

Two Types of Unselected Embedded Questions

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1. Introduction

Embedded questions (EQs) typically appear with predicates which semantically select them. In Japanese and Korean, however, there are cases in which questions are subordinated without such selectors. The following Korean sentences exemplify these unselected EQs.

- (1) [Pi-ka w-ass-nun-ci] matang-i ceceiss-ta.
rain-Nom come-Past-Ind-Q ground-Nom wet-Decl
'(Lit.) [Whether it rained] the ground is wet,' or 'the ground is wet and I wonder whether it rained.'
- (2) [Pi-ka w-ass-nun-ci] Paul-un pakk-ul naytapo-ass-ta.
rain-Nom come-Past-Ind-Q Paul-Top outside-Acc look-Past-Decl
'(Lit.) [Whether it rained] Paul looked outside,' or 'Paul looked outside to see if it rained.'

While the two sentences appear to be very similar, they call for independent analyses, as their meanings are rather different. Let us examine (1) first. The semantic effects of this sentence are summarized as follows.

- (3) a. The speaker asserts that the ground is wet.
b. The speaker is not certain whether it rained.
c. The speaker believes that if it had rained, it would constitute a good reason for why the ground is wet.

On the other hand, the EQ in (2) describes what the matrix subject was thinking when the main event happened. More concretely, Paul's wish to know the answer to the EQ caused him to look outside, as the second paraphrase in (2) indicates. While the two type of unselected EQs share the involvement of 'cause', they differ in the perspective to which the question is relevant; the speaker's perspective in (1), and the agent's in (2). The semantic relations between the questions and the matrix clauses are also subtly different. In the first case, the presumed answer may be the cause of the main clause event. The second case, on the other hand, states the causal link between the main clause event and the agent's desire to know the answer to the question. We believe that these differences justify our strategy to treat them as different constructions.¹

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¹ It should be pointed out that the semantic/pragmatic contributions of these unselected EQs in Japanese and Korean make it clear that they cannot be analogized to the two known types of unselected interrogative sentences, shown below, which are superficially similar but have completely different meanings.

- (i) EQs as Concessive Conditionals (or Unconditionals) in English (cf. Gawron 2001; Rawlins 2006)
Whether Tom leaves or not / whether Tom leaves or stays / whatever Tom does, Jon won't stay past midnight.
- (ii) Question-Answer Clause in ASL (cf. Caponigro & Davidson 2011)

In this paper, we will call the former “speaker-oriented embedded questions (SOEQs)” and the latter “agent-oriented embedded questions (AOEQs).” The challenges that unselected EQs bring about are twofold. First, it must be demonstrated that an unselected EQ can be successfully integrated in the matrix clause without any overt predicate that semantically selects it. Second, one must find a way to derive the semantic/pragmatic contributions of those questions. The aim of this paper is to present analyses that meet these challenges. Our primary focus in this paper is on the second type, AOEQs, as we have analyzed SOEQs in full detail elsewhere (Kim & Tomioka 2013). In order to make the paper compact, we choose examples from either Japanese or Korean but not from both. The two languages behave alike in almost all relevant respects, and the choice of the language has no significance to the analysis.

2. Speaker-oriented embedded questions (SOEQs)

In Kim & Tomioka (2013), we argue that SOEQs are interpreted at the Conventional Implicature (CI) tier of the multi-dimensional system of Potts (2005). SOEQs have all the characteristics of CIs that Potts lists.

- (4) a. SpEQs are speaker-oriented
- b. They are not deniable
- c. They are lexically triggered by a comma intonation, like supplement clauses in Potts (2005).
- d. They are anti-backgrounded

As argued in Potts (2005), a comma intonation involves a feature, *COMMA*, which functions as a meaning-tier changer; it takes at-issue content and turns it into a Conventional Implicature. (5) gives the structure of a sentence with an SOEQ, where the question is adjoined to the main clause. At the at-issue level, *COMMA* plus SOEQs is no more than an identity function; at the not-at-issue level, it ships off the question meaning to the CI tier, as described in (6b).

