A Case of Tense Acquisition: Is 90% Enough?*

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This paper is a case study to analyze divergences in the L2 English past tense that a Korean learner of English has produced. The learner supplies appropriate past tense verbs in about 90% of their obligatory contexts, which strongly suggests that he has acquired the past tense morpheme.

The present study, however, identifies the following aspects of systematicity in the 10% residue. First, the divergences mostly occur in embedded clauses. Second, most divergences occurring in matrix contexts can be related to a past tense morpheme nearby. We propose that this systematic divergence mainly reflects an English-Korean difference in the tense system: Unlike in English, the [-past] tense can be interpreted as denoting a time or interval in the past in embedded clauses in Korean (Han 1996, Lee 2001).

Further, We also note that some cases of divergence are not attested in either of the learner's L1 and L2. We suggest that the "wild grammar" feature can arguably be derived from an interaction of a calcitrant macro-parameter "efficiency-oriented" that Korean has and the relevant input from the target language, and be compatible with the thesis that acquisition of EFL is constrained by Universal Grammar.

Keywords: SLA, L2 English, tense, macro-parameter, efficiency-oriented, sequence of tense, tense binding

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1. Introduction

At least since Selinker's (1972) seminal work, learning a second language is understood as a process of developing a series of interlanguages whose first member may have a number of grammatical properties similar to what constitute the grammar of the learner's mother tongue, and whose final member will be identical (or similar) to the target language. This implies that the learner(s) will formulate a series of generative grammars.

As in first language acquisition a second language learner will be provided with only a limited size of the target language data, so he will possibly suffer from the logical problem of language acquisition (see Baker and McCarthy 1981, Pinker 1989, for L1 acquisition, and Bley-Vroman 1990, White 2003, for L2 acquisition, among others). This has led to the lively discussion on whether Universal Grammar (or UG) is available to second language acquisition as well. A group of SLA scholars have given positive answers to this question, even though they do not agree concerning the time periods of UG availability (see Flynn and Martohardjono 1994, Flynn 1996, and Epstein et al (1996, 1998) for the Full Access (Without Transfer) Hypothesis; Schwartz and Sprouse (1994, 1996) for the Full Transfer Full Access Hypothesis; Vainikka and Young-Scholten 1994, 1996a,b for the Minimal Trees Hypothesis; Eubank 1993/4, 1994, 1996 for the Valueless Features Hypothesis). Others have pursued the thesis that UG is not fully available for SLA (see Beck 1998 for the Local Impairment Hypothesis, Bley-Vroman (1988, 1990) for the Fundamental Difference Hypothesis; and Hawkins 1998 and Hawkins and Chan 1997 for the Failed Functional Features Hypothesis).

Another related and important issue is concerned with the development of grammatical features of L2 interlanguage grammars. The issue is what the successive interlanguage grammars actually look like. Initial studies observed that child and adult L2 learners show similar patterns of difficulty with various functional morphemes of English including the tense morphology, and that the past tense is on the side of difficult items to learn for learners of L2 English from various L1 background (Dulay and Burt 1974, Bailey et al. 1974, Larsen-Freeman 1975, Hakuta 1976, Rosansky 1976; see Kwon 2005 for a survey and discussion of this matter).

Supporting those results, Johnson & Newport (1989) observed (i) that US immigrants of L1 Korean or Chinese who had immersed three years or more in English from their age of 17 or later showed more than 25% rate of errors with past tense, and that the past tense was the fourth highest in error percentage only below determiners,

plurality marking, and subcategorization. This means that tense will potentially be quite difficult for Korean learners to learn. Lardiere (1998) even reported that an L1 speaker of Madarin and Hokkien, exposed to English for more than 18 years, used the past tense morpheme in only about 35% (in conversation) or 78% (in writing) of the obligatory contexts.

Related to this is the issue of the criterion for acquisition of a grammatical property. In the tradition of L1 acquisition, on the one hand, Brown (1973) and Radford (1990), for example, take its 90% or above correct use as the basis for judging that it has been acquired. On the other hand, Vainikka and Young-Scholten (1994, 1996a,b) take 60% correct use as indicating its acquisition.

In this context of SLA, this paper basically has the following broad research questions: (i) What tense systems do Korean learners of L2 English develop in learning English? (ii) Are they constrained by the Universal Grammar?

2. Background

Typologically, English and Korean are quite different. English is a head-initial language, while Korean is a head-last language. In the English sentence the subject is prominent, but in the Korean sentence the topic and the subject are both prominent (Li & Thompson 1976). That is, English, a subject-prominent language, has a grammaticalized subject-predicate structure, while Korean, a topic-prominent language, has a "grammaticalized" topic-comment structure in addition to the subject-predicate structure.

