Clause types, intonation and stranded embedded clauses[1]

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In this paper, I examine the properties of a construction in Korean speech that has not received much attention in the literature. I refer to the construction in question as the 'stranded embedded clause' (SEC). SECs are a special type of echoed utterance, where an utterance in the form of an embedded clause is repeated for various reasons. The characteristic properties of the SEC involve the fact that there can be a mismatch between the type of the clause indicated by the clause type marker that they contain and the actual illocutionary force of the utterance that is indicated by its prosody. The complementizer is also obligatory, despite the fact that no matrix clause element shows up—hence, the name stranded embedded clause. I propose a deletion-based analysis of SECs, where they start out as a full-fledged embedded clause in a complex sentence and undergo movement, followed by deletion of the rest of the clause. It should be noted that this is essentially how fragment answers (and some other ellipsis constructions) have been analysed in the literature. Indeed, I show that there is a parallelism between SECs and fragment answers, which I argue provides support for the deletion-based approach to the former.

KEYWORDS: Clause type, Complementizer, Deletion, Embedded clause, Echo question, Fragment answer, Intonation

1. INTRODUCTION

In this paper, I examine the properties of a construction in Korean speech that has not received much attention in the literature. For ease of exposition, I refer to the construction in question as the 'stranded embedded clause' (SEC). On the surface, SECs are utterances that have the form of an embedded clause without any matrix clause elements. An example of the SEC is given in Example (1).

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[1] I would like to express my gratitude to the participants of the Non-canonical Questions at the Syntax-Prosody Interface workshop, held in November 2020, for helpful comments and discussion. I am also deeply grateful to Agnès Celle, Maud Pélissier and three anonymous reviewers for the Journal of Linguistics for their invaluable feedback at various stages of preparing this paper. In this paper, the Leipzig Glossing Rules are supplemented by the following abbreviations: HON = honorific, INT = interrogative, MOD = modal, POL = politeness marker.

(1) Toto-ka   chayk-ul   ilk-ess-ta-ko
    Toto-NOM book-ACC read-PST-DECL-COMP
    'Toto read a book'[2]

As can be seen in Example (1), an SEC looks like an embedded clause in that the complementizer -KO attaches to the verb. However, it should be noted that no matrix clause material shows up in SECs. Compare Examples (1) and (2) in this regard.

(2) Momo-nun na-eykey [Toto-ka   chayk-ul   ilk-ess-ta-ko]
    Momo-TOP I-DAT   Toto-NOM book-ACC read-PST-DECL-COMP
    malha-ess-ta.
    say-PST-DECL
    'Momo said to me that Toto read a book.'

   The central properties of SECs that I am concerned with in this paper are as follows: first, there can be a mismatch between the syntactic clause type and the actual illocutionary force of the utterance, a phenomenon that was originally noted by Hong (2018) based on a different construction. For instance, Example (1) can be interpreted as a question, despite the presence of the declarative clause type marker -TA. Similarly, the SEC in Example (3) contains the interrogative clause type marker -NYA, even though the utterance can be used to make a statement rather than to ask a question. Of course, Examples (1) and (3) can also be uttered to make a statement and to ask a question, respectively, in which case, their clause type and illocutionary force match well with each other.

(3) Toto-ka   chayk-ul   ilk-ess-nya-ko
    Toto-NOM book-ACC read-PST-INT-COMP
    'Toto read a book'

Second, crucially, the kind of mismatch noted above is resolved by means of intonation, that is, the actual illocutionary force of these utterances is indicated by their prosody. The question that arises is why the overt clause type markers are somehow ignored in determining the actual interpretation of the utterance. It is also significant that the type of prosody that signals the illocutionary force of an utterance normally does not apply to embedded clauses, as discussed in more detail below. So, the question is how SECs can bear such prosody while they look like embedded clauses. Furthermore, a fundamental question that arises is why the complementizer is obligatory in SECs, as if they are embedded clauses, while there are no matrix clause elements.

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[2] The precise interpretation of Example (1) is actually more complex than is represented here. The same applies to Example (3). I will discuss interpretative properties of SECs in more detail below. It should also be mentioned here that punctuation marks are omitted from Examples (1) and (3) (and other similar cases below) because the precise illocutionary force of an SEC can vary depending on how it is uttered, as discussed in more detail below.

Given these questions, the gist of my proposal is that SECs are derived in a way that is similar to how fragment answers are derived. Especially, adopting the move-and-delete analysis of fragment answers (see, e.g. Merchant 2004; Park 2005; An 2016), I propose that SECs start out as a full-fledged embedded clause in a complex sentence and undergo movement, followed by deletion of the rest of the clause. I also discuss how the mismatch between clause types and illocutionary force can be captured and how the prosodic properties of SECs can be accounted for. The discussion on the interaction between clause types, illocutionary force, and sentence prosody can be seen as an extension of Hong's (2018) analysis, where similar mismatches are investigated.

The discussion below is organised as follows: Section 2 briefly introduces some basic properties of Korean speech that are relevant to the discussion to follow; Section 3 introduces some basic properties of SECs; Section 4 illustrates the role that intonation plays in determining the interpretation of SECs; Section 5 takes a closer look at the distribution and interpretation of SECs; Section 6 argues that SECs involve genuine embedded clauses; Section 7 proposes a syntactic analysis of SECs; Section 8 discusses how the special prosody of SECs is to be implemented; Section 9 discusses the parallelism between SECs and fragment answers and Section 10 summarises the discussion.

2. Background

Before going into details of SECs, let me briefly discuss a few basic properties of Korean speech. Although these properties are well known, it is worth mentioning them here, as they are directly relevant to the discussion to follow.

First, Korean is an SOV language. Therefore, normally, verbs (or, more generally, predicates) occupy sentence-final position.

(4) (a) Toto-ka pap-ul mek-ess-ta.
Toto-NOM meal-ACC eat-PST-DECL
'Toto had a meal.'

(b) Toto-nun [Mimi-ka pap-ul mek-ass-ta-ko]
Toto-TOP Mimi-NOM meal-ACC eat-PST-DECL-COMP
malha-ess-ta.
say-PST-DECL
'Toto said that Mimi had a meal.'

Second, Korean is an agglutinating language. Various morphemes with clearly discernible functions attach to roots and stems. The standard assumption is that the morphological structure of a predicate reflects aspects of the clause structure.