(5) [S [_{commaP} *COMMA* [whether it rained]] [the ground is wet]]

(6) (*COMMA*([whether it rained]))

- a. $\rightsquigarrow \lambda f.f$ (at-issue)
- b. $\rightsquigarrow \lambda p.p=\text{rain} \vee p=\neg\text{rain}$. (not-at-issue)

Kim and Tomioka’s analysis expands the domain of CIs to include question meanings as well. One of its direct consequences is the speaker’s ignorance in (1), as one asks a question only when he does not know the answer to the question. In Potts (2005), a CI proposition, as a non-backgrounded proposition, leads to the updating of the context set, and in this sense, it is no different from the effect of the assertion of an at-issue proposition. However, the update process is “deemphasized,” according to Potts. Drawing parallels between a proposition and a question, Kim and Tomioka claim that the discourse function of an SOEQ is the same as a typical root question, but its effect is “deemphasized.”² The intuition is that an SOEQ poses a question that is not urgent—not a kind of question that the speaker demands the addressee to answer it. The lack of urgency and the secondary status of an SOEQ is empirically observable with possible continuations.

- (7) A: [Pi-ka w-ass-nun-ci] matang-i cec-ess-ta.
rain-Nom come-Past-Ind-Q ground-Nom wet-Decl
‘[Whether it was raining] the ground is wet.’

² Although an SOEQ’s function is practically the same as a root question, it is clearly an embedded question in syntax. First, the choice of the Q-morpheme shows the embedded status. In Japanese, only *ka* is allowed for SOEQs, which is the typical attribute of an embedded question. In Korean, the Q-morpheme *-ci* must co-occur with *-(n)un* in an SOEQ, but this combination is unacceptable in a root question. In addition, politeness marking is not allowed in SOEQs in either language, which is taken to be a good indication that they are not root clauses.

- B: (a) Oh, No! My new shoes will be ruined! (The speaker may or may not know whether it rained.)
 (b) Yes, it did rain. (The speaker implicitly accepts the assertion that the ground is wet.)

The speaker can comment on the assertion part of the sentence without making effort to answer the EQ. Or she can choose to answer the EQ, but in such a case, it is assumed that she has no objections to the asserted portion of the sentence. This contrast suggests that the assertion is the primary discourse function of the sentence, and that being “deemphasized” is a fitting characterization of an SOEQ.

To capture these deemphasized effects of SOEQs, Kim & Tomioka (2013) suggest that the discourse functions of SOEQs are similar to those of “self-addressing” questions. In Hara & Davis (to appear), a self-addressing question is claimed to perform inquisitive update (Groenendijk 1999; Isaacs & Rawlins 2008) of the speaker’s beliefs. In the traditional Stalnakerian model of discourse, a question does not directly change the context set. Some frameworks posit a set of questions (e.g., Questions-under-Discussion of Roberts 1996), along with the context set, that can be updated with a questioning act. The system of inquisitive updates makes it possible that a question also updates the context set, which is a set of equivalent classes of possible worlds.

(8) **Inquisitive update (\odot) on contexts** (Isaacs & Rawlins, 2008:(5))

For any context c and clause ϕ : $c \odot \phi =_{\text{def}} \{ \langle w_1, w_2 \rangle \in | \llbracket \phi \rrbracket^{w_1, c} = \llbracket \phi \rrbracket^{w_2, c} \}$

Typically, a question updates (or proposes to update) the context set, the set of possible worlds in which all propositions in the common ground are true. With a self-addressing question, on the other hand, the speaker is updating her belief worlds, according to Hara and Davis. An SOEQ is also a self-addressed question, but it is obviously a part of an utterance that is addressed to someone distinct from the speaker. Thus, what is updated by an SOEQ is the speaker’s ‘public’ beliefs or *commitment set*, the notion advocated by Gunlogson (2003). By presenting a self-addressing question, the speaker invites but does not demand the addressee to discuss the issue. This is the source of the weak/indirect discourse effects of SOEQs.