Further, English has expletives, which Korean doesn't have. English standardly doesn't allow omission of obligatory arguments and uses null pronouns only in a limited set of contexts while Korean freely uses null pronouns when their referents can be determined contextually, e.g., by topical (or discourse) referents. This difference, some scholars have tried to capture in terms of the Pro Drop parameter (Chomsky 1981), and null pronouns are regarded as being bound by the topic operator(s) (Huang 1984).

Another interesting distinction is whether tense must be specified or not. English is an absolute tense language which takes the present moment as the deictic center, whereas Korean is a relative tense language which does not necessarily include the present moment as the deictic center (Comrie 1985, Lee 2001). This difference will be described in more detail in the following subsections, but for now it suffices to say that this cannot be subsumed under the Pro Drop parameter because in here a more "neutral" (perhaps, present tense) marking can be interpreted as indicating a temporal point in the past depending

on its environment. In other words, it is not a matter of presence or absence of overt marking, rather a matter of neutral or more specific marking.

These differences might be captured by means of a set of micro-parameters, but they seem to have similarity: English seems to prefer more explicit marking, whereas Korean tends to prefer efficiency. Let us say the two languages are different in the setting of a macro-parameter: English is "explicitness-oriented", while Korean is "efficiency-oriented". This parameter is presumably also related to the differences between the two languages in agreement or concord (Kuroda 1988) as well. This much will suffice for now, and let's take a look at more detailed aspects of the tense systems of the two languages.

2.1. Tense systems of Korean and English

2.1.1. Tense morphology

Both languages have tense: *-ess-* (K) and *-ed* (E) are past tense markers; {∅, *-(nu)n-*} (K) and {∅, *-s*} (E) are non-past markers. Unlike English, however, Korean doesn't have a syntactically distinct device to mark the perfect aspect: *-Ess-* also is associated with the aspectual sense of perfectness as its derived meaning (1a-b). Sometimes, as an implicature, it can implicate that a past state or habit may continue up to the moment of speaking (1c-d). But, it is still not compatible with an adjunct indicating the present moment (2).

(1) a. kunye-nun onul   yeyppun os-ul   ip-ess-ta
       she-Top   today   pretty   clothes-Acc put+on-Pst-Dec
       'She has put on pretty clothes.'
    b. ku-nun   pelsse ku chayk-ul ilk-ess-ta
       he-Top   already the book-Acc read-Pst-Dec
       'He has already read the book.'
    c. ku-nun sonyen-i-ess-ul   ttay-pwuthe hananim-ul mit-ess-ta
       he-Top boy-be-Pst-Comp   time-from   God-Acc believe+in-Pst-Dec
       'He has believed in God since he was a boy.'
    d. ku-nun sonyen-i-ess-ul   ttay-pwuthe i   senggatay-eyse nolay-lul
       he-Top boy-be-Pst-Comp   time-from   this church+choir-in song-Acc
       pwul-ess-ta
       sing-Pst-Dec
       'He has sung in this church choir from the time when he was a boy.'
                                                         [Cho 2003: (35), (37)]

(2)　*ku-nun sonyen-i-ess-ul　　ttay-pwuthe　　cikum-kkaci
　　　he-Top boy-be-Pst-Comp time-from　　　now-until
　　　i　senggatay-eyse nolay-lul pwul-ess-ta
　　　this church+choir-in song-Acc sing-Pst-Dec
　　　'He has sung in this church choir from the time when he was a boy until now.'

When the adverbials in (1) are substituted by expressions with a past reference point, such as *cakyen-ey* 'last year', however, all the examples come to be about situations located in the past. In this respect, Cho (2003) observes, the Korean past tense morpheme *-ess-* is broader in sense than the English counterpart *-ed*, and is more dependent on the adverbial or other contextual ingredient(s) it combines with, for the determination of its specific meaning range.

As Cho (2003: 193) also observes, the Korean non-past tense markers {∅, *-((Nu)n)-*} are broader and more flexible than their English counterpart in use and are more context-dependent. As in English, the non-past tense markers can be used for situations in the past when its temporal location is established in the discoursal context. They are more flexible than in English in that the past and present tense markers may alternate quite freely as in (4).[1]

(3)　a. I'm in this bank, y'know? An' this mafia-type walks in and hauls out this sawed-off shortgun and yells that everybody should lie down (Hoffman 1993: 125).

　　b. The crowd swarms around the gateway, and seethes with delighted anticipation: excitement grows, as suddenly their hero makes his entrance (Quirk et al. 1985: 183).

