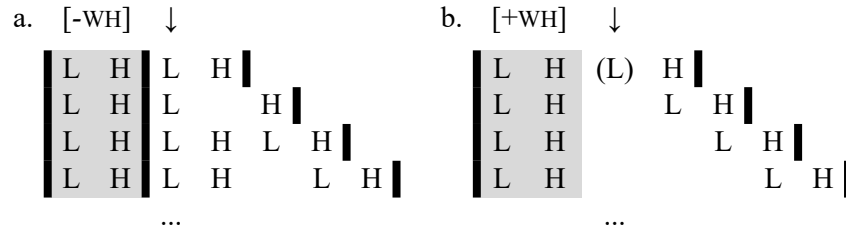
What would be the most crucial prosodic factor for disambiguating *wh*-words? Although the most frequently mentioned factor in the literature is prominence of the *wh*-word,

experimental evidence suggests that phrasing is the most effective clue. A production experiment by Jun and Oh (1996) reports that the most consistent factor for distinguishing *wh*-questions from yes-no questions was AP tone deletion after the *wh*-word, which indicates post-*wh* dephrasing. Although other distinctive prosodic factors, such as sentence-final tones and prominence of the *wh*-word, were also observed in that study, the participants did not adopt them as consistently as they did post-*wh* AP tone deletion. Furthermore, a production experiment by Yun and H.-S. Lee (forthcoming) demonstrates that post-*wh* AP tone deletion is widely observed in *wh*-questions even when it is not predicted to hold, as in cases where both the *wh*-word and the following word are disyllabic and the first syllable in each word receives an L tone. For example, in (25), the *wh*-word and the following word are expected to show the LHLH AP tonal pattern, whether or not dephrasing occurs (i.e. YNQ: [LH][LH], WHQ: [LHLH]). However, the results of the production experiment by Yun and H.-S. Lee indicated that for sentences such as those in (25), the yes-no question reading and the *wh*-question reading exhibited a clear difference in their AP tone realization in terms of the presence and absence of the post-*wh* L tone, respectively. Yun and H.-S. Lee suggest that this could be a production strategy for maximizing the phonological contrast between an interrogative reading and an indefinite reading of *wh*-words. The diagrams in (26) illustrate the AP tonal patterns of a disyllabic *wh*-word and a variable-length post-*wh* word. As shown in these diagrams, the most prominent difference in tonal patterns between indefinite and interrogative readings of *wh*-words can be characterized by the presence or absence of the first AP tone after the *wh*-word, as indicated by the arrows, except when the post-*wh* word is disyllabic. Thus, speakers may consistently drop the post-*wh* L tone in a *wh*-question to maintain the same paradigm, even when they do not have to, in an effort to help listeners process an ambiguous sentence more easily.

- (25) *Nayil* *nwukwu* *manna?*
tomorrow who meet
‘Who are you going to meet tomorrow?’

‘Are you going to meet someone tomorrow?’

(26) Post-*wh* AP tone paradigm (Yun and H.-S. Lee, forthcoming)



A series of perception experiments (Yun 2015; Yun forthcoming; Yun and H.-S. Lee forthcoming) investigated the relative contribution of each prosodic factor to disambiguation of *wh*-words and suggested the importance of prosodic phrasing. In what follows, the “favored reading” indicates most of the responses. Yun (forthcoming) conducted a perception experiment, as summarized in (27), to compare the influence of *wh*-prominence with that of post-*wh* dephrasing, using synthesized speech to control the target prosodic factors. In this experiment, the base stimuli (“no manipulation”) replicated the intonation contour of declarative sentences including *wh*-words and other stimuli were obtained by manipulating the tones in the *wh*- and/or post-*wh* regions. The results demonstrated that *wh*-prominence did not change the meaning of the *wh*-word, but post-*wh* dephrasing did. Another perception experiment using synthesized speech by Yun and H.-S. Lee (forthcoming) also demonstrated that manipulating *wh*-prominence by pitch raising had no effect on interpreting *wh*-words, even though pitch is a major factor for indicating *wh*-prominence in production (Jun and Oh 1996; D.-S. Park 2010).

(27) Influence of prominence and phrasing on perception (Yun forthcoming)

Prosody	Favored reading
a. No manipulation	[-WH]
b. <i>Wh</i> -prominence	[-WH]
c. Post- <i>wh</i> dephrasing	[+WH]

d. *Wh*-prominence + post-*wh* dephrasing [+WH]

Yun (2015) performed a perception experiment that compared the influences of sentence-final intonation and post-*wh* dephrasing, as in (28). In this experiment, carefully recorded speech was used to elicit minimal pairs of contrast. The results revealed sharp contrasts depending on whether post-*wh* dephrasing was involved. When post-*wh* dephrasing was not involved, the *wh*-word was mostly interpreted as an indefinite. In this case, the sentence-final intonation had a correlation with the sentence type: When the sentence ended with a falling intonation, it was mostly perceived as a declarative sentence; with a rising intonation, the most favored reading was a yes-no question. However, when post-*wh* dephrasing was involved, the most acceptable reading was a *wh*-question reading, regardless of the sentence-final intonation.