The remaining task is to derive the last effect of an SOEQ: the speaker’s speculation that a correct answer to the EQ is the cause of the event described by the main clause. The strategy employed in Kim & Tomioka (2013) to connect it to the similar effect found with the English expression *I wonder Q*.

- (9) The ground is wet, and I wonder whether it rained.

The relevant notion here is the rhetorical relation *Explanation* of Lascarides & Asher (1993).

- (10) *Explanation*(α , β): The event described in β explains why α ’s event happened (perhaps by causing it); e.g.,
 a. “John arrived late for work.”
 b. “He had totalled the car.” (Lascarides & Asher, 1993:p.440, 459)

(10b) is understood to be the explanation for (10a) without any explicit connectives like such as *because*. SOEQs, as well as the English *I wonder Q*, are used as ‘explanation seeking questions’, which have exactly the kind of meaning that we are after: the speaker hypothesizes that an answer to the question would explain for what has happened.

The analysis of SOEQs as embedded root questions that belong to the CI tier can account for the basic semantic/pragmatic effects as described above. In addition, it explains a variety of other effects and constraints that are connected to this construction. First, as an explanation seeking question, an SOEQ is expected to show the speaker’s bias towards a particular answer. For instance, if it is a polar question of the form $p?$, then, the speaker is biased towards p , rather than *not p*. This prediction is borne out. A polar SOEQ cannot take the unbiased form, p or *not?*.

- (11) * [Pi-ka w-ass-nun-ci ani-i-n-ci] matang-i ceceiss-ta.
 rain-Nom come-Past-Ind-Q not-Cop-Ind-Q ground-Nom wet-Decl
 ‘[Whether it rained or not] the ground is wet.’

One can also see the presence of the speaker’s bias morphologically in Japanese. In Japanese, a polar SOEQ must be in the nominalized form *no-ka*, which is used for a biased question. Second, main clauses that host SOEQs cannot be non-assertion sentences (i.e., imperatives, interrogatives, promissives) or have epistemic modals. Such sentences are incompatible with SOEQs because explanation seeking questions with those sentences would lead to the nonsensical presumption that the speaker made a judgment or engaged in a speech act without knowing why she did so. Consider a sentence with an epistemic modal, for instance.

- (12) # [Dareka byooki-ni natta-no-ka], Mako-wa ashita syukkin-suru-ni tigail-nai
 [someone illness-Dat became-NML-Q], Mako-Top tomorrow work-do-Dat wrong-Neg
 ‘[Whether someone has fallen ill], it must_{epistemic} be that Mako will go to work tomorrow.’

The speaker of this sentence made an epistemic judgment based on her knowledge, but at the same time, she is seeking an explanation for the judgment. Clearly this is an irrational act.

In summary, by analyzing SOEQs as root questions in the CI tier, we can account for all the semantic and pragmatic effects without appealing to any theoretical inventions that are not independently motivated.

3. Semantics for agent-oriented embedded questions (AOEQs)

3.1. AOEQs and Agentivity

Let us now turn to the second type of unselected questions, which we call agent-oriented embedded questions (AOEQs). First, it is necessary to justify this naming by showing that the relevant notion in this type of EQ is agentivity. The example we began with has the agentive subject, who wishes to know the answer to the EQ. Therefore, this type of EQ could be described as “subject-oriented.” However, this description is not accurate as can be seen the following Japanese sentences.

- (13) a. [Matigai-ga nai-ka] sono-syorui-wa nan-nin-mo-no kensain-niyotte
 [error-Nom Neg-Q] that-document-Top how.many-CL-even-Gen examiner-by
 yom-are-ta.
 read-Pass-Past
 ‘Whether it contains any errors, that document was read by many examiners.’
- b. [Kyookenbyoo-ni kakate-i-nai-ka] uti-no inu-wa kensa-o uke-ta.
 [rabies-Dat contract-Prog-Neg-Q] house-Gen dog-Top examination-Acc receive-Past
 ‘Whether she carries rabies, our dog went through the exam.’