(5) (a) Sensayngnim-i tochakha-si-ess-keyss-ta.
teacher-NOM arrive-HON-PST-MOD-DECL
'The teacher may have arrived.'

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(b)

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                                        CP
                                       /  \
                                 ModalP    C
                                 /    \    -ta³
                               TP     Modal
                              /  \    -keyss
                          AgrP    T
                         /   \   -ess
                       VP    Agr
                      /  \   -si
                         V
                     tochakha              (irrelevant details are ignored)
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Third, Korean has overt clause type markers that attach to predicates, as shown in Example (6).[4] These clause type markers can also attach to predicates of embedded clauses, as in Example (7).

(6) (a) Toto-ka   chayk-ul   ilk-ess-TA.
          Toto-NOM   book-ACC   read-PST-DECL
          'Toto read a book.'
     (b) Toto-ka   chayk-ul   ilk-ess-NI?
          Toto-NOM   book-ACC   read-PST-INT
          'Did Toto read a book?'
     (c) Chayk   ilk-ELA.
          book   read-IMP
          'Read a book.'

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[3] In placing the clause type marker -TA under C in Example (5b), I am simplifying the structure for ease of exposition, ignoring certain details that do not affect the discussion, for example, there is the obvious question where the complementizer -KO should be located in cases like Example (7). In the recent literature, in particular, given the cartographic approach (e.g. Rizzi 1997; Cinque 1999), the traditional CP domain has been expanded into a series of functional categories. Thus, recently, clause type markers are often assumed to be located in ForceP or MoodP. Similarly, labels like 'Sub' or 'Report' have been proposed for subordinators like -KO (see Bhatt & Yoon 1992; Haegeman 2012 for 'Sub' and Lahiri 1991; Saito 2012, 2015 for 'Report'. See also Pak 2008 and references therein for relevant discussion). It should be noted, however, that I am not concerned with the details of the expanded CP domain here. That is because determining the precise category label for -KO (or the clause type markers, for that matter) does not affect the current analysis. Rather, what matters is the fact that their presence entails a full-blown clause structure in SECs, which is one of the main proposals of the current paper.

[4] Some researchers postulate additional clause types in Korean, such as exhortatives, promissives and so on, which also employ unique clause type markers (see, e.g. Sohn 1999; Pak 2008; Zanuttini, Pak & Portner 2012). As they do not play an important role in the discussion below, I will ignore them here.

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(7) (a) Jojo-nun [Toto-ka   chayk-ul ilk-ess-TA-ko]
           Jojo-TOP Toto-NOM   book-ACC read-PST-DECL-COMP
           malha-ess-ta.
           say-PST-DECL
           'Jojo said that Toto read a book.'
     (b) Jojo-nun [Toto-ka   chayk-ul ilk-ess-NYA-ko]
           Jojo-TOP Toto-NOM   book-ACC read-PST-INT-COMP
           mwul-ess-ta.
           ask-PST-DECL
           'Jojo asked whether Toto read a book.'
     (c) Jojo-nun Toto-eykey [chayk-ul ilk-ULA-ko]
           Jojo-TOP Toto-DAT   book-ACC read-IMP-COMP
           malha-ess-ta.
           say-PST-DECL
           'Jojo told Toto to read a book.'

3. STRANDED EMBEDDED CLAUSES

Let us turn to the basic properties of SECs. Some examples of the SEC are given in Example (8). Note that the examples in Example (8) are identical to the embedded clauses in Example (7). Especially, it is important to note that the verbs in Example (8) carry the complementizer -KO.

(8) (a) Toto-ka   chayk-ul ilk-ess-ta-ko
           Toto-NOM   book-ACC read-PST-DECL-COMP
           'Toto read a book'
     (b) Toto-ka   chayk-ul ilk-ess-nya-ko
           Toto-NOM   book-ACC read-PST-INT-COMP
           'Toto read a book'
     (c) Chayk-ul ilk-ula-ko
           book-ACC read-IMP-COMP
           'Read a book'

While the SECs in Example (8) involve all the usual elements of an embedded clause, such as the embedded subject, embedded object and so on, it is also possible for SECs to be much smaller on the surface, as in Example (9). In fact, this is rather common.

(9) Ilk-ess-ta-ko
     read-PST-DECL-COMP
     '(X) read (Y)'[5]

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[5] The precise identity of X and Y depends on context.

Note that several functional morphemes are attached to the verb stem in Example (9), indicating that we are dealing with a larger structure, not just a single verb. Furthermore, the complementizer -KO shows up here as well. Thus, the obligatory occurrence of the complementizer is one of the characteristic properties of SECs.

Next, the important question is where SECs are used. Regarding their distribution, SECs are most common when an utterance is repeated. In general, there can be various reasons why an utterance is repeated, for example, speakers may literally be asked to repeat their utterance, as it was not properly received, they may repeat their utterance to confirm its content and so on. This is illustrated in Example (10).[6] Here, the utterances with subscript numbers are instances of SEC.

(10)　A:　Toto　wa-ss-ta.
　　　　　　Toto　arrive-PST-DECL
　　　　　　'Toto arrived.'
　　　B:　(No response.)
　　　A_1:　Toto　wa-ss-ta-ko.
　　　　　　　Toto　arrive-PST-DECL-COMP
　　　　　　　'(I said) that Toto arrived.'
　　　B_2:　Toto　　wa-ss-ta-ko?
　　　　　　　Toto　　arrive-PST-DECL-COMP
　　　　　　　'(You said) that Toto arrived?'
　　　A_3:　Kulay,　Toto　wa-ss-ta-ko.
　　　　　　　yes　　　Toto　arrive-PST-DECL-COMP
　　　　　　　'Yes, (I said) that Toto arrived.'

In Example ($10A_1$), the speaker repeats what he/she said earlier because speaker B did not show any response to it – perhaps speaker B did not hear it. In Example ($10B_2$), the speaker tries to confirm what he/she heard because it was not received clearly or because it was something unexpected. In Example ($10A_3$), the speaker confirms the message again by repeating it.

