

On the syntax of ‘why’-like ‘how’ in Korean

Okgi Kim*

Abstract. The *wh*-phrase *ettehkey* ‘how’ in Korean is forced to be interpreted as a reason *wh*-adverbial corresponding to *way* ‘why’ when it occurs with a causative *-key toy*-construction with past tense. In this paper, I try to answer a simple but fundamental question of whether or not reason *ettehkey* is base-generated in the same position as the ‘high’ *wh*-adjunct *way* (Ko 2005, 2006). I argue that reason *ettehkey* in an interrogative clause is externally merged in its checking position, Spec-C_{Int}P, just like *way* (Ko 2006), whereas manner/instrumental *ettehkey* originates below NegP.

Keywords. reason *ettehkey*; manner/instrumental *ettehkey*; Intervention Effect; Anti-Superiority Effect; Negative Island Effect

1. Introduction. In Korean, the *wh*-word *ettehkey*, which corresponds to English *how*, is standardly used as a question whose answer could be manner or instrumental, as illustrated in (1).

(1) A: John-un **ettehkey** kkochpyeng-ul kkayss-ni?
 John-TOP how vase-ACC broke-QUE
 ‘How did John break the vase?’

B: amwu cwuce epsi [manner]
 any hesitation without
 ‘Without any hesitation’

B’: mangchi-lo [instrumental]
 hammer-with
 ‘With a hammer’

However, the usage of *ettehkey* is not restricted to such cases. The *wh*-item can be also used non-standardly in that it is forced to be interpreted as a reason *wh*-adverbial when it occurs with a causative *-key toy*-construction with past tense.¹ This type of *ettehkey* (henceforth, reason *ettehkey*) is exemplified in (2A) (here and throughout the paper, the ^w superscript is used in glossing reason *ettehkey* and distinguishing it from its standard counterpart (i.e., manner/instrumental *ettehkey*)).²

(2) A: John-un {**ettehkey^w/way**} kkochpyeng-ul kkay-key toyess-ni?
 John-TOP how/why vase-ACC break-CONN became-QUE
 ‘Why did John break the vase?’

B: silswulo patak-ey ttelettulyess-e.
 by.mistake floor-LOC dropped-DECL
 ‘(He) dropped (it) on the floor by mistake.’

B’: #amwu cwuce epsi
 any hesitation without
 ‘Without any hesitation’

* Author: Okgi Kim, University of Wisconsin-Milwaukee (okgikim@uwm.edu).

¹ See Yeo (2019) for discussion of causative *-key toy*-constructions.

² See Tsai (2008) for discussion of Chinese *how-why* alternations.

B'': #mangchi-lo
 hammer-with
 'With a hammer

The construal of *ettehkey* as a reason *wh*-adverbial is verified by the fact that it can be replaced by the regular reason *wh*-adjunct *way* why, without affecting the intended meaning of a sentence, as indicated in (2A).

The 'why'-like behavior of *ettehkey* introduced above raises many important theoretical questions in terms of syntax, one of which is whether or not reason *ettehkey* originates in the same position as the 'high' *wh*-adjunct *way* (Ko 2005, 2006).³ This simple but fundamental question—to my knowledge—has not previously been answered in the literature. Therefore, this paper aims to address the research gap. In this paper, building on Ko's (2006) analysis of *wh*-licensing in Korean, I argue that, like *way*, reason *ettehkey* in an interrogative clause is base-generated in its checking position, Spec-C_{Int}P, while manner/instrumental *ettehkey* originates below NegP and undergoes covert movement to Spec-C_{Foc}P, configured higher than C_{Int}P (cf. Rizzi 1999, 2001).

The paper is organized as follows. In the following section, I present similarities between reason *ettehkey* and *way* with regard to the Intervention Effect and the Anti-Superiority Effect. In Section 3, I present Ko's (2006) analysis of *way*. Section 4 discusses where the two variants of *ettehkey* are base-generated and how they are licensed, based on Ko's analysis. In Section 5, I conclude.

