Korean Adverbials with Interrogative/ Declarative Endings and the Speaker's Commitment

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1 Introduction

This paper analyzes the Korean adverbial clause which ends with the declarative subordinator *kel* (the contracted form of the complementizer *kes* with the accusative ending -*ul*) and with the interrogative subordinator -*ci*.

(1) Nay-ka   Mary-eykey   mal-ul   ha-l   *kel*
    I-NOM   Mary-DAT   word-ACC   do.-FUT.REL   DECL.COMP
    kulay-ess-e.
    do.so-PAST-*e*

'It was desirable that I said that to Mary. (but I didn't)'

(2) Ney-ka   Mary-eykey mal-ul   ha- Ø   -ci
    You-NOM Mary-DAT   word-ACC do.-FUT.REL   Q.COMP
    kulay-ess-e.
    do.so-PAST-*e*
    'It was desirable that you said that to Mary. (but you didn't)'

Here we identify various restrictions on *kel* and *ci*- adverbials, regarding the subject, the embedded tense, and the ending in the main clause, and show that these restrictions can be explained if we consider the relative difference of the speaker's commitments (Gunlogson 2001, a.o.) to the *kel* adverbial and the *-ci* adverbial, and the tense marker of the main clause and its relation to counterfactual semantics (Arregui 2007, a.o.).

2   Data

First, the *kel*- adverbial only allows the first-person subject, whereas the *ci*- adverbial allows only the second-person subject.

(1') Nay-ka/*Ney-ka/*ku-ka   Mary-eykey mal-ul   ha-l
      I-NOM /You-NOM /He-Nom Mary-DAT   word-ACC do-FUT.REL
      kel   kulay-ess-e.
      DECL.COMP   do.so-PAST -*e*
(2') *Nay-ka/Ney-ka/*ku-ka   Mary-eykey mal-ul   ha-Ø-
      I-NOM /You-NOM /He-NOM Mary-DAT   word-ACC do-FUT.REL
      -ci   kulay-ess-e.
      Q.COMP   do.so-PAST -*e*

The subject restriction is weakened when the main verb takes *-ta* rather than *-e*, as in (3), where the third-person subject is allowed:

(3) Nay-ka/ku-ka   Mary-eykey   mal-ul   ha-l
     I-NOM /He-NOM   Mary-DAT   word-ACC   do-FUT.REL
     kel   kulay-ess-ta.
     DECL.COMP   do.so-PAST -*ta*
     'It was desirable that I/he said that to Mary. (but I/he didn't)'

Next, with *kel*, the ending of the main clause is relatively free (see 1 and 3), whereas with *-ci*, it is restricted to *-e*: the declarative ending *-ta* and the interrogative ending *-ni* are less compatible with the *-ci* adverbial:

(4) Mary-eykey mal-ul   ha-l   kel   kulay-ess-e./-ta./-ni?

(5)   Mary-eykey mal-ul   ha-Ø-ci   kulay-ess-e./*-ta./*-ni?[1]
       Mary-DAT   word-NOM do-FUT.REL-Q.COMP do.so-PAST -*e*/-*ta*/-Q

Finally, the tense marker of the adverbial should be future (or non-past), whereas that of the main clause should be past. Any change of tense will result in unacceptable sentences. See (6) and (7), where the tense of the embedded clauses is past or present, and (8) and (9), where the tense of the main clause is present or future: all these variations are unacceptable.

(6)   *Mary-eykey mal-ul   hay-essnun/ha-n/ha-nun
       M.-DAT   word-NOM   do-PAST.REL/do-PRES.REL/do-PROG.REL
       kel   kulay-ess-e.
       DECL.COMP   do.so-PAST -*e*
(7)   *Mary-eykey mal-ul   hay-essnun-/ha-n-/ha-nun
       M.-DAT   word-NOM   do-PAST -/do-PRES-/do-PROG
       -ci   kulay-ess-e./*kulay-ess-ta./kulay-ess-ni?
       Q.COMP   do.so-PAST -*e*/do.so-PAST -*ta*/do.so-PAST-Q
(8)   *Mary-eykey mal-ul   ha-l   kel
       M.-DAT   word-NOM   do-FUT.REL DECL.COMP
       kulay-Ø-e./kule-keyss-e.
       do.so-PRES-*e*/do.so-Fut-*e*
(9)   *Mary-eykey mal-ul   ha-Ø-   -ci
       M.-DAT   word-NOM   do-FUT.REL Q.COMP
       kulay-Ø-e./kule-keyss-e.
       do.so-PRES-*e*/do.so-FUT-*e*

This tense restriction seems related to its counterfactual semantics: (1) and (2) have the implication that the speaker and the addressee, respectively, did not tell *Mary*, even though there is no conditional marker. To account for these, next we will present the theory of the speaker's commitment (Gunlogson 2001, 2008, a.o.), which our proposal is based on.