Note here that Example ($10B_2$) is effectively an echo question. Although the phenomenon of SEC itself has not received much attention in the literature, this particular use of SECs has been observed and discussed from the perspective of echo questions in Korean (Noh 1995, 1998; Lee 2010). Of course, not all SECs are echo questions. In Examples ($10A_1$) and ($10A_3$), it is clear that the speaker is making a statement rather than asking a question. Regarding the SECs in Example (10), there are two things to note: first, what they have in common is that they involve a repetition of an earlier utterance. Given this, it may be assumed that SECs involve echoed utterances; second, more importantly, these SECs all have the same surface form. What distinguishes them is their intonation, as discussed in the next section.

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[6] Other clause type markers can be used in environments equivalent to Example (10). For reasons of space, however, I will mostly focus on cases involving the declarative clause type marker -TA in what follows.

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4. THE ROLE OF INTONATION AND CLAUSE TYPE MARKING

As pointed out above, the complementizer -KO is obligatory in SECs. In addition to this element, a clause type marker is also obligatory in SECs, as can be seen in Example (10). Interestingly, despite the presence of a clause type marker, there can be a mismatch between the clause type indicated by these clause type markers and the actual interpretation of an SEC. For instance, even though Example $(10B_2)$ contains the declarative clause type marker -TA, the utterance is actually interpreted as a kind of question. Crucially, the primary factor that determines the actual illocutionary force of an SEC is its intonation. More specifically, when an SEC is interpreted as a statement, as in Examples $(10A_1)$ and $(10A_3)$, it is uttered with falling intonation, while it should be uttered with rising intonation when interpreted as a question, as in Example $(10A_2)$.[7] For convenience, I will refer to the type of prosody in question as the 'illocutionary prosody'. In addition, following the standard convention, I use below the intonation phrase (IP) boundary tone symbols like L% and H% to describe the patterns of illocutionary prosody in SECs.

It is also worth mentioning that IP boundary tones are usually assumed to be associated with various illocutionary acts like making a statement (L%), requesting the listener's response (H%) and so on. Furthermore, in many, if not all, cases, SECs reveal the speaker's annoyance or irritation for having to repeat what was said earlier. In such contexts, an SEC is accompanied by the characteristic boundary tone LHL% (e.g. Jun 2000; Shin 2017).

Furthermore, recall that SECs look like embedded clauses. In fact, in Section 6, I provide more concrete evidence that they are genuine embedded clauses. Given this, it is very important to note that ordinary embedded clauses in Korean do not show the same prosodic pattern as SECs. In particular, they are not uttered with rising intonation even when they are interrogative. For instance, the embedded question in Example (11), which contains the interrogative clause type marker -NYA, cannot be uttered with rising intonation.

(11) Jojo-nun [Toto wa-ss-nya-ko] (*H%) mwul-ess-ta.
      Jojo-TOP Toto arrive-PST-INT-COMP   ask-PST-DECL
      'Jojo asked whether Toto arrived.'

In Example $(10B_2)$, despite the presence of the declarative clause type marker -TA, the utterance is interpreted as a kind of question if uttered with rising intonation, as noted above. However, if the same clause shows up as a genuine embedded clause,

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[7] This is similar to what is known as declarative questions in the English language, where a sentence that is structurally declarative is uttered with rising intonation and is interpreted as a question. But there are some differences between declarative questions and SECs like Example $(10A_2)$. For instance, declarative questions in English speech do not involve complementizers. There is also a difference in the way they are interpreted, though the details are not crucial here. What is significant is that in both cases, intonation seems to override the clause type indicated by the syntactic structure of the sentence. See below for further discussion.

as in Example (12), applying rising intonation to it does not yield an interrogative reading. In fact, the utterance is unacceptable.

(12) Jojo-nun [Toto wa-ss-ta-ko] (*H%)   malha-ess-ta.
      Jojo-TOP Toto   arrive-PST-DECL-COMP say-PST-DECL
      'Jojo said that Toto arrived.'

In general, in ordinary embedded clauses in Korean, the verbal complex, that is, the morphological unit that comprises the verb and the complementizer along with other functional heads that come in-between, is always uttered with neutral flat intonation regardless of the type of the clause type marker. Thus, the availability of rising intonation (or illocutionary prosody, more generally) on the verbal complex in SECs is surprising and needs to be explained.

The state of affairs that we are concerned with here naturally poses a question about the role or function of sentence prosody and clause type marking. As shown in Section 2, Korean employs overt clause type markers. However, as also shown above, having the declarative clause type marker -TA, for instance, does not necessarily guarantee that the utterance is interpreted as making a statement (see Example (10)). The same is true of other clause type markers. In fact, it seems that such a situation is not limited to SEC contexts. Even an ordinary sentence like Example (13) can be interpreted differently depending on its prosody.

(13) Toto wa-ss-ta   (L%)   → statement: 'Toto arrived.'
      Toto come-PST-DECL (HL%) → exclamation: 'Toto arrived!'

This is also confirmed by the fact that a discoursal adverb like UNG 'yes' can be placed in front of Example (13) naturally when the latter is uttered with the L% boundary tone, while it sounds awkward when the latter is uttered with the HL% boundary tone.[8]

As is well known, different clause types are associated with clusters of distinct syntactico-semantic properties. For instance, in root contexts, declaratives, marked by -TA in Korean, must involve finite tense inflection, have a full array of case-marked arguments, describe the properties of the subject or topic and so on, while imperatives, marked by -LA, disallow finite tense inflection, regularly omit the subject, describe a directive given to the listener and so on. Interrogative clause type markers can mark the scope of a WH-phrase, while declarative clause type markers cannot. There are many other properties that characterise different clause types, but we need not go into the details of how each of these properties should be implemented. Rather, the important point is that the choice of a clause type marker goes hand in hand with clusters of distinct properties, which makes it reasonable to

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[8] Uttering UNG, a positive reply to a question, indicates that the speaker acknowledges or confirms the situation, while making an exclamation indicates that the situation is unexpected. It is reasonable that these are contradictory, which explains the oddity of Example (13) when uttered with the HL% tone. If an exclamatory word like 'WA!', instead of UNG, is used in front of Example (13), uttering it with the HL% boundary tone becomes more acceptable, as expected.