2. Similarities with *way*: Intervention Effect and Anti-Superiority Effect. Reason *ettehkey* behaves like the regular reason *wh*-adjunct *way* in terms of the Intervention Effect: unlike other *wh*-phrases, including manner/instrumental *ettehkey*, both reason *ettehkey* and *way* can be preceded by a Scope Bearing Element (SBE) (a.k.a. an intervener) like *amwuto* 'anyone' that gives rise to the Intervention Effect when it c-commands a *wh*-phrase (see, among others, Beck & Kim 1997; Ko 2005; Beck 2006; Kotek 2014 for detailed discussions of the Intervention Effect). Consider the following examples:

- (3) a. **amwuto* Mary-eytayhay **ettehkey** malha-ci anh-ass-ni?
 anyone Mary-about how talk-CONN not-PST-QUE
 'How was no one talking about Mary?'
 b. John-i **ettehkey** Mary-eytayhay amwu-eykey-to malha-ci anh-ass-ni?
 John-NOM how Mary-about anyone-to talk-CONN not-PST-QUE
 'How was John talking to no one about Mary?' (adapted from Choi 2007)
- (4) a. *amwuto* {**ettehkey**^w/**way**} nonmwun-ul ilk-ci anh-key toyess-ni?
 anyone how/why paper-ACC read-CONN not-CONN became-QUE
 'Why didn't no one read papers?'
 b. {**ettehkey**^w/**way**} *amwuto* nonmwun-ul ilk-ci anh-key toyess-ni?
 how/why anyone paper-ACC read-CONN not-CONN became-QUE
 'Why didn't no one read papers?'

Example (3) shows that manner/instrumental *ettehkey* cannot follow but must precede the SBE. On the other hand, example (4) illustrates that both reason *ettehkey* and *way* can follow or pre-

³ I leave to future research the crucial issue of how 'why'-like meaning is derived from non-'why'-like *wh*-items like *ettehkey*.

cede the SBE.

Reason *ettehkey* also patterns like *way*, and unlike other *wh*-phrases, with respect to the Anti-Superiority Effect in that it is unable to precede the other *wh*-phrase in a multiple *wh*-question (see, among others, Watanabe 1992 and Saito 1994 for detailed discussions of the Anti-Superiority Effect):

- (5) a. John-un **ettehkey** mwues-ul kkayss-ni?
 John-TOP how what-ACC broke-QUE
 ‘What did John break how?’
 b. John-un mwues-ul **ettehkey** kkayss-ni?
 John-TOP what-ACC how broke-QUE
 ‘What did John break how?’
- (6) a. *John-un {**ettehkey**^w/**way**} mwues-ul kkay-key toyess-ni?
 John-TOP how/why what-ACC break-CONN became-QUE
 ‘What did John break why?’
 b. John-un mwues-ul {**ettehkey**^w/**way**} kkay-key toyess-ni?
 John-TOP what-ACC how/why break-CONN became-QUE
 ‘What did John break why?’

As observed in (5), manner/instrumental *ettehkey* can precede or follow the *wh*-argument *mwues-ul*. However, as shown in (6), both reason *ettehkey* and *way* cannot precede but must follow the *wh*-argument in the multiple *wh*-question.

3. Ko (2006): the external merge of *way* in Spec-C_{Int}P. To explain the peculiar behavior of *way* with respect to the Anti-Superiority Effect, i.e., its inability to precede the other *wh*-phrase in a multiple *wh*-question (see (6)), Ko (2006), following Rizzi’s (1999) split-CP hypothesis, assumes that *way* in an interrogative clause is base-generated in its checking position, Spec-C_{Int}P, as illustrated in (7a), while other *wh*-operators covertly move from their base position to Spec-C_{Foc}P, configured higher than C_{Int}P, for feature checking, as illustrated in (7b).⁴

- (7) a. [CP C_{Foc[+Q]} ... **way** C_{Int[+Q]} [IP ...]]
 b. [CP **wh_i** C_{Foc[+Q]} ... C_{Int[+Q]} [IP ... t_i ...]]

Ko further assumes that unlike other *wh*-items, *way* is an SBE that induces the Intervention Effect which she takes as a constraint on *wh*-movement at LF, where a *wh*-phrase cannot be attracted to its checking/scope position across an SBE, as illustrated in (8) (see also Ko 2005; cf. Beck & Kim 1997).⁵

⁴ C_{Int}P and C_{Foc}P correspond to IntP and FocP, respectively, in Rizzi’s split-CP system for Romance languages.

⁵ Ko takes *way* as an SBE given that it induces focus association, where the answer to a *way*-question differs depending on the association between *way* and a focus-marked phrase with emphatic stress (see also Bromberger 1992):

- (i) a. A: way Adam-i sakwa-lul mek-ess-ni?
 why Adam-NOM apple-ACC eat-PST-QUE
 ‘Why did Adam eat the apple?’
 B: hanunim-i kukes-ul uytohasiessu-nikka
 God-NOM that-ACC intend-because
 ‘because God intended it (to happen)’
 b. A: way ADAM-i sakwa-lul mek-ess-ni?