3   Speaker's commitment and clause type

3.1 Individual commitment set

Stalnaker (1978) analyzes the meaning of a declarative sentence in terms of its interaction with the conversational context. To formalize this, Stalnaker

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[1] The use of -*ni* seems acceptable in (4) when the final intonation does not sufficiently rise to yield a canonical information-seeking question: see Section 4.3 for further discussion.

(1978) proposes: (i) the conversational context is understood in terms of propositions mutually shared and accepted as true by conversational participants. He calls this set of propositions the common ground (hereafter cg). (ii) assuming that a declarative sentence refers to a proposition, to utter a declarative sentence is to add a proposition (say p) to the cg.

Unlike Stalnaker, Hamblin (1971) assumes that each conversational participant has his/her own individual commitment set. Here commitments can be understood as adding a proposition to each participant's commitment slate (i.e. a set of propositions representing the positions taken by a participant) (Gunlogson 2008: 7). Following Hamblin (1971), Gunlogson (2001, 2008) assumes that commitment sets are relativized to individuals. In her analysis, the commitment set for some agent (=participant) a in discourse d is defined as follows (Gunlogson 2008: 7 (16)):

(10) cs_a^d = { w $\in$ W: all discourse commitments of agent a in discourse d are true in w}

In this way, a's committing to p is construed as adding p to a's individual cs, and as a result a's cs only contains p-worlds. In this analysis, updating a cg (i.e. joint commitment set of all participants) with the proposition p is available only after every participant's cs is updated with p.

3.2 Strong and weak commitment

Committing to a proposition p requires appropriate evidence (Grice's maxim of Quality). Based on this, Gunlogson (2008: 17) proposes that commitments may be based on either independent or dependent sources. When the participant has independent evidence supporting p, she is committed to p as an independent source, and when the participant lacks independent evidence but is committed to p depending solely on another agent's evidence in a previous discourse, she is committed as a dependent.

Northrup (2014) further distinguishes between strong and weak commitment. According to him, commitment is a tuple of p and the evidential base E: $<p,E>$, and commitments are divided into strong and weak based on the degree of E. If the speaker is committed to p based on weak evidence (i.e. E_{WEAK}), and lacks other independently obtained evidence, she is not sure as to whether p is the case. By contrast, strong commitment to p is based on the speaker's independent evidence. In such a case, the speaker does not consider the possibility of withdrawing her commitment.

3.3 Clause type and commitment

Clause types have been claimed to be related to the strength of commitment (Gunlogson 2008; Farkas and Roelofsen 2017, a.o.). The context change potential of a (normal falling) declarative is to add its propositional content to the speaker's commitment set. Thus, the speaker of a (falling) declarative is strongly committed to the proposition p as the agent of the context update. Uttering an interrogative, by contrast, does not update the speaker's commitment set, but it has the effect of asking the hearer to update the context. In interrogatives, the speaker is not the agent of the update, but she just passes the duty of update to the other participant (i.e. the hearer). That is, in interrogatives, the context is updated in terms of the hearer's commitment.

Also, various types of clauses have been analyzed in relation to the strength of commitment. Tag questions and rising declaratives show some degree of speaker commitment. Their commitments are considered stronger than those of rising interrogatives, but not as strong as falling declaratives.

4 Analysis

Here we try to explain the semantics and syntax of the *kel* and *-ci* adverbial clauses in (1) and (2) in terms of the speaker's commitment, and their counterfactual-like semantics in terms of their past-tense marker.

4.1 Adverbials with different endings and their commitments

We claim that the subject restriction on the *kel* and *-ci* adverbials comes from the different degrees of commitment in the adverbials. Previously we glossed *kel* as a declarative complementizer, whereas *-ci* is an interrogative complementizer. We further assume that two different clause types are related to different types of the speaker's commitments to the proposition. When a speaker utters a clause with a declarative ending, she usually has evidence which is independent of the current conversation, and based on that, she makes an assertion. Therefore she can make a strong commitment to the proposition she is asserting. In contrast, when a speaker asks a question, the addressee is usually expected to make a stronger commitment to her answer based on her stronger evidence. That is, in a declarative clause with an assertion, the speaker's commitment to that assertion is stronger than the addressee's, whereas in an interrogative clause, the addressee is expected to make a stronger commitment to the answer.