(28) Influence of sentence-final intonation and phrasing on perception (Yun 2015)

Prosody	Favored reading
a. Final falling	[-WH]
b. Final falling + post- <i>wh</i> dephrasing	[+WH]
c. Final rising	[- <i>wh</i>]
d. Final rising + post- <i>wh</i> dephrasing	[+WH]

The impact of post-*wh* phrasing in perceiving *wh*-phrases is further evidenced by an experiment by S. Y. Lee and Yun (2018). The experiment was conducted to investigate three factors (i.e. sentence ending, scope of post-*wh* dephrasing, and position of the *wh*-word) that can potentially influence the scope of embedded *wh*-interrogative phrases in Kyeongsang Korean. In this dialect, a sentence ending can explicitly indicate whether the sentence is a yes-no question or *wh*-question, as presented in Section 4.1. Since the scope of the *wh*-phrase can be directly indicated by the sentence ending in this case (-*no*: matrix scope, -*na*: embedded scope), one might expect that prosody would provide redundant information and thus it might not have considerable influence on interpretation. Indeed, in

most cases it was the sentence ending that played a decisive role in determining the scope of the *wh*-word, as shown in (29). However, when the *wh*-word was scrambled into the matrix clause and followed by prosodic dephrasing that continued to the end of the matrix clause, most of the responses indicated that the sentence was perceived as a *wh*-question even when the sentence-final particle indicated a yes-no question. This suggests that post-*wh* dephrasing can still play a role in perception even when there is a clear segmental cue to the opposite direction.

(29) Influence of various factors on the perception of embedded *wh*-phrases in Kyeongsang Korean (E: embedded, M: matrix) (S. Y. Lee and Yun 2018)

	Sentence-final suffix	Scope of post- <i>wh</i> dephrasing	Position of <i>wh</i> -word	Favored reading
a.	- <i>na</i> (E)	E	E	E
b.	- <i>no</i> (M)	E	E	M
c.	- <i>na</i> (E)	E	M	E
d.	- <i>no</i> (M)	E	M	M
e.	- <i>na</i> (E)	M	E	E
f.	- <i>no</i> (M)	M	E	M
g.	- <i>na</i> (E)	M	M	M
h.	- <i>no</i> (M)	M	M	E

To summarize, the results of all the reviewed experimental studies suggest that post-*wh* dephrasing plays a key role in disambiguating the meanings of *wh*-words. The importance of dephrasing in forming *wh*-questions is also attested in other languages. In Japanese, for example, it has been noted that pitch accents on words between a *wh*-word and its corresponding question particle are significantly reduced (i.e. deaccented) in *wh*-questions (e.g. Kitagawa 2005). Such post-*wh* deaccenting has been argued to be an instance of phonological dephrasing (Richards 2010; cf. Pierrehumbert and Beckman 1988). Richards (2010) proposes a universal condition on *wh*-prosody that a *wh*-phrase and the

corresponding complementizer must be separated by as few prosodic boundaries as possible. As a result, *wh*-questions create a prosodic domain that starts with the *wh*-phrase and ends with the complementizer. He further argues that there are two options for satisfying this universal condition: i) change the prosody so that there are no prosodic boundaries intervening between the *wh*-word and the complementizer, or ii) move the *wh*-phrase to a position closer to the complementizer so that they are in a single prosodic domain. This provides a unified way to explain the mechanisms of forming *wh*-questions in *wh*-movement languages such as English and *wh*-in-situ languages such as Korean. The data presented thus far support this idea: Instead of forcing *wh*-movement, Korean changes the prosody to form proper *wh*-questions.

5 Conclusion

In this chapter, we have explored *wh*-indefinites in Korean and their historical development, typological observation, grammatical properties, and processing strategies. What has been presented in this chapter is far from an exhaustive list of topics regarding *wh*-indefinites, and there are still many open questions that require further research.

Wh-indefinites are a relatively recent phenomenon in Korean, which had not been fully developed until the nineteenth century. The literature indicates that *wh*-words in Korean used to allow interrogative readings only, and indefinite meanings were expressed by the indefinite pronoun *amwu*. The emergence of *wh*-indefinites caused an apparent redundancy to the inventory of indefinites, which calls for a study that extensively compares the entire series of *wh*-indefinites with that of *amwu*-indefinites in contemporary Korean.

Although *wh*-indefinites appear in most of the world's languages, Korean provides a particularly compelling test case for theories of *wh*-indefinites because it has one of the richest inventories of *wh*-indefinites and it allows both bare and complex forms of *wh*-indefinites. The semantics of the bare form of *wh*-indefinites is different from that of the complex form of *wh*-indefinites with an explicit indefinite marker *-inka*. Although they both involve the seemingly same existential reading, they have different scope taking

properties and distinct implicatures. There are conflicting judgments on the scope configuration of *wh*-indefinites, rendering it difficult to build a unified theory of *wh*-indefinites. Therefore, future research should include carefully designed and controlled experiments to verify judgments.

The indefinite-interrogative ambiguity can be a potential challenge to sentence processing. Despite the availability of some morpho-syntactic disambiguating cues, all of them have limitations and, in most cases, speakers rely on the context and the prosody. The prosodic characteristics of *wh*-interrogatives include distinctive sentence-final intonation, prominence of the *wh*-word, and post-*wh* dephrasing. A series of experimental studies suggest that post-*wh* dephrasing is the most effective prosodic factor for distinguishing *wh*-interrogatives from *wh*-indefinites. Future studies could investigate real-time processing of *wh*-words to reveal when disambiguation starts in the process of sentence comprehension.

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