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assume that the clause type markers are involved in licensing these properties in some way, for example, via selection, agreement and so on.
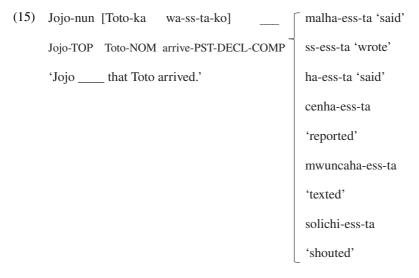
Given this, I propose that the primary function of the clause type markers is to license the relevant syntactico-semantic properties. I also assume that they can be associated with unmarked, canonical prosodic patterns, as in Example (14), while the latter may be overridden by more special, marked prosody when the speaker's intention underlying the utterance, that is, the illocutionary force, requires it. For instance, regardless of the clause type marker, the boundary tone LHL% is used in many instances of SECs to signal the speaker's annoyance or irritation because the speaker has to repeat what was uttered before.

(14)   (a)   -TA: declarative + L%
       (b)   -NYA: interrogative + H%
       (c)   -LA: imperative + L%   (Shin 2017: 55)

5. A CLOSER LOOK AT THE DISTRIBUTION AND INTERPRETATION OF SECs

Regarding the distribution of SECs, it should be noted that they are not allowed as a conversation starter. Given that SECs repeat what was uttered before, it is natural that they require a preceding utterance. For ease of exposition, I will refer to the preceding utterance for an SEC as its 'antecedent'.

It is noteworthy that a wide range of matrix verbs can be used with the type of embedded clause that can occur as an SEC, that is, embedded clauses headed by the so-called quotative complementizer -KO. Roughly, these verbs can be characterised as verbs that denote various forms of communication, whose embedded clause complement describes the message that was communicated.

(15)   Jojo-nun [Toto-ka   wa-ss-ta-ko]   ___   ⌈ malha-ess-ta 'said'

       Jojo-TOP   Toto-NOM   arrive-PST-DECL-COMP │ ss-ess-ta 'wrote'

       'Jojo _____ that Toto arrived.'   │ ha-ess-ta 'said'

                                                       │ cenha-ess-ta

                                                       │ 'reported'

                                                       │ mwuncaha-ess-ta

                                                       │ 'texted'

                                                       │ solichi-ess-ta

                                                       ⌊ 'shouted'

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Given this, the antecedent for an SEC often contains a verb of communication as the matrix verb, and the SEC is interpreted as the complement to an implicit counterpart of this verb.

(16) A: Jojo-ka   mwue-la-ko   ss-ess-ni?
           Jojo-NOM   what-COP-COMP write-PST-INT
           'What did Jojo write?'
     B: Toto-ka   wa-ss-ta-ko.   (SEC)
           Toto-NOM arrive-PST-DECL-COMP
           '(Jojo <u>wrote</u>) that Toto arrived.'

Note, however, that this does not mean that SECs have to have an antecedent that contains a verb of communication. It is actually possible for SECs to occur when the antecedent does not contain a verb of communication overtly.[9] Example (17) illustrates this. This was also the case in Example (10).

(17) A: Na pap   mek-ess-ta.
           I   meal eat-PST-DECL
           'I ate.'
     B: Mwue-la-ko?
           what-COP-COMP
           'What is it?
    A_1: Na pap   mek-ess-ta-ko.   (SEC)
           I   meal eat-PST-DECL-COMP
           '(I said) that I ate.'

Here, Example (17A) is the antecedent for Example ($17A_1$). In the former, there is no separate matrix verb of communication, as it is a simple sentence. Still, the SEC in Example ($17A_1$) is interpreted as if it is the complement to a verb of communication like HA-ESS-TA 'said'. I assume that in cases like this, there is indeed an implicit matrix verb, whose precise meaning is determined contextually.[10]

To summarise, given the properties noted above, we can say that uttering an SEC is basically a way of referring back to an act of communication that was made before, where the message communicated corresponds to the meaning of the SEC. Of course, depending on its intonation, an SEC can be used to assert that there was a certain act of communication or to ask whether there was such an act of communication. It is also noteworthy that SECs can often signal the speaker's annoyance, given that the speaker has to repeat what he/she said before.

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[9] But, as noted above, there should still be an antecedent irrespective of the presence or absence of a verb of communication in it because SECs are echoed utterances.

[10] This is reminiscent of Ross's (1970) performative analysis, where it is argued that root clauses are embedded under an implicit verb of saying (see Speas & Tenny 2003; Miyagawa 2012; Yim 2016 for relevant discussion and references).

6. SECs INVOLVE EMBEDDED CLAUSES

As mentioned above, I propose that SECs derive from embedded clauses. Obviously, part of the motivation for the proposal is based on the obligatory presence of the complementizer -KO, which heads embedded clause CPs. But, before going into the proposed analysis, let us briefly consider an alternative possibility. More specifically, suppose that the -KO in SECs is somehow different from its usual counterpart that heads embedded clauses. That is, it may be that the -KO in SECs simply functions as a marker of echoed utterances without heading an embedded clause, perhaps due to grammaticalisation. This is illustrated in Example (18). As Example (18a) shows, it is perfectly normal for an independent sentence to end with a clause type marker, such as the declarative ending -TA. In Example (18b), the clause type marker -TA is further followed by -KO as the sentence is an echoed utterance.

(18) (a) Toto-ka   wa-ss-ta.   (non-echoed normal utterance)
           Toto-NOM   arrive-PST-DECL
           'Toto arrived.'
     (b) Toto-ka   wa-ss-ta-ko.   (echoed utterance (tentative))
           Toto-NOM   arrive-PST-DECL-ECHO
           '(I said) that Toto arrived.'

If this tentative suggestion is on the right track, SECs would have to be analysed as simple matrix clauses on their own.

However, the distribution of the subject-oriented reflexive pronoun CAKI 'self' provides crucial evidence that SECs cannot be analysed as simple matrix clauses. Especially, note that CAKI in embedded object position must be bound by a subject in the same sentence, either the matrix subject or the embedded subject, as Example (19a) shows. It is important that in this environment, CAKI cannot take its antecedent from the discourse. The latter property, that is, the inability to take an antecedent from the discourse, is also true of CAKI in object position in a simple sentence, as in Example (19b). In this case, CAKI has to be bound by the subject.