Following Malamud and Stephenson (2015: M&S), we claim that this difference in the speaker's commitment is related to the perspective/point of view triggered in certain predicates. According to M&S, when a clause with

a certain type of commitment appears in an environment sensitive to a perspective, that type of commitment can restrict the perspective holder. Based on this, we suggest that the subject is indeed determined by the commitment when the subject should be the perspective holder.

One example comes from subjective psych-predicates (e.g. *chwup-* 'feel cold'). In (11) and (12), this type of predicates describes someone's psychological/mental state: they are perspective-sensitive (Tenny 2006; Lee 2016; Hoe et al. 2015; Kwon 2014; Nam 2018; Hoe 2020, a.o.): when used in a declarative sentence (see 11), their perspective is anchored to the speaker, therefore their subject should be the first person pronoun. When used in a question, their perspective is 'shifted' (Tenny 2006; McCready 2007, a.o.) to the addressee (see 12), given that the speaker requires the addressee to answer the question with stronger grounds.

(11) Nay-ka/*Ney-ka/*John-i   chwu-e.
     I-NOM /you-NOM /John-NOM   cold-DECL
     'I feel cold./*You feel cold./*John feels cold.'
(12) *Nay-ka/Ney-ka/*John-i   chwup-ni?
     I-NOM /you-NOM /John-NOM   cold-DECL
     '*Do I feel cold?/Do you feel cold?/*Does John feel cold?'

We claim that the main predicate *kuleh/kulay-* 'do so' also creates a perspective-sensitive environment. Even though the literal meaning of *kuleh/kulay-* is close to the anaphoric expression which refers to the previously used VP/AdjP, they can also be used as a positive answer to a polar question, or an answer expressing the speaker's agreement with the addressee's utterance, like *yes* or *OK* in English:

(13) Na-nun   cikum cip-ey   ka-n-ta.   / Kulay.
     I-NOM   now   home-LOC go-PRES-DECL / Do.so.
     'I am going home now.' / 'OK.'

If *kuleh-/kulay-* can be used to express the speaker's agreement, we may speculate that using this predicate also involves the speaker's perspective toward a previously mentioned proposition: it generates a perspective-sensitive environment. If this is the case, we may conclude that, because of this perspective-sensitive environment, the adverbial clauses under them constitute a subject-restriction environment. When the adverbial is headed by the declarative *kel*, the subject is restricted to the first person: the subject is restricted to the second person when it is headed by the interrogative *ci-*, due to the perspective shift from the first to the second person.

4.2 The role of the verbal ending in the main clause

Our next question is why this restriction seems weakened when the verbal ending of the main predicate is changed from *-e* to *-ta*, as in (14) and (15):

(14) Nay-ka/*John-i   Mary-eykey   mal-ul   ha-l
      I-NOM /John-NOM Mary-DAT   word-NOM   do-FUT.REL
      kel   kulay-ess-e.
      DECL.COMP   do.so-PAST-*e*

(15) Nay-ka/John-i   Mary-eykey   mal-ul   ha-l
      I-NOM /John-NOM Mary-DAT   word-NOM   do-FUT.REL
      kel   kulay-ess-ta.
      DECL.COMP   do.so-PAST-*ta*
      'It was desirable that I/John said that to Mary. (but I didn't)'

To account for this, we propose that *-ta* in the main clause is neutral with respect to the commitment, whereas *-e* in the main clause strengthens or emphasizes the relevant commitment to the asserted proposition under the scope of the verbal ending (or the prejacent). This kind of analysis is not unprecedented, if stated in different terms (Kim 2014 and Kuroda 1973, a.o.), and is further supported by examples like (16), where the subject restriction on the subjective psych-predicates is weakened depending on the verbal ending (Nam 2018; Hoe 2020, a.o.):

(16)   (?)Hoya-ka   chup/oelop-ta.   /   *Hoya-ka   chuw/oelow-e.
        Hoya-NOM   cold/lonely-DECL   Hoya-NOM   cold/lonely-e.
        'Hoya is cold/lonely.'

Here we recast these analyses in terms of the commitment, and propose that the verbal ending *-e* makes the commitment to the prejacent stronger. Because of this, when *kulay-/kuleh-* is used with *-e*, the perspective of the adverbial should be the same as the one who makes a stronger commitment to the prejacent: the speaker. The contrast in (16) also rests on one key analogy that the commitment on the prejacent is not strong enough to induce the perspective-sensitive environment. In this sense, our analysis retains much of what has been formerly gained, while providing a unified way to understand the role of *-e* in terms of commitment.