(8) [... Q SBE **wh** ...]

Let us now examine how Ko's analysis accounts for the Anti-Superiority Effect. Under her analysis, the Anti-Superiority Effect arises because *way* as an SBE gives rise to the Intervention Effect by blocking LF movement of the other *wh*-phrase that it c-commands.⁶ For example, (6a) is ruled out because LF movement of the *wh*-argument *mwues-ul* to Spec-C_{Foc}P is interfered with by the SBE *way* sitting in Spec-C_{Int}P, configured lower than C_{Foc}P, as illustrated in (9).

(9) [CP C_{Foc[+Q]} ... **way** C_{Int[+Q]} [IP ... **mwues-ul** ...]]

Ko's analysis also explains the asymmetry between *way* and other *wh*-phrases in terms of the Intervention Effect, where only the former is not subject to the Intervention Effect when c-commanded by an SBE in an interrogative clause (see the contrast between (3a) and (4a)). According to the Intervention Effect constraint, the ungrammaticality of (3a), where manner/instrumental *ettehkey* is preceded by the SBE *amwuto*, is because LF movement of the *wh*-phrase to Spec-C_{Foc}P is blocked by the c-commanding SBE, resulting in a derivational crash, as illustrated in (10).

(10) [CP C_{Foc[+Q]} ... C_{Int[+Q]} [IP **amwuto** ... **ettehkey** ...]]

On the other hand, the well-formedness of (3b) is because manner/instrumental *ettehkey*, which is not in the c-commanding domain of the SBE, can freely move to its checking position at LF, as illustrated in (11).

(11) [CP C_{Foc[+Q]} ... C_{Int[+Q]} [IP ... **ettehkey** ... **amwu-eykey-to** ...]]

Meantime, as we have seen in (4), unlike manner/instrumental *ettehkey*, the reason *wh*-adverb *way* can follow an SBE that induces the Intervention Effect. This is because *way* is licensed in its base position (i.e., Spec-C_{Int}P) and, therefore, does not move at LF. For example, (4a) is assumed to involve the LF structure given in (12), where the SBE has undergone overt scrambling over *way* licensed in Spec-C_{Int}P.

(12) [CP C_{Foc[+Q]} ... **amwuto**_i **way** C_{Int[+Q]} [IP ... t_i ...]]

- B: Ivu-ka Adam-eykey kwonhayssu-nikka
 Eve-NOM Adam-DAT recommended-because
 'because he was the one that Eve recommended (to eat the apple)'
- c. A: way Adam-i SAKWA-lul mek-ess-ni?
 B: kukes-i cwupyenyey iss-ten yulihan umsik iessu-nikka
 that-NOM around be-MOD only food be-because
 'because it (the apple) was the only food around'
- d. A: way Adam-i sakwa-lul MEK-ess-ni?
 B: kukes-ulo mwues-ul halci mollassu-nikka
 that-with what-ACC to.do be.ignorant.of-because
 'because he couldnt think of anything else to do with it'

⁶ She thus takes the Anti-Superiority Effect as a variant of the Intervention Effect.

The well-formed sentence in (4b) is simply explained since *way* is not in the intervention configuration, that is, it is not c-commanded by the SBE, as illustrated in (13).

(13) [_{CP} C_{Foc[+Q]} ... **way** C_{Int[+Q]} [_{IP} **amwuto** ...]]

4. Base positions of the two variants of *ettehkey*.

4.1. BASE-GENERATION OF REASON *ettehkey* IN SPEC-C_{INT}P. As we have observed in Section 2, reason *ettehkey* behaves exactly like the regular *wh*-adjunct *way* in regard to the Intervention Effect and the Anti-Superiority Effect. If Ko's analysis discussed in the previous section is on the right track, it may be reasonable to assume that reason *ettehkey* in an interrogative clause is base-generated in the same checking/scope position as *way*, namely Spec-C_{Int}P.

The base-generation of reason *ettehkey* in Spec-C_{Int}P is supported by the fact that, unlike manner/instrumental *ettehkey*, it cannot cooccur with *way*, as in (14); the two *wh*-expressions compete for the same licensing position (Spec-C_{Int}P).