In the passive example (13a), the question was relevant from the perspectives of those who read the document, which suggests that agentivity is the key, rather than the subjecthood. The second example is less clear. It could be the one who administer the exam, or the speaker, who is the owner of the dog, who may be considered the receiver of the exam via the dog she owns. It is nonetheless clear that the grammatical subject is not always the one who wants to know the answer to the EQ.

The general agent-orientation and some degree of indeterminacy (as in (13b)) reminds us of purpose clauses (cf. Bach 1982). The determination of the referent of PRO in a purpose clause is arguably agent-oriented, but there are some cases where the controllers are not obviously agentive. For instance, when the EQs are replaced with purpose clauses in the Japanese examples above, the referents of PRO subjects are the same as those who want to know the answer of the EQs.

- (14) a. [Matigai-ga nai-koto-o kakunin-suru-tame-ni], sono-syorui-wa
 [error-Nom Neg-fact-Acc make.sure-purpose-Dat], that-document-Top
 nan-nin-mo-no kensain-niyotte yom-are-ta.
 how.many-CL-even-Gen examiner-by read-Pass-Past
 ‘In order to make sure that it contains no errors, that document was read by many examiners.’
- b. [Kyookenbyoo de-nai-koto-o shoumei-suru-tame-ni], uti-no inu-wa
 [rabies Cop-Neg-fact-Acc proof-do-sake-Dat], house-Gen dog-Top
 kensa-o uke-ta.
 examination-Acc receive-Past
 ‘In order to prove that she does not carry rabies, our dog went through the exam.’

While we cannot offer a more definitive way to determine what entity becomes the ‘inquirer’ of the EQ, whatever system is responsible for the control phenomenon in purpose clauses seems to be operative in AOEQs. We will maintain the use of “agent-oriented” with the acknowledgement that the notion of agentivity for this construction is sometimes vague.

Another concern related to the agentivity is the restriction on the predicates that appear in the matrix clauses. Typically, they are agentive predicates of particular kinds; seek, look for, check, investigate, or try are among the most commonly found verbs that appear with AOEQs. This restriction naturally leads to the skepticism against the unselected status of AOEQs. One may feel that AOEQs are actually arguments or quasi-arguments of those verbs, as some of them (e.g., check, investigate) can take interrogative clauses as arguments. While we admit that some AOEQs that may be regarded as (quasi)arguments, there are clear cases of unselected AOEQs. The passive sentence (13a), for instance, has the verb ‘read many times’, which cannot be considered as a question-taking predicate. The complex verb ‘walk-around’ can also be used with an AOEQ, and it is hard to imagine that this verb selects a question as its argument.

- (15) Ken-wa [okane-ga otite-inai-ka] mati-zyuu-o aruki-mawa-tta.
 Ken-Top [money-Nom fall-Neg-Q] town-all-Acc walk-go.around-Past
 ‘Ken walked all over the town, [whether there was any money on the ground]’

We therefore believe that our assumption that AOEQs are unselected is justified.

3.2. *At-issueness*

One of the major differences between SOEQs and AOEQs are their statuses in the multi-dimensional meaning system. We will enlist three pieces of evidence that show that AOEQs are at-issue and contribute to the truth condition of their main clauses.

First, a sentence with an AOEQ is false when the question incorrectly describes the agent’s intention or purpose for the main event. For instance in (16), speaker B responds with *ani* ‘no’ since *Paul* wished to know ‘who is coming’, not ‘whether it rained’ as speaker A stated.