Given this, let us turn to the next puzzle:

(17) a. *Mary-eykey mal-ul   ha-Ø-*ci*   kulay-ess-**ta**.
        M.-DAT   word-NOM do-FUT.REL- Q.COMP do.so-PAST-*ta*
     b. Mary-eykey mal-ul   ha-Ø-*ci*   kulay-ess-**e**.

| Mary-DAT | word-NOM do-FUT.REL- Q.COMP do.so-PAST-*e* |

Since (17a) involves -*ta*, it is a canonical declarative clause. Thus, the prediction is that, unlike (17b), the person restriction on its adverbial clause is obviated, which is not borne out: it is just unacceptable. To explain this, we suggest that the choice of C in the adverbial clause should be affected by the one in the matrix clause via a syntactic dependency (18).

(18) a. √: matrix C [+Q]   →   adverbial subordinator [+Q]
       b. √: matrix C [-Q]   →   adverbial subordinator [-Q]
       c. √: matrix C [+Q]   →   adverbial subordinator [-Q]
       d. X: matrix C [-Q]   →   adverbial subordinator [+Q]

Based on the simple agreement relation triggered by syntactic dependency, (18a) and (18b) are straightforward. In contrast, (18c) and (18d) do not exhibit the feature agreement, but only (18d) is ruled out. Here, we would like to emphasize that this kind of asymmetry can be easily captured with a simple proviso that [+Q] is identified as a marked feature.

Given the concept of markedness, many studies show that a goal with an unmarked feature can establish a well-formed syntactic dependency with a target with a marked one, but not vice versa (Preminger 2014; Miyagawa 2017, a.o.). In this respect, the contrast between (17a) and (17b) can be explained if the feature specification of (17a) is confined to (18d) while that of (17b) is not. This can be verified:

(19) a. Hoya-ka   cip-ey   ka-ss-e?
           Hoya-NOM   house-DAT go-PAST-*e*
       b. *Hoya-ka   cip-ey   ka-ss-ta?
           Hoya- NOM house-DAT go-PAST-*ta*
       'Did Hoya go home?"

Both -*ta* and -*e* can be used in declaratives. However, as in (19a), -*e* can be freely used in an information-seeking polar question, showing that it is compatible with both [+Q] and [-Q] contexts. In contrast, (19b) cannot express the request to the hearer that the speaker wants to know whether the prejacent is true based on the hearer's commitment (although it can be used to express the speaker's mirativity, which is not usual). Thus, it is plausible to assume that the morpheme -*ta* cannot be realized when [+Q] feature is specified in the matrix C. Given this, we assume the following morphological rules (if not exhaustive) of the matrix C in Korean:

(20) a. MATRIXC$_{[-Q]}$ → /ta/, /e/

b. MATRIXC[+Q] → /e/, /ni/, /ka/

(18) and (20) can also explain why (14) and (15) are fine while (17a) is bad, as well as why (21) is acceptable, as partly discussed in Section 2.

(21) Mary-eykey mal-ul   ha-l   kel   kulay-ess-ni?
     Mary-DAT   word-NOM do-FUT.REL DECL.COMP do.so-PAST-Q
     'Should I have said that to Mary?'

Here, (18c) and (20b) can properly capture why (21) is fine.

Similarly, we can explain why (17b) can be acceptable. Unlike (17a), -e can satisfy (18a) and (20b). However, things are more complicated. Up to now, we have shown that (17b) is fine from the morphological perspective, but the main clause of (17b) does not have an interrogative meaning, regardless of the [+Q] in the matrix C. Furthermore, as shown in Section 2, the question ending -ni is not allowed in the main clause:

(22) *Mary-eykey mal-ul   ha-Ø-   -ci   kulay-ess-ni?
     Mary-DAT   word-NOM do-FUT.REL Q.COMP do.so-PAST-Q
     '*Should you have said that to Mary?'