(4)　a. ku i-nun　　　　kakkasulo cip-ey　　　tochakha-ess-ta. [e] choincong-ul
　　　the man-Top barely　　　house-at arrive-Pst-Dec　[e] bell-Acc
　　　nwulu-n-ta.　　pang-eyse　　　nwukwunka-ka mwun-ul yelko

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[1] In English the present tense can refer to a future point when it is close to the present moment, and when the verb is one of the following: *start, arrive, begin, finish, open, close, be*, etc. The Korean present tense marker, however, can do so without such restrictions.

　(i) a. She comes back {tomorrow, ?ten years from now}.
　　　b. kunye-nun {nayil,　　　10 nyen hwu-ey} tola　　o-n-ta
　　　　she-Top　(tomorrow,　10 year after-in} turn-and come-Prs-Dec
　Unlike in English, the present tense marker in Korean can have a present progressive meaning quite freely (even though there is a syntactic device to mark the progressive aspect).
　(ii) a. #He sings a song now.
　　　b. ku-nun　cikum nolay-lul pwulu-n-ta
　　　　he-Top　now　song-Acc sing-Prs-Dec

press-Prs-Dec room-out+of   somebody-Nom door-Acc open-and
nao-n-ta.
come+out-Prs-Dec
'He barely arrived at the house. He presses the bell. Out of the room,
somebody opens the door and comes out.'

  b. Sejong imkeum-un Ciphyeonjeon-ulo nap-si-n-ta.
Sejong King-Top   Ciphyeonjeon-into enter-Hon-Prs-Dec
sinha-tul-i   ku twuy-lul ttal-ass-ta
subject-Pl-Nom the rear-Acc follow-Pst-Dec
'King Sejong enters Cipheonjeon and his subjects followed him.'

    To summarize, Korean has morphological tense markers, but they are more inclusive and flexible than their English counterparts.

2.1.2. Tense marking in complex sentences

Korean has more structural contexts than English where the tense marker is not repeated. Compare the Korean examples with their English translations. In a conjunction of "successive listing" (Yoo 2002), [2] the tense is marked only with the last verb; and it also determines the temporal location of the content situation of the first verb as well (5a). Some adverbial subordinate clauses cannot be marked with tense, and the temporal location of their content situations are determined by the matrix clause tense (5b-c).

(5) a. Chelswu-ka   ku meli-bis-ul   sa-(*ass-)-se]   [e] Yenghi-eykey
Chelswu-Nom the hair-brush-Acc buy-(*Pst)-and+then   Yenghi-to
cwu-ess-ta
give-Pst-Dec
'Chelswu bought the hair brush and then gave it to Yenghi.'
  b. Yenghi-ka   Seoul-ul   ttena-(*ass-)-ca   Chelswu-to   Seoul-ul
Yenghi-Nom   Seoul-Acc leave-(*Pst)-after   Chelswu-too Seoul-Acc
ttena-ass-ta.
leave-Pst-Dec
'Immediately after Yenghi left Seoul, Chelswu left Seoul too.'

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    [2] Following Lee Philyoung (personal communication) and Yoo (2002), I assume that even though they are semantically coordinative, the first VP is a subordinate unit and has an adverbial function in syntax.

   c. Chelswu-ka   [yelsimhi kongpwuha-(*ass-)-koto]   ku sihem-ey
      Chelswu-Nom   hard   study-(*Pst)-though   the test-in
      tteleci-ess-ta
      fail-Pst-Dec
      'Though he studied hard, Chelswu failed in the exam.'

                                                        [Lee 2001: (1)]

In all the corresponding English cases, the past tense is marked morphologically.
    Secondly, there are cases where tense markers are optional. Consider the following sentence with a "contemporary listing" reading (Yoo 2002).

  (6) a. Chelswu-ka pap-ul   ha-(-ess)-ko   Yenghuy-ka kwuk-ul   kkulhi-ess-ta.
        C.-Nom   rice-Acc do-(Pst)-and Y.-Nom   soup-Acc   boil-Pst-Dec
        'Chelswu cooked rice and Yenghuy made soup.'

                              [J.-M. Yoon 1996, (4b), with slight modification]
      b. [VP[VP Chelswu-ka pap-ul ha-(-ess)]-ko [VP Yenghuy-ka kwuk-ul
         kkulhi]]-ess-ta.

In (6a), the verb in the first conjunct can be marked with *-ess* 'past' optionally, while the second verb must be tense-inflected. Initial attempts to describe this were made in J. H.-S. Yoon (1993, 1994, 1997) and J.-M. Yoon (1996); (6a) was analyzed as involving a VP coordination as in (6b), and the tense of the two VPs is determined by the tense morpheme[3] which c-commands them. This analysis predicts that in such a *ko*-conjunction, the first conjunct will always have the same tense interpretation as the second one; this, however, was shown by Chung (2001) to be false. Consider example (7).