- (16) A: Paul-i [pi-ka w-ass-nun-ci] pakk-ul naytapo-te-ta.
 Paul-Nom rain-Nom come-Past-Ind-Q outside-Acc look-Past-Decl
 ‘(Lit.) Paul [whether it rained] looked outside,’ or ‘Paul looked outside to see whether it rained.’
- B: Ani, Paul-un [nwu-ka o-nun-ci] po-lyeko-ha-yss-e.
 No, Paul-Top who-Nom come-Ind-Q see-Purpose-do-Past-Decl
 ‘No, Paul intended to see who’s coming (when he looked outside).’

Second, constituents within AOEQs can be questioned. Forming a wh-question with a constituent within a non-at-issue expression is prohibited.

- (17) * Who wants to go out with Donna, the only daughter of which Mafia family?

In applying the wh-question test, we encounter one complication. Since an AOEQ itself is a question, putting a wh-phrase with matrix scope would create a wh-island configuration. However, the issue of wh-islands in Japanese and Korean is controversial. Some assume the presence of this type of island (e.g., Nishigauchi 1990; Watanabe 1992; Shimoyama 2006) while others find a way to circumvent it by assigning appropriate prosody/intonation (e.g., Deguchi & Kitagawa 2002; Ishihara 2003; Hirotani 2004). With this controversy in mind, consider the following example.

- (18) (?) Sono-inu-wa [dono-byooki-ni kakatte-i-nai-ka] kensa-o uke-ta-no?
 That-dog-Top [which-disease-Dat contract-Prog-Neg-Q] examination-Acc receive-Past-Q
 ‘Which disease is such that that dog received the examination, whether it carries that disease?’

While this sentence is slightly degraded for many, it is comparable to other cases of wh-islands. In other words, the effect cannot be attributed to the illegitimacy of making a wh-question out of a not-at-issue expression. In this sense, an AOEQ behaves on a par with other at-issue expressions.

Finally, a sentence with an AOEQ can be in an *if*-clause, and the meaning of the EQ is a part of the restriction of the conditional. For instance:

- (19) Mosi Mari-ga Yuki-no ronbun-o [tookee-no matigai-ga nai-ka] nandomo
 if Mari-Nom Yuki-Gen article-Acc [statistics-Gen error-Nom Neg-Q] many.times
 yomi-kaesita-ra, Yuki-wa okoru-daroo.
 read-return-cond, Yuki-Top get.angry-Evid
 ‘If Mari reads Yuki’s article over and over, (wondering) whether it contains any errors in the statistics, Yuki will be angry.’

If the AOEQ were outside of the at-issue meaning of the sentence, the sentence should mean that Yuki will be angry if Mari reads her article for whatever reason. However, this sentence can be followed by a statement like ‘But if Mari does it, (wondering) whether it contains any useful data for her own paper, Yuki will be pleased.’ Such a continuation would be contradictory if the meaning of the AOEQ were not-at-issue.

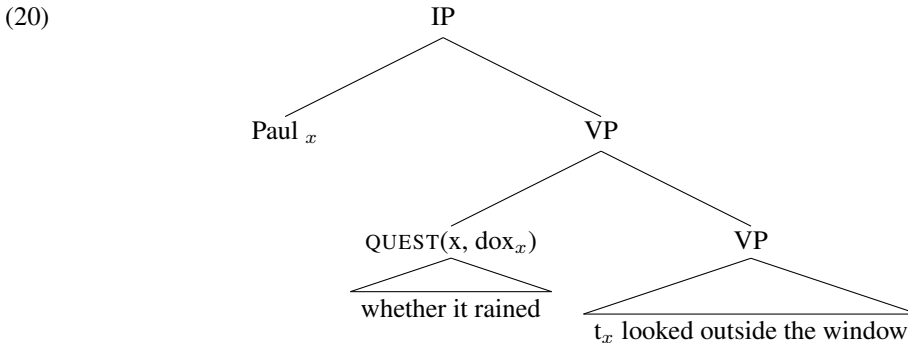
To summarize, we have compelling evidence to believe that, unlike SOEQs, AOEQs contribute to the at-issue meaning.