(19) (a) Toto$_i$-nun   [Momo$_j$-ka   caki$_{i/j/*k}$-lul   coaha-n-ta-ko]
           Toto-TOP   Momo-NOM   self-ACC   like-PRS-DECL-COMP
           malha-ess-ta.
           say-PST-DECL
           'Toto$_i$ said that Momo$_j$ likes him$_i$/herself$_j$.'
     (b) Momo$_j$-ka   caki$_{*i/j}$-lul   coaha-n-ta.
           Momo-NOM   self-ACC   like-PRS-DECL
           'Momo likes *him/herself.'

In contrast, it is perfectly fine for CAKI to occur as an object in SECs, as the grammaticality of Example (20B) shows. Crucially, Example (20B) is grammatical even when CAKI is not bound by the subject MOMO in stark contrast to Example

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(19b). Thus, the grammaticality of Example (20B) provides strong evidence that there is an underlying antecedent for CAKI in the sentence that is not overtly realised.

(20) A: Toto$_i$-ka mwue-la-ko   malha-ess-ni?
          Toto-NOM what-COP-COMP say-PST-INT
          'What did Toto say?'
      B: Momo-ka   caki$_{i/j}$-lul coaha-n-ta-ko.   (SEC)
          Momo-NOM self-ACC   like-PRS-DECL-COMP
          '(Toto said) that Momo likes him/herself.'

It is also important to note the parallelism between Examples (20B) and (21B), where the latter is a regular embedded clause.

(21) A: Toto$_i$-ka mwue-la-ko   malha-ess-ni?
          Toto-NOM what-COP-COMP say-PST-INT
          'What did Toto say?'
      B: Toto$_i$-nun [Momo-ka   caki$_{i/j}$-lul coaha-n-ta-ko]
          Toto-TOP Momo-NOM self-ACC   like-PRS-DECL-COMP
          malha-ess-e.
          say-PST-DECL
          'Toto said that Momo likes him/herself.'

To conclude, in addition to the presence of the complementizer -KO itself, the distribution of the reflexive pronoun CAKI provides crucial evidence that SECs derive from underlying embedded clauses, that is, they cannot be analysed as independent main clauses.

7. DERIVATION OF SECs

Regarding the syntactic derivation of SECs, I propose that they are derived in essentially the same way as fragment answers (FAs), as in Example (22B).

(22) A: Toto-ka   nwukwu-lul coaha-ni?
          Toto-NOM who-ACC   like-INT
          'Who does Toto like?'
      B: Jojo.
          '(Toto likes) Jojo.'

FAs, along with some other similar ellipsis constructions, have been one of the most extensively investigated topics of research in syntax in the past 20 years or so. Various properties of FAs in different languages, including Korean, have been examined, leading to a huge amount of literature. According to the standard analysis of FAs, inspired by Merchant's (2001, 2004) seminal work, FAs are derived from an underlying full sentence that undergoes deletion (e.g. Hankamer 1979; Merchant 2004; Park 2005, 2013; Ahn & Cho 2011, 2017; Ince 2012; Park & Oh 2014, 2015; Weir 2014; An 2016, 2018; Park 2016). More specifically, the constituent that

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surfaces as the FA itself, that is, the remnant, is assumed to undergo movement to FocusP located high in the traditional CP outside the deletion domain.[11] This is schematically illustrated in Example (23).

(23)   [$_{FocusP}$ [Jojo]$_i$ [$_{TP}$ ~~Toto likes t$_i$~~]]

   I propose that SECs also involve movement of the embedded clause to some higher position in the matrix clause, followed by deletion of the rest of the clause. A natural question that arises here is the precise landing site of the moved embedded clause in SECs. It seems plausible to assume that SECs involve the focus projection (FocusP), just like in FAs, given that they are often uttered as questions or answers (Q&As). To be precise, however, not all SECs are used in Q&A contexts, for example, they can be used for emphatic purposes, usually when the speaker voluntarily repeats his/her utterance, as in Example (24B).

(24)   A: Ppalli   wa-la.
           quickly   come-IMP
           'Come quickly!'
       B: Ka-n-ta.   Ka-n-ta-ko.   (SEC)
           go-PRS-DECL go-PRS-DECL-COMP
           'I'm going. (I said) I'm going.'

In non-Q&A contexts like this, the SEC is usually accompanied by the special LHL % boundary tone, which indicates the speaker's irritation, as mentioned in Section 4. Though further investigation is necessary, I assume that this special prosody of non-Q&A SECs is also due to its focused status. In other words, I assume that these different types of SECs all involve focused elements in some way, and that this requires the presence of a focus projection that will host a moved element.
   Given this, the derivation of an SEC like Example (25B) can be represented as in Example (26), where the dotted line indicates the deletion domain.
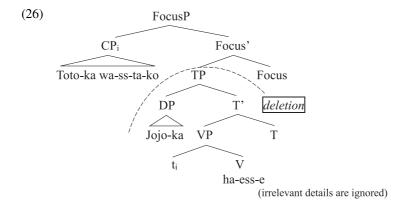
(25)   A: Jojo-ka   mwue-la-ko   ha-ess-ni?
           Jojo-NOM   what-COP-COMP   say-PST-INT
           'What did Jojo say?'

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[11] While many variants exist concerning the details of their implementation, there are largely two main approaches to FAs: one type of approach employs movement of the remnant and reduction of a full sentential source, as in the main text; the other type involves base generation of nonsentential elements (e.g. Yanofsky 1978; Morgan 1989; Barton 1990; Stainton 1993, 1995; Ku & Cho 2014; Kim 2015; Cho 2016). It goes beyond the scope of this paper to discuss the details of the existing analyses of FAs here. But I'd like to briefly point out that it is not clear under the nonsentential base-generation approach why SECs should show properties of embedded clauses, as shown in Section 6. See also the discussion in Section 9 regarding another aspect of the obligatoriness of the complementizer, which is also problematic for the base-generation analysis. Thus, without additional assumptions, the nonsentential base-generation analysis seems to face serious problems with respect to SECs.

B: Toto-ka   wa-ss-ta-ko.   (SEC)
Toto-NOM   arrive-PST-DECL-COMP
'(Jojo said) that Toto arrived.'