- (14) a. *John-un **ettehkey**^w **way** kkochpyeng-ul kkay-key toyess-ni?
 John-TOP how why vase-ACC break-CONN became-QUE
 'Why did John break the vase?'
 b. *John-un **way** **ettehkey**^w kkochpyeng-ul kkay-key toyess-ni?
 John-TOP why how vase-ACC break-CONN became-QUE
 'Why did John break the vase?'
- (15) a. ?John-un **ettehkey way** kkochpyeng-ul kkayss-ni?
 John-TOP how why vase-ACC broke-QUE
 'Why did John break the vase how?'
 b. *John-un **way ettehkey** kkochpyeng-ul kkayss-ni?
 John-TOP why how vase-ACC broke-QUE
 'Why did John break the vase how?'

Note that the ill-formedness of (15b), where manner/instrumental *ettehkey* is preceded by *way*, is due to the Intervention Effect induced by the SBE *way*, as discussed before.

Another source of support for the external merge of reason *ettehkey* in Spec-C_{Int}P arises from the fact that it takes obligatory wide scope over negation, just like *way* (Ko 2005):

- (16) John-un {**ettehkey**^w/**way**} mikwuk-ey ka-ci anh-key toyess-ni?
 John-TOP how/why America-to go-CONN not-CONN became-QUE
 'What is the reason x such that John didn't go to America?'
 *What is not the reason x such that John went to America for x?

Since reason *ettehkey* is directly merged into Spec-C_{Int}P, it is impossible for it to be interpreted under the negation.

The direct merge of reason *ettehkey* at Spec-C_{Int}P straightforwardly explains why, just like *way*, it does not show the Intervention Effect when c-commanded by an SBE, as we have seen in (4): since reason *ettehkey* is licensed in its base-generated position, Spec-C_{Int}P, it does not undergo LF movement across the c-commanding SBE, thereby not violating the Intervention Effect constraint. The sentences involving reason *ettehkey* in (4) are assumed to have the LF structures presented in (17).

- (17) a. [_{CP} C_{Foc[+Q]} ... **amwuto**_i **ettehkey**^w C_{Int[+Q]} [_{IP} ... t_i ...]] (LF for (4a))

- b. [[_{CP} C_{Foc[+Q]} ... **ettehkey**^w C_{Int[+Q]} [_{IP} ... **amwuto** ...]] (LF for (4a))

Meantime, if reason *ettehkey* is base-generated in Spec-C_{Int}P of an embedded declarative clause and is preceded by a scrambled SBE, it exhibits the Intervention Effect just as *way* occurring in the same environment does (Ko 2005). Let us consider the following examples:

- (18) a. *John-un [amwuto {**ettehkey**^w/**way**} ku chayk-ul ilk-ci anh-key
John-TOP anyone how/why that book-ACC read-CONN not-CONN
toyess-ta-ko] malhayss-ni?
became-DECL-COMP said-QUE
'What is the reason x such that John said that no one read that book for x?'
- b. John-un [amwuto {**ettehkey**^w/**way**} ku chayk-ul ilk-ci anh-key
John-TOP anyone how/why that book-ACC read-CONN not-CONN
toyess-nunci] mwules-ta.
became-QUE asked-DECL
'John asked why no one read that book.'
- c. John-un [Mimi-ka {**ettehkey**^w/**way**} ku chayk-ul ilk-key
John-TOP Mimi-NOM how/why that book-ACC read-CONN
toyess-ta-ko] malhayss-ni?
became-DECL-COMP said-QUE
'What is the reason x such that John said that Mimi read that book for x?'

The reason *ettehkey* in (18a) cannot be licensed in its base position because the embedded declarative C_{Int}P lacks the [+Q] feature. Thus, for feature checking, it needs to move covertly to the matrix interrogative C_{Int}P containing [+Q]. However, the LF movement required is blocked by the scrambled subject SBE *amwuto*, inducing the Intervention Effect. This is illustrated in (19).

- (19) $\begin{array}{c} \downarrow \text{---}^* \text{---} \\ \text{[CP}_1 \text{ C}_{\text{Int}[+Q]} \text{ ... [CP}_2 \text{ amwuto}_i \text{ ettehkey}^w \text{ C}_{\text{Int}[-Q]} \text{ [IP ... t}_i \text{ ...]}] \end{array}$

Meantime, (18b) is grammatical since the reason *ettehkey* is licensed in its base position, i.e., the embedded interrogative Spec-C_{Int}P, and thus does not move across the c-commanding SBE:

- (20) $\text{[CP}_1 \text{ C}_{\text{Int}[-Q]} \text{ ... [CP}_2 \text{ amwuto}_i \text{ ettehkey}^w \text{ C}_{\text{Int}[+Q]} \text{ [IP ... t}_i \text{ ...]}]$

The well-formedness of (18c) is because no element blocks LF movement of the reason *ettehkey* to the matrix C_{Int}P that does contain [+Q], as illustrated in (21).