In (22), although there's nothing wrong with using -ni in terms of syntactic dependency, it cannot be felicitously uttered as an information-seeking question. We suggest that this infelicity stems from the meaning of the question. Information-seeking questions are uttered when the hearer is expected to have a proper independent commitment to the prejacent, and the speaker *lacks* a proper commitment to it. In this regard, (22) is not canonical, since the prejacent of its adverbial clause is supposed to be anchored to the speaker's commitment, weakly based on the hearer's as follows: As discussed, if the choice of the subordinator in the adverbial clause restricts a commitment holder, it is natural to assume that its content is also anchored to the same commitment holder. When the speaker utters an interrogative sentence which consists of the adverbial clause and the main clause like (22), then, due to the nature of -ci, she is supposed to acknowledge or presuppose that the content in the adverbial clause would be true based on the hearer's commitment. This can be interpreted as saying that the speaker still makes a commitment to the adverbial clause (but not to the main clause); hence a weak commitment. As such, if a discourse includes such a weak commitment, especially based on the hearer, the canonical information seeking question cannot be formulated (cf. Gunlogson 2008, a.o.).

Now, we can understand why the interrogative clause like (22) is not compatible with the -ci adverbial. This leads us to conclude that (17b) also

lacks the canonical interrogative force, despite the [+Q] feature in the matrix C. To solve this, we point out that the sentence with *-ni* could also be felicitouly used without rising intonation, and tentatively assume that rising interrogatives should be distinguished from falling ones (Ciardelli et al. 2019, a.o.):

(23) a. *Mary-eykey mal-ul   ha-Ø-ci   kulay-ess-ni-↗
        Mary-DAT   word-NOM do-FUT.REL-Q.COMP do.so-PAST-Q-R.I.
        '*Should you have said that to Mary?'
     b. Mary-eykey mal-ul   ha-Ø-ci   kulay-ess-ni-↘
        Mary-DAT   word-NOM do-FUT.REL-Q.COMP do.so-PAST-Q-F.I.
        'You should have said that to Mary.'

Ciardelli et al. (2019) argue that the rising intonation (↗) and the falling intonation (↘) are independent grammatical objects (cf. Davis 2009). Therefore logically, the following four cases should all be considered:

(24) a. falling declaratives: declarative ending + ↘
     b. rising declaratives: declarative ending + ↗
     c. rising interrogatives: question ending + ↗
     d. falling interrogatives: question ending + ↘

(24a) and (24c) are canonical, and (24b) is widely discussed (Gunlogson 2008; Farkas and Bruce 2010; Northrup 2014; Malamud and Stephenson 2015; Farkas and Roelofsen 2017, a.o.). Only (24d) has had less attention in the literature. Here we propose that (23b) is a rare instance of (24d). Even though *-ni* is realized due to the [+Q] feature in the matrix C, the falling intonation turns it into a non-canonical question. In this light, if it can be supposed that (24d) is more similar to non-canonical questions/declaratives in terms of commitment (see Ciardelli et al. 2019), we can explain why (23b) does not pose the semantic conflict that (23a) does.

A similar analysis can be applied to (17b): even though the morpheme *-e* is realized due to the [+Q] feature in the matrix C; the proper syntactic dependency is thereby established, and falling intonation should be employed to induce the proper interpretation. If this is on the right track, we can also predict that when the prejacent of the adverbial clause lacks the weak commitment based on the hearer, the sentence functions as a rising interrogative. This prediction is borne out as shown in (21). When *-kel* is employed, the question can be uttered felicitously with the rising intonation.

4.3 Counterfactual semantics and the tense restriction

Finally, we need to explain the counterfactual-like semantics of constructions like (1) and (2). To do so, first let us see the meaning of the adverbials and their role in discourse. As shown above, constructions like (1) and (2) are acceptable only when the tense of the embedded adverbial is future. In Korean, the future (non-past) can be used to express a speaker's intention. Given that a speaker usually expresses her intention when she has a future plan, we propose that the commitment in *kel* and *-ci* adverbials does not update the cg of the discourse participants directly, but instead it updates the so-called to-do list of the discourse participants (see Portner 2007; Northrup 2014, a.o.), which specifies what action each participant in a discourse will, or should, take.