(26)

FocusP
- CP$_i$ — Toto-ka wa-ss-ta-ko
- Focus'
  - TP
    - DP — Jojo-ka
    - T'
      - VP
        - t$_i$
        - V — ha-ess-e
      - T
  - Focus — *deletion*

(irrelevant details are ignored)

8. SPEECH ACT PROJECTIONS AND PROSODY

Recall that intonation plays an important role in determining the interpretation of SECs. Regarding this, there are two things to note: first, as pointed out above, the clause type marker on the verb in SECs does not reflect the actual illocutionary force of the utterance and second, the particular intonation that does reveal the actual illocutionary force of the utterance, that is, the illocutionary prosody, is only found at the end of the utterance.
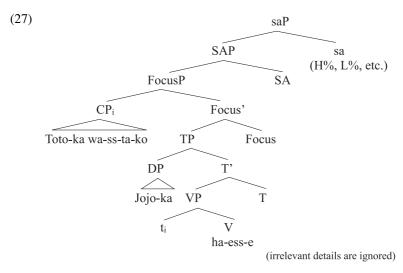
Given the analysis in Example (26), the first property is accounted for straightforwardly. That is because the clause type marker that survives on the surface in SECs has nothing to do with the clause type of the whole sentence, that is, it only indicates the clause type of the embedded clause.

Regarding the second property, I assume, following researchers like Haegeman (2002, 2014); Speas & Tenny (2003); Hill (2007); Coniglio & Zegrean (2012); Miyagawa (2012); Haegeman & Hill (2013); Hong (2018), that in the root of a sentence, there is a layer of special speech-act-related functional projections, namely, saP and SAP, that encode properties that have to do with the speaker and the listener, respectively.[12] In particular, I propose that the illocutionary prosody, which signals the speaker's intention or attitude underlying an utterance, is encoded by the head of saP.[13] More specifically, I assume that the saP head has

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[12] Following the researchers cited in the text, I assume that the speech act projections are a unique property of the root and, thus, are present in all root clauses universally.

[13] The proposal that the illocutionary prosody of an utterance is encoded by saP finds its predecessor in Hong's (2018) discussion on sentence-final endings in Korean, though I cannot go into it here for reasons of space. Thus, to the extent that the current analysis provides a successful analysis of SECs, it also provides support for Hong's analysis as well.

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features that are accessed by the PF and LF interfaces, determining the intonational contour of an utterance and its illocutionary interpretation, respectively. I assume further that in languages like Korean, the saP head is like an affix (or clitic) in that its prosodic property is realised on the overt element that is adjacent to it on the surface (see Pan 2019 for a similar proposal based on Chinese).[14] Given this, the structure in Example (26) can be represented more precisely as in Example (27).

(27)

(irrelevant details are ignored)

Here, if deletion does not take place, as in Example (28), the matrix verb will be adjacent to the saP head. As expected, the illocutionary prosody is realised on it.

(28) [Toto-ka   wa-ss-ta-ko]   Jojo-ka   t
      Toto-NOM   arrive-PST-DECL-COMP Jojo-NOM
      ha-ess-e   (H%, L%, etc.)
      say-PST-E[15]
      'Jojo said that Toto arrived'

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[14] An anonymous reviewer asks what happens in head-initial languages like English, because if the saP head operates on adjacency, it would be incorrectly predicted that sentence-initial elements will bear the illocutionary prosody in English, contrary to fact. Although the details need to be worked out further, one possibility is that saP heads can resort to other types of structural relations, for example, c-command, so that they can be realised on more remote elements. An alternative possibility is that the illocutionary prosody is realised on the last overt element. Considering that a head-initial language like English also normally realises the illocutionary prosody on the last element, this alternative may allow us to dispense with the assumption that the saP head is like an affix (or a clitic) in head-final languages like Korean. At the moment, I am not fully sure about the ramifications of these approaches.

[15] Note that in Examples (28) and (29), the sentences end with the sentence-final ending -E, glossed simply as -E. In some sense, this element is neutral with respect to clause types, being able to occur in declaratives, interrogatives and so on. Concerning the precise nature of -E, it is usually

If deletion applies to TP in Example (27), which leads to Example (25B), what is left of the sentence will be the fronted embedded clause CP. As a result, the embedded verb will be adjacent to the saP head and receive the illocutionary prosody. Crucially, this explains why we sometimes find mismatches between the type of the clause type marker on the verb in an SEC and the actual prosody and interpretation of it.

Finally, in ordinary complex sentences, as in Example (29), the illocutionary prosody applies to the matrix verb, as it is adjacent to the saP head on the surface (cf. Example (28)).

(29) Jojo-ka   [Toto-ka   wa-ss-ta-ko]
     Jojo-NOM Toto-NOM arrive-PST-DECL-COMP
     ha-ess-e   (H%, L%, etc.)
     say-PST-E
     'Jojo said that Toto arrived'

Furthermore, recall that based on Examples (11) and (12), repeated below as Examples (30a) and (30b), it was shown that embedded verbs in ordinary complex sentences cannot receive the illocutionary prosody unlike their counterparts in SECs. This also follows straightforwardly because the embedded verb is not adjacent to the saP head in this environment.[16]

(30) a. Jojo-nun [Toto wa-ss-nya-ko] (*H%) mwul-ess-ta.
        Jojo-TOP Toto arrive-PST-INT-COMP   ask-PST-DECL
        'Jojo asked whether Toto arrived.'
     b. Jojo-nun [Toto wa-ss-ta-ko] (*H%)   malha-ess-ta.
        Jojo-TOP Toto arrive-PST-DECL-COMP say-PST-DECL
        'Jojo said that Toto arrived.'

9. SUPPORTS AND CONSEQUENCES

In the previous section, I proposed that FAs and SECs are derived in essentially the same way. Supporting evidence for this comes from their parallel behaviour. I discuss this in this section.

First, as discussed in the previous section, FAs and SECs are similar in the sense that they involve movement of the remnant and deletion of elements that are repeated from a previous utterance.[17]

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assumed that it is a kind of dummy element whose main function is to support a morphologically incomplete predicate stem. For further discussion and relevant references, see An (2021).

[16] As pointed out above, in Example (30a), rising intonation is disallowed even in the presence of the interrogative clause type marker on the embedded verb.