- (21) $\begin{array}{c} \downarrow \text{---} \text{---} \\ \text{[CP}_1 \text{ C}_{\text{Int}[+Q]} \text{ ... [CP}_2 \text{ ... ettehkey}^w \text{ C}_{\text{Int}[-Q]} \text{ ...]}] \end{array}$

The same line of reasoning applies to the data involving *way* in (18) (see Ko 2005).

The analysis proposed here also provides an explanation for the Anti-Superiority Effect induced by reason *ettehkey*. Under the additional assumption that, like *way*, reason *ettehkey* functions as an SBE, the sentence in (6a) is ruled out because the SBE *ettehkey* interferes with LF movement of the *wh*-argument *mwues-ul* that it c-commands, inducing the Intervention Effect:⁷

⁷ Like the regular reason *wh*-adjunct *way*, reason *ettehkey* gives rise to focus affected readings, as in (i), which supports its function as an SBE.

(22) $\left[\begin{array}{c} \downarrow \text{---}^* \text{---} \uparrow \\ \text{CP } C_{\text{Foc}[\text{+Q}]} \dots \text{ettehkey}^w C_{\text{Int}[\text{+Q}]} [\text{IP } \dots \text{mwues-ul } \dots] \end{array} \right]$

4.2. BASE-GENERATION OF MANNER/INSTRUMENTAL *ettehkey* BELOW NEG_P. Example (23) illustrates the so-called *how-why* asymmetry with regard to the Negative Island Effect, a well-known phenomenon in which negation blocks extraction of certain (*wh*-)phrases (Rizzi 1990; Tsai 2008; Shlonsky & Soare 2011):

- (23) a. Why didn't Geraldine fix her bike?
 b. *How didn't Geraldine fix her bike? (Shlonsky & Soare 2011: (14))

The asymmetry can receive a natural account if we assume that unlike manner/instrumental *how*, reason *why* is directly merged in the CP domain (Rizzi 2001; Tsai 2008; a.o.). On this view, reason *why* is exempt from the Negative Island Effect since it originates above negation, i.e., Neg_P, as illustrated in (24a). Meantime, the ungrammaticality of (23b) can be explained by assuming that manner/instrumental *how* originates in a structurally lower position below negation; that is, the negator blocks LF movement of the *wh*-phrase to its scope position in the CP domain, as illustrated in (24b).

(24) a. $\left[\text{CP } \text{why} [\text{TP } \dots \text{NegP } \dots] \right]$
 b. $\left[\text{CP } \text{how} [\text{TP } \dots \text{NegP } \text{t}_{\text{how}} \dots] \right]$

Note that such an asymmetry also holds for *wh*-questions in Korean:

- (25) a. Mimi-nun way cha-lul kochi-ci anh-ass-ni?
 Mimi-TOP why car-ACC fix-CONN not-PST-QUE
 'Why didn't Mimi fix the car?'
 b. *Mimi-nun ettehkey cha-lul kochi-ci anh-ass-ni?
 Mimi-TOP how car-ACC fix-CONN not-PST-QUE
 'How didn't Mimi fix the car?'

As observed in (25a), the reason *wh*-adverb *way* is not subject to the Negative Island Effect,

- (i) a. A: ettehkey^w Adam-i sakwa-lul mek-key toyess-ni?
 how Adam-NOM apple-ACC eat-CONN became-QUE
 'Why did Adam eat the apple?'
 B: hanunim-i kukes-ul uytohasiessu-nikka
 God-NOM that-ACC intend-because
 'because God intended it (to happen)'
 b. A: ettehkey^w ADAM-i sakwa-lul mek-key toyess-ni?
 B: Ivu-ka Adam-eykey kwonhayssu-nikka
 Eve-NOM Adam-DAT recommended-because
 'because he was the one that Eve recommended (to eat the apple)'
 c. A: ettehkey^w Adam-i SAKWA-lul mek-key toyess-ni?
 B: kukes-i cwupyeny iss-ten yulihan umsik iessu-nikka
 that-NOM around be-MOD only food be-because
 'because it (the apple) was the only food around'
 d. A: ettehkey^w Adam-i sakwa-lul MEK-key toyess-ni?
 B: kukes-ulo mwues-ul halci mollassu-nikka
 that-with what-ACC to.do be.ignorant.of-because
 'because he couldn't think of anything else to do with it'