  (7) apenim-un caknyen-ey   kyot^{h}ongsako-lo   tolakasi-ko
      father-Top   last+year-in   traffic+accident-due+to   pass+away-and
      emenim-un   cikum   pyeng-ulo   nwuwe   kyesi-n-ta.
      mother-Top now   disease-due+to   lie+in+bed   be+Hon-Pres-Dec
      'My father passed away in a traffic accident last year and my mother is now lying in bed due to an illness.'

                                   [Chung 2001: (10a)]

This example shows that the conjuncts in question can have different tense

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    [3] The verb in the second VP (*kkulhi-* 'to boil') was to combine with the past tense morpheme (*-ess*) later at a phonetic level.

interpretations, which is especially clear when they contain temporal adverbials for different temporal periods. Following Chung (2001), we will assume that they involve functional projections higher than VP, perhaps TPs.

There are also cases of subordinate clause where tense is optionally marked.

(8) a. Chelswu-ka   ku il-ul   ha-ki   ttaymwun-ey na-to ku il-ul
       Chelswu-Nom   the thing-Acc do-Nml   reason-at   I-too the thing-Acc
       ha-ess-ta
       do-Pst-Dec
       'Since/because Chelswu did the thing, I did the thing too.'
    b. Chelswu-ka   ku il-ul   ha-yess-ki ttaymwun-ey na-to
       Chelswu-Nom   the thing-Acc do-Pst-Nml reason-at   I-too
       ku il-ul ha-ess-ta
       the thing-Acc do-Pst-Dec
       'Since/because Chelswu had done the thing, I did the thing too.'

[Lee 2001: (4)]

When it is not marked with tense (8a), the temporal location of its content situation is determined by the matrix clause tense; when it is, the "past-shifted" reading (En ç 1987) obtains as shown in its translation.

Though a past tense on an episodic eventive verb embedded in a past matrix clause has the past-shifted reading in both languages (9a-b), thirdly, Korean is different from English in interpreting tense morphemes on stative or habitual verbs occurring in the same embedded context (10a-b). (9a) and (9b) have the same interpretation, where Sam's leaving occurred before Max's reporting in the past (the past-shifted reading).

(9) a. Max said that Sam left.
    b. Max-ka   Sam-i   ttena-ess-ta-ko   malha-ess-ta.
       Max-Nom   Sam-Nom   leave-Pst-Dec-Comp say-Pst-Dec

In English, even when the complement clause expresses a situation that holds at the present moment, its tense can be marked past under the influence of the tense of the matrix clause, as in (10a) [the "sequence of tense" phenomena, Comrie 1985]. In Korean, as in (10b), however, that situation must be expressed in the present tense even under the past matrix context.

(10) a. Copernicus believed that the Earth moved around the Sun.

b.*C-nun cigwu-ka hay cwuwi-lul   tol-ess-ta-ko   mitessta.
   C-Top Earth-Nom Sun circumference-Acc turn-Pst-Dec-C   believed
   'C believed that the Earth moved around the Sun.'

In (10b) the present-tense morpheme -*n*- must be used in place of the past morpheme -*ess*-.

  Closely related to this, fourthly, is that a present tense in English must be interpreted, as in (11a), as denoting a time span including the time of utterance as well as the period of John's believing (the "double access" reading; Abusch 1994), which is not the case in Korean. When the complement clause is in the present tense, as in (11b), the content situation is determined by the matrix clause tense to be located in a past, present, or future time period.

(11) a. John believed that Mary is pregnant.
     b. C-nun [Y-ka   ku chayk-ul   ilk-nun-ta-ko
        C-Top T-Nom   the book-Acc   read-Prs-Dec-Comp
        malha-{-n-/-yess-/-l kes-i-}-ta
        say-{-Prs-/-Pst-/-Rel KES-be-}-Dec
        'C says that Y is reading the book.'/ 'C said that Y was reading the book.'/ 'C will say that Y will be reading the book.'

                                                    [Lee 2001: (10-12)] [4]

  Quoting Abusch (1988), Stowell (2007) notes that when a relative clause is embedded within the complement of an intensional verb and has a *de dicto* reading[5], it allows "dependent" interpretations (the shifted-past and the simultaneous readings) such as are found with complement clause tense.

(12) a. Terry thought [that a woman [who lent me her car] was in your office].
     b. Sam claimed last week [that Max gave some money to a panhandler [who was sitting on the sidewalk]].