[17] An anonymous reviewer points out that if focus movement in Korean involves covert movement, as Choe (1995) argues, the analysis proposed in this paper might face problems, as it is based on overt movement of the remnant. However, as far as I can see, the possibility of covert focus movement in and of itself does not pose a problem for the current analysis. In fact, there is an

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Second, FAs and SECs are associated with the same speech level, that is, the level or degree of the speaker's deference towards the listener. More specifically, FAs and SECs are associated with the so-called plain speech level that is used between speakers who are close to each other, for example, between friends, siblings and so on, or when the speaker has a higher status than the listener. Thus, it is inappropriate to use FAs or SECs when addressing someone whose status is higher than the speaker's.[18] Interestingly, FAs and SECs can be followed by the so-called politeness marker -YO, which has been argued to occupy the SAP head position in the root as it encodes a listener-oriented property (Yim 2016; Hong 2018). Thus, attaching -YO to FAs and SECs renders the utterance more polite, so that they can be used when addressing someone whose status is higher than the one speaking (Ahn & An 2011).[19]

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aspect in which covert focus movement provides further support for it. More specifically, suppose that it is essentially phonological considerations that determine which copy of a moved element, that is, the higher or lower copy, is to be overtly realized, and that covert movement arises as a result of pronouncing the lower copy, as several researchers argue (e.g. Nunes 2004; Bošković 2001, 2002; Bobaljik 2002; An 2007b, 2008; Corver & Nunes 2007). In the context of SECs, pronouncing the lower copy of the remnant, which would correspond to covert focus movement, actually leads to a problem in PF, as the special prosody of the saP head will fail to be realised after deletion of TP. This forces the higher copy to be pronounced, yielding the effect of overt movement, as has been assumed so far.

[18] Following An (2020, 2021), I assume that the plain level interpretation, indicated by the notation [S≥L], arises as an unmarked default value of speech levels, while the polite level interpretation, indicated by the notation [S<L], is a marked option that arises only when appropriate morphemes occur. Thus, in the absence of such polite form morphemes, an utterance is naturally interpreted on the plain speech level.

More generally, I assume that speech levels are basically a listener-oriented property and that a formal licensing relation (e.g. feature checking or valuation) exists between the SAP head and the sentence enders in the root, putting aside the details. I also assume that when the marked [S<L] feature of a sentence ender is licensed by the SAP head, it must be overtly realised. I refer the reader to An (2020, 2021) and references therein for further discussion on how different sentence enders in Korean encode various speech levels.

[19] Given the discussion on -YO, an anonymous reviewer asks why the honorific marker -SUPNITA is not allowed in SECs, as in Example (i).

(i) *Toto-ka   sang-ul   pat-ass-ta-ko-supnita. (Cf. (32B$_2$))
      Toto-NOM   award-ACC   receive-PST-DECL-COMP-HON
      '(Jojo said) that Tom received an award.'

There are actually independent reasons why -SUPNITA is not expected to behave like -YO. That is, -SUPNITA and -YO do not have the same grammatical status. For instance, though it is not commonly used in contemporary Korean, it used to be possible for -SUPNITA and -YO to cooccur, as in -SUPNITA-YO. This form was frequently used when the speaker's social status is much lower than the one being addressed, for example, when a servant talks to his master. The fact that the sequence -SUPNITA-YO is, in principle, possible indicates that -SUPNITA is lower than -YO in the structure. This is not unexpected, given that -YO is supposed to be very high in the structure as the head of SAP. In any case, it is clear that these elements do not occupy the same structural position (see also Ceong & Saxon 2020 to this effect). Second, it is also possible that -SUPNITA is internally complex unlike -YO, that is, it is based on the combination between the formal politeness ending -SUPNI and the declarative clause type marker -TA. Note also that -SUPNITA has an interrogative counterpart, namely, -SUPNIKKA, which may also involve the combination of -SUPNI and the interrogative clause type marker -KKA. If this is correct, -SUPNITA is quite different from -YO. In

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(31) A: Jojo-ka   nwukwu-lul coaha-ni?
         Jojo-NOM   who-ACC   likes-INT
         'Who does Jojo like?'
      B₁: Hana.   (FA, [S≥L])
          '(Jojo likes) Hana.'
      B₂: Hana-yo.   (FA, [S<L])
          Hana-POL
          '(Jojo likes) Hana.'

(32) A: Jojo-ka   mwue-la-ko   ha-ess-ni?
         Jojo-NOM   what-COP-COMP say-PST-INT
         'What did Jojo say?'
      B₁: Toto-ka   sang-ul   pat-ass-ta-ko.   (SEC, [S≥L])
          Toto-NOM   award-ACC   receive-PST-DECL-COMP
          '(Jojo said) that Tom received an award.'
      B₂: Toto-ka   sang-ul   pat-ass-ta-ko-yo. (SEC, [S<L]
          Toto-NOM   award-ACC   receive-PST-DECL-COMP-POL
          '(Jojo said) that Tom received an award.'

Third, just like SECs, FAs are interpreted differently depending on their prosody. Thus, while the same form is repeated in Examples (33B) and (33A₁), their interpretations differ depending on whether they are uttered with falling or rising intonation, which makes them declarative or interrogative, respectively, just like in SECs.

(33) A: Toto-ka   nwukwu-lul coaha-ni?
         Toto-NOM   who-ACC   like-Q
         'Who does Toto like?'
      B: Hana.   (L%)
         '(Toto likes) Hana.'
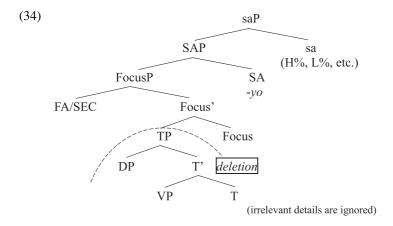   A₁: Hana?   (H%)[20]
          '(Toto likes) Hana?'

These properties can be captured straightforwardly by the analysis proposed in the previous section. After deletion of the clause, the fronted FA, for example, HANA in Example (33), will be the only overt element that is adjacent to the saP head. Therefore, the politeness marker -YO and the illocutionary prosody can be realised

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particular, given that -SUPNITA must be much lower than -YO, it is plausible that the configuration in Example (i) is simply impossible to arise when deletion takes place. Third, -SUPNITA has to combine with bound roots or stems. In SECs, the complementizer -KO closes off the verbal morphological complex, precluding the occurrence of -SUPNITA. The same is true of FAs. FA remnants are invariably morphologically independent units and thus disallow -SUPNITA. On the other hand, -YO combines with morphologically independent units, which is why it can be used in SECs and FAs, as in Examples (31) and (32). This also explains why Example (i) is impossible.