   Second, let us consider the main predicate. Above we pointed out that *kuleh-/kulay* can express the speaker's agreement. However, we should also note that *kuleh-/kulay* is an anaphoric expression. If so, what does it refer to in (1) and (2)? To derive the counterfactual meaning, we adapt Arregui's (2007) proposal, which is based on the following contrast:

   (25) Suppose you are about to go on holiday and ask me to look after your plants. I accept, but I am rather nervous.
   You: Could you look after my plants next week, while I am gone?
   Me: Of course. But I am rather nervous. If your plants died next week, I would be very upset.   (Revised from Arregui 2007, (2))

   (26) Suppose your plants die before you leave on holiday, and you cancel your request. I feel sorry, but also relieved.
   You: Don't worry about my plants. They died yesterday.
   Me: I am sorry, but also a bit relieved. If your plants had died/*died next week, I would have been/*would be very upset.
   (Revised from Arregui 2007, (3, 4))

As in (25), the simple would-conditional can be used to explain the future supposition about the dying of the plants. But, if it is supposed that the plants have already died, the same meaning will only be allowed if the perfect/past forms are used. To explain this, Arregui (2007) assumes that even for the future supposition, the status of the actual world ($w_@$) is important. That is, in (25), the plants are alive, and it is possible to assume that they will die in the future. But in (26), the plants are already dead, thus it is not possible to assume that they will die in the future; the dying event/situation cannot be repeated in $w_@$.

Given this, Arregui argues that the perfect/past tense in (26) indicates that the dying situation in the antecedent is not supposed to occur in $w_@$ (counterfactual), and the conditional in (25) should be regarded as a simple (non-counterfactual) "predictive conditional": the dying situation in the antecedent is supposed to occur in $w_@$. Adopting this, we propose that *kuleh-/kulay* refers to the situation previously updated into the cg by being publicly presented, and this situation should be in a specific temporal interval and specific location in $w_@$ (cf. Lewis 1986).

Now we are ready to explain how the to-do list update of the *kel* and *-ci* adverbials and the anaphoric nature of *kuleh-/kulay* are used to derive the counterfactual meaning in (1) and (2). Above we proposed that *kuleh-/kulay* refer to a situation (s_1) in a specific spatio-temporal region in $w_@$ (or the situation of the main predicate). Since s_1 has already occurred in a specific spatio-temporal region, it cannot be repeated in $w_@$. Furthermore, s_1 is referred to by *kuleh-/kulay* and updated into the cg, meaning that participants in the conversation accept that s_1 has already occurred at some spatio-temporal region in $w_@$. At the same time, the *kel* and *-ci* adverbials update the to-do list of the conversation, which concerns the future plans of the participants. This means that the situation denoted by the adverbial (s_2, or the situation of adverbial clauses) should occur after the time of utterance: while s_1 refers to a situation which is updated as part of $w_@$ in the conversation, s_2 is a situation which is related to the to-do list and therefore has not happened yet in $w_@$. Intuitively, s_1 and s_2 seem to refer to the same situation, as we saw in the interpretation of counterfactuals, but the problem is that, since s_1 has already been established—or has already occurred—in a specific spatio-temporal location, s_1 and s_2 cannot actually refer to the same situation. Therefore, the only way to reconcile the conflict between the intuition and the difference in reference is to introduce the counterfactual interpretation that unlike s_1, s_2 occurs in a possible world which is most similar to the actual world except that s_2 is repeated.

Now let us turn to tense morphemes. First, for the future tense in the adverbial, we argue that it is used to express the intended volitional meaning, given that the volitional/bouletic/deontic situation should be regarded as a future plan (Condoravdi 2002; Landau 2015, a.o.). Because of this, it can update the to-do list, which is crucial in our accounts.

Furthermore, we conclude that our target sentences are a kind of conditional, and the counterfactual interpretation is forced. In this sense, we can explain why the past morpheme should be used in the main clauses in our target sentences; the past form is required to induce the counterfactual interpretation in conditionals, as discussed in Arregui (2007). Moreover, it is widely discussed that the past/perfect morphemes in conditionals are not always interpreted as deictic tense (Ippolito 2013; Ogihara 2014; Park et al.

2018, a.o.), and when the past/perfect form is not employed in the consequent in Korean, the counterfactual interpretation cannot be produced (Park et al. 2018; see also Ogihara 2014 for Japanese):

> (27) Given the scenario in (26),
> You: Don't worry about looking after my plants. They died yesterday.
> Me: *Ney   hwacho-ka taumcwu-ey   cwuk-ess-umyen/cwuk-umyen,
>   your plant-NOM next week-DAT die-PAST-if/die-if
>   nay-ka   maywu konlanha-l   kes-iy-a.
>   I-NOM   very   nervous-Adn kes-COP-e
>   (int.) '*If your plant had died next week, I would have been very
>   nervous.'   (Park et al. 2018, (7), (8))

Given this, we can conclude that the past tense in the main clause of our target sentences is not a deictic past tense, but is used as a marker for counterfactual conditionals. This explains the obligatory use of the past-tense marker in constructions like (1) and (2).

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