3.3. Analysis

In analyzing AOEQs, the most difficult challenge is to derive its meaning. There is a significant gap between what a sentence with an AOEQ means and the visible structure of the sentence, as there are no expressions that indicate the notion of ‘cause’ or ‘purpose’. Our first attempt is to refrain from introducing any arbitrary silent constants for those notions and to see if a somewhat underspecified structure can generate the meaning of an AOEQ.

First of all, we are not too concerned about the syntactic position of an AOEQ. We assume that it is an adjunct of some verbal projection, such as VP, Aspect P, or vP/Voice P. Considering the closeness between AOEQs and purpose clauses in terms of control choices, we believe that they occupy the same position, wherever it may be. On the other hand, the syntactic make-up of an AOEQ deserves more careful examination. An AOEQ should be as big as a CP, as standardly assumed for an embedded interrogative clause. At this level, a question denotes a set of propositions (as in Hamblin 1973 or Karttunen 1977) or a propositional concept (as in Groenendijk & Stokhof 1982). We argue, however, that an AOEQ is not a simple question denotation of this kind but corresponds to a constituent in which inquisitive update is performed. Let such a constituent be a Force P, Mood P, or Speech Act P. The label is of less importance than what happens there semantically.

We would like to suggest that an AOEQ leads to inquisitive update of the agent's belief worlds. The idea is quite simple: an AOEQ is a self-addressing question that the relevant agent had when he engaged in the action depicted in the main clause. The simplified syntax of an AOEQ-containing sentence is shown below.



QUEST is the inquisitive updating morpheme and has three arguments; the question it selects (i.e., *whether it rained*) and the agent who performs the update (x) and the domain of update (dox_x , x 's belief worlds). The end result is something very close to the following English sentence.

(21) Paul looked outside, wondering whether it rained.

In this sentence, the embedded question is most likely interpreted as the motivation for Paul's looking outside, just as is the case with our AOEQ sentence.

We believe that the current proposal has some commendable features. First, it is minimalist in the sense that it does not employ any additional elements that are not independently motivated. It also presents close parallelism between SOEQs and AOEQs. Despite the differences we mentioned above, they look strikingly similar, and according to our proposal, they are indeed not all that different. They both lead to inquisitive update, and that function is at the core of their existence. The relevant domains of the update are different, and the relevance to the main clause is the answer to the question in an SOEQ and the questioning act itself in an AOEQ.³ These differences lead to the divergence of their uses.

However, there is one serious problem of the analysis. The English gerundive, *wondering Q*, allows interpretations that AOEQs in Japanese and Korean do not.

- (22) a. Paul ate breakfast, wondering what he was going to do for the rest of the day.
 b. # [Namun halu-tongan mwe-l ha-l-ci] Paul-un achimpap-ul mek-ess-ta.
 remaining day-during what-Acc do-Fut-Q Paul-Top breakfast-Acc eat-Past-Decl
 [intended: Paul ate breakfast, wondering what he was going to do for the rest of the day]

The EQ in (22a) represents a question that the agent happened to have at the time of engaging the action of the main clause. Their relation is just being simultaneous or concurrent. Such a 'semantically light' relation is not good enough to license an AOEQ, as the infelicity of (22b) suggests. Leaving the relation between the matrix clause and the embedded clause unspecified have may be a good strategy for *wondering Q* in English, but it is too loose for our AOEQs cases.

³ The second difference has another empirical consequence. A polar SOEQ is biased, as only one of the two answers is likely to be a good explanation. An AOEQ is not explanation-seeking but is a question that the relevant agent wishes to know the answer of. Therefore, it can be but need not be biased. As expected, an AOEQ can be of the form of *p or not*.