just like English *why*. This is readily explained by Ko's (2006) claim that *way* is externally merged in Spec-C_{Int}P in the left periphery of the clause. On the other hand, the ill-formedness of (25b) can be accounted for by assuming that manner/instrumental *ettehkey* is base-generated below NegP and that its LF movement to Spec-C_{Foc}P is blocked by the negator, triggering the Negative Island Effect. Meanwhile, reason *ettehkey* is not subject to the Negative Island Effect, just like *way*, as in (26), which supports the claim that reason *ettehkey* is base-generated in the CP domain (Spec-C_{Int}P).

- (26) Mimi-nun **ettehkey**^w cha-lul kochi-ci ahn-key toyess-ni?
 Mimi-TOP how car-ACC fix-CONN not-CONN became-QUE
 'Why didn't Mimi fix the car?'

5. Conclusion. In this paper I have investigated reason *ettehkey*-questions and tried to answer the simple but important question of whether or not reason *ettehkey* originates in the same position as the regular *wh*-adjunct *way* 'why'. As for the question, I have proposed that reason *ettehkey* in an interrogative clause is externally merged in its checking position, Spec-C_{Int}P, just like *way*, whereas manner/instrumental *ettehkey* originates below NegP. If this syntactic analysis is correct, it lends support to previous research (e.g., Rizzi 2001; Ko 2006; Tsai 2008) arguing that a reason/causal *wh*-adverbial merges into the left periphery of the clause without undergoing (LF-)movement.

References

- Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14. 1–56. <https://doi.org/10.1007/s11050-005-4532-y>.
- Beck, Sigrid, & Shin-Sook Kim. 1997. On *wh*-and operator scope in Korean. *Journal of East Asian Linguistics* 6(4). 339–384. <https://doi.org/10.1023/A:1008280026102>.
- Bromberger, Sylvain. 1992. *On what we know we don't know: Explanation, theory, linguistics, and how questions shape them*. Chicago: University of Chicago Press.
- Choi, Young-Sik. 2007. Intervention effect in Korean *wh*-questions: Indefinite and beyond. *Lingua* 117. 2055–2076. <https://doi.org/10.1016/j.lingua.2007.01.001>.
- Ko, Heejeong. 2005. Syntax of *why*-in-situ: Merge into [Spec, CP] in the overt syntax. *Natural Language & Linguistic Theory* 23(4). 867–916. <https://doi.org/10.1007/s11049-004-5923-3>.
- Ko, Heejeong. 2006. On the structural height of reason *wh*-adverbials: Acquisition and consequences. In Lisa Cheng & Norbert Corver (eds.), *Wh-movement: Moving on*. 319–349. Cambridge, MA: MIT Press.
- Kotek, Hadas. 2014. *Composing questions*. Cambridge, MA: MIT dissertation.
- Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1999. On the position of "Int(errogative)" in the left periphery of the clause. Ms., Universit di Siena.
- Rizzi, Luigi. 2001. On the position of "Int(errogative)" in the left periphery of the clause. In Guglielmo Cinque & Giampaolo Salvi (eds.), *Current studies in Italian syntax*. 267–296. Amsterdam: Elsevier.
- Saito, Mamoru. 1994. Additional-WH effects and the adjunction site theory. *Journal of East Asian Linguistics* 3(3). 195–240. <https://doi.org/10.1007/BF01733064>.
- Shlonsky, Ur, & Gabriela Soare. 2011. Where's 'why'? *Linguistic Inquiry* 42. 651–669. https://doi.org/10.1162/LING_a_00064.

- Tsai, Wei-Tien Dylan. 2008. Left periphery and *how-why* alternations. *Journal of East Asian Linguistics* 17. 83–115. <https://doi.org/10.1007/s10831-008-9021-0>.
- Watanabe, Akira. 1992. Subjacency and S-structure movement of *wh*-in-situ. *Journal of East Asian Linguistics* 1(3). 255–291. <https://doi.org/10.1007/BF00130554>.
- Yeo, Seungju. 2019. On the *-key toy*-construction as implicit causatives. *Studies in Linguistics* 51. 49-68.