Under the *de dicto* readings of the relative clauses, in (12a), the car lending is

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[4] If the past tense marker is added in a complement clause in (11b), it brings forth the effect of locating the situation of C's reading the book in a time span prior to that of the matrix clause (the past-shifted reading).

[5] This reading expresses a description attributed to the subject of the intensional verb. The reading is discussed in contrast to the *de re* reading, where the relevant description is attributed to the speaker.

ordered before terry's thinking (the shifted past reading); in (12b), while Sam's claim is ordered before or within the time span for the panhandler's sitting on the sideway (the shifted past or simultaneous reading). Let us note that at least (12b) can be translated into Korean with a present-tense relative clause with the simultaneous reading preserved.

In a complement clause in Korean, fifth, the future or past tense devices are compatible with adverbials referring to a different time band.

(13) a. na-nun kucey   [Y-ka   ecey
         I-Top   the+day+before+yesterday Y-Nom yesterday
         o-l   kes-i-la-ko]   malha-yess-ta.
         come-Comp+Fut KES-is-Dec-Comp say-Pst-Dec
         'I said the day before yesterday that Y would [Lit. *will] come yesterday.'
      b. ku-nun nayhwunyen-ey   myencep-ul   ha-myense,
         he-Top the+year+after+the+next+one-in   interview-Acc   do-while
         naynyen-ey tayhak-ul colepha-yess-ta-ko   malha-l   kes-i-ta
         next+year-in college-Acc graduate-Pst-Dec-Comp say-Comp KES-is-Dec
         'While being interviewed the year after the next one, he will say that he is
          going to be [Lit. *was] graduated from the college next year.'

                                                                     [Lee 2001: (13)]

Notice that in (13a) 'will' is related to 'yesterday' and that in (13b) 'was' is related to 'next year', which are impossible in English. This impossibility seems to be a typical property related to the sequence of tense property of the English language.

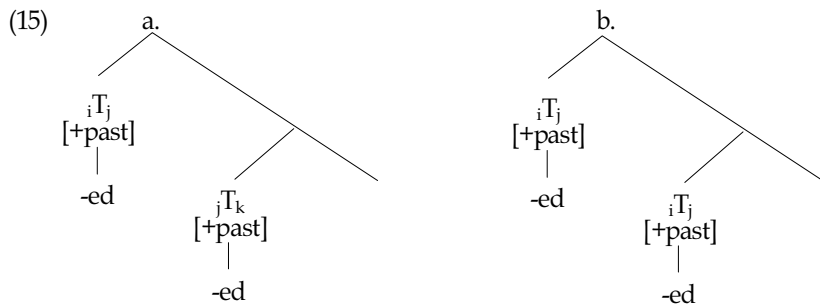2.1.3. A theoretical treatment of tense and the sequence of tense phenomena

Tense was noticed to have a pronominal property (Partee 1973), an operator property (Prior 1968), or a predicate property (Reichenbach 1947). Revising En ç (1987) to embrace empirical challenges which are not directly related to the current discussion, Enç (2004: (11)) proposes the following theory:[6]
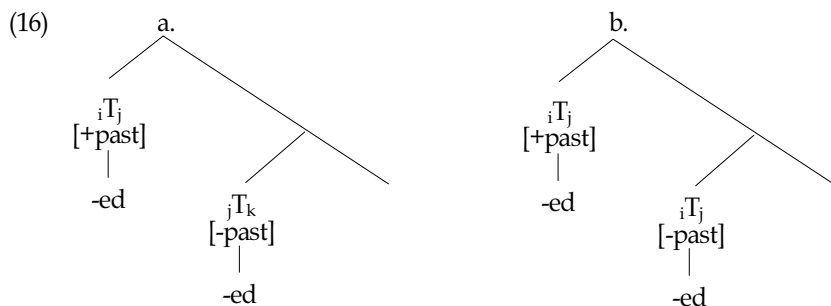
    (14) Anchoring conditions

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    [6] We have substituted T for her I; we basically adopt Enc's theory here leaving the possibility open to translate the discussion into those under other theories on the syntax of tense (cf. Guèron & Lecarme (2004), Stowell (2007), and works cited in their references), since their theoretical evaluation is beyond the scope of the current discussion.

a. All Ts carry two temporal indices: an index, which yields the evaluation time of T (Reichenbach's reference time, RT); and a referential index, which yields the time (Reichenbach's event/state time, ET) at which the situation described by the sentence holds. Given $_iT_j$, i is the evaluation index and j is the referential index.

b. All Ts must be temporally anchored.

c. A T is temporally anchored if and only if

   i. it is bound by the local c-commanding T (through