- (i) Paul-i [pi-ka w-ass-nun-ci ani-i-n-ci] pakk-ul naytapo-te-ta.
 Paul-Nom rain-Nom come-Past-Ind-Q Neg-Cop-Ind-Q outside-Acc look-Past-Decl
 '(Lit.) Paul [whether it rained or not] looked outside'

Therefore, we may have to give up the ‘strongly underspecified’ analysis of AOEQs after all. It seems necessary to be more specific about the relation between an AOEQ and its matrix clause, but at this point, we only have some speculative ideas about the nature of this relation. One possibility is to use the rhetorical relation *Explanation*, as is the case with SOEQs in Kim & Tomioka (2013). With this option, the logical representation of (2) is (23).

(23) $R_{Explanation}(\text{Paul looked outside})(\text{QUEST}(\text{Paul})(\text{dox}_{Paul})(\text{whether it rained}))$

We admit that the use of *Explanation* may be a major diversion from the original intent of Lascarides & Asher (1993). First, it is used for a sentence-internal clausal relation. Second, our version says that the inquisitive updating of Paul’s belief about raining is the explanation of his action. The relation of this kind is novel. The attested cases are (i) an event/proposition explains another event/proposition, and (ii) an event/proposition explains some speech act (e.g., *What are you doing tonight? I have an extra ticket for the Lakers-Celtics game.*). Can a speech act or something like a speech act be an explanation for an event or an act? We do not have a definite answer but take encouragement from the fact that a performative(-like) sentence *I wonder Q* can be an argument of *because*, as in (24a) or function as an explanation for asking another question, as in (24b).

- (24) a. We should fly on coach class, not on first class, because I wonder what our procurement office would say.
 b. Are you really going to buy a sports car? I just wonder whether people will think you are having a mid-life crisis.

Specifying the relation to be *Explanation* is not ideal in all cases, however. AOEQs are compatible with non-declarative sentences, such as imperatives and interrogatives.

- (25) a. [Nwu-ka o-nun-ci] chang pakk-ul poa-la!
 who-Nom come-Ind-Q window outside-Acc look-Imper
 ‘Look outside of the window to see who comes!’
 b. [Nwu-ka o-nun-ci] chang pakk-ul po-koiss-e?
 who-Nom come-Ind-Q window outside-Acc look-Prog-Q
 ‘Are you looking outside of the window to see who comes?’

The problem here is that it is not easy to come up with reasonable paraphrases of those Korean sentences with the notion of *Explanation*. A better story may be told with our first hypothesis with the relation underspecified. The paraphrase, ‘Look outside of the window, with the question of ‘who comes’ in mind’, seems fairly reasonable.⁴

To sum up, we have analyzed AOEQs as embedded inquisitive update acts. This analysis captures the intuition that an AOEQ is the question that the relevant agent asks (and wishes to know the answer) when he performs the action described in the main clause. There remains some uncertainty concerning the degree of specificity of the relation between an AOEQ and its host clause, and the rhetorical relation *Explanation*, which SOEQs make crucial use of, may be called for.

4. Conclusion

In this paper, we present novel analyses of two types of unselected EQs in Japanese and Korean. Both types are analyzed as self-addressing questions, which lead to inquisitive update of personal beliefs;

⁴ Interestingly, the English *I wonder Q* does not sit comfortably in such sentences (but better in a interrogative than in an imperative). We are puzzled by this restriction.

- (i) # Look out the window, wondering who comes!
 (ii) Are you looking out the window, wondering who comes?

the speaker's beliefs in SOEQs and the agent's beliefs in AOEQs. Many of the semantic/pragmatic effects of those EQs follow from their root-like discourse effects (i.e., inquisitive updating). However, the paper leaves some issues unresolved. The most urgent one is to elaborate the involvement of the rhetorical relation *Explanation*. Why should this relation, but not others, be necessary in unselected EQs? We feel that the problem is even more acute with AOEQs, as we took the liberty to use the notion in the way that was perhaps not anticipated by Lascarides & Asher (1993). We hope to offer a more definitive account for it in future research.

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