[20] Strictly speaking, Example (33A₁) is not exactly an FA because it is interpreted as a kind of echo question similarly to an SEC. This similarity can be considered to provide an additional argument for the uniform analysis of FAs and SECs.

on this element just like in SECs. The relevant configurations are schematically illustrated below.

(34)

```
                                    saP
                          ┌──────────┴──────────┐
                        SAP                      sa
                   ┌──────┴──────┐          (H%, L%, etc.)
               FocusP            SA
          ┌──────┴──────┐       -yo
      FA/SEC          Focus'
                  ┌──────┴──────┐
                 TP            Focus
             ┌────┴────┐      deletion
            DP        T'
                  ┌────┴────┐
                 VP         T
```

(irrelevant details are ignored)

Furthermore, the current analysis can also explain why no matrix clause element is allowed in SECs, as noted above.[21] That is because they are all contained in the domain that undergoes deletion. Thus, although Example (35B) can be answered by the SEC in Example (35A₁), it cannot be answered by Examples (35A₂) or (35A₃), where some matrix elements are realised along with the embedded clause.

(35) A: Jojo-nun   na-eykey   [Toto-ka   wa-ss-ta-ko]
         Jojo-TOP   I-DAT   Toto-NOM   arrive-PST-DECL-COMP
         ha-ess-e.
         say-PST-E
         'Jojo said to me that Toto arrived.'
      B: Mwue?
         what
         'What?'
      A₁: Toto-ka   wa-ss-ta-ko.   (SEC)
          Toto-NOM   arrive-PST-DECL-COMP
          '(Jojo said) that Toto arrived.'
      A₂: Toto-ka   wa-ss-ta-ko   (*Jojo-nun) (*na-eykey).
          Toto-NOM   arrive-PST-DECL-COMP   Jojo-TOP   I-DAT
      A₃: (*Jojo-nun) (*na-eykey) Toto-ka   wa-ss-ta-ko.
          Jojo-TOP   I-DAT   Toto-NOM   arrive-PST-DECL-COMP

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[21] The same is true of FAs.

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Before wrapping up the discussion, let us briefly discuss how Korean and English behave with respect to SECs. First, recall that the complementizer -KO is obligatory in SECs in Korean. I repeat the relevant examples below.

(36)   A: Toto   wa-ss-ta.
              Toto   arrive-PST-DECL
              'Toto arrived.'
        B: (No response.)
        A₁: Toto   wa-ss-ta-*(ko). (L%)
              Toto   arrive-PST-DECL-COMP
              '(I said) that Toto arrived.'
        B₂: Toto   wa-ss-ta-*(ko)? (H%)
              Toto   arrive-PST-DECL-COMP
              '(You said) that Toto arrived?'
        A₃: Kulay, Toto wa-ss-ta-*(ko). (L%)
              yes   Toto arrive-PST-DECL-COMP
              'Yes, (I said) that Toto arrived.'

In Example (36), the utterances with subscript numbers are instances of the SEC. Note that -KO cannot be omitted here. On the other hand, -KO is, in principle, optional in in-situ embedded clauses.[22]

(37)   Jojo-nun [Toto-ka   chayk-ul ilk-ess-ta-{ko/Ø}]
        Jojo-TOP   Toto-NOM book-ACC read-PST-DECL-COMP
        malha-ess-ta.
        say-PST-DECL
        'Jojo said that Toto read a book.'

Under the movement analysis of SECs proposed in the current paper, the obligatoriness of -KO in SECs is reminiscent of the distribution of the complementizer THAT in English. That is, it is well known that THAT cannot be omitted from displaced CPs, as shown below.[23]

(38)   I believe [CP {that/Ø} [TP the teacher was lying]].

(39)   a. [CP {That/*Ø} [TP the teacher was lying]], Ben already knew t.
        b. [CP {That/*Ø} [TP she was angry at me]], Louise forgot to
            mention t.   (Stowell 1981: 397, adapted)

Crucially, when FAs involve CPs in English, THAT is obligatory.

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[22] I thank an anonymous reviewer for JOURNAL OF LINGUISTICS for drawing my attention to this property.
[23] For further discussion on the distribution of THAT, see Stowell (1981); Bošković & Lasnik (2003); An (2007a, b) and references therein.

(40)   A: What does no one believe?
       B: *(That) I'm taller than I really am.

(41)   A: What became obvious after the election?
       B: ∗(That) he opposes us. (Merchant 2004: 690-691)

Thus, the parallel behaviour between -KO and THAT provides additional support for the current analysis.

10. CONCLUSION

In this paper, I examined the properties of SECs in Korean, a phenomenon that has not received much attention in the literature. SECs are a special type of echoed utterances, where an utterance in the form of an embedded clause is repeated for various reasons. I proposed a deletion-based analysis of SECs, where SECs start out as a full-fledged embedded clause in a complex sentence that undergoes movement, followed by deletion of the rest of the clause. This straightforwardly captures the fact that the complementizer is obligatory in SECs. I proposed that the illocutionary prosody is realised on sentence-final overt elements by the saP head in the root, which I argued is the source of the mismatch that can occur between the syntactic clause type of an SEC and the actual illocutionary force of the utterance. It remains to be seen, among others, whether phenomena equivalent to SECs can be found in other languages and what are their properties.[24]

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[24] Interestingly, the utterances with subscript numbers in Example (i) seem to be very similar to SECs, as an anonymous reviewer notes. However, unlike in the Korean SECs in Example (36), overtly realizing the complementizer leads to ungrammaticality here. Note that this also contrasts with FAs in English as well, shown in Examples (40) and (41).

(i)   A: John left.
       B: What did you say?
       A_1: (*That) John left. (L%)
       B_2: (*That) John left? (H%)
       A_3: Yes, (*that) John left. (L%)

Though further research is needed, one possibility is that in Example (i), no movement is involved. That is, the clauses are licensed in-situ as independent clauses. This may also have to do with the availability of declarative questions in English (see note 7). In fact, in Korean, a direct counterpart of a declarative question is ungrammatical, as shown below.

(ii)   a. You have the keys?
       b. *Ne   yelsoy   iss-ta?
           you   key   have-DECL
           '(intended) You have the keys?'

Several details need to be explored further regarding this contrast, but I put them aside for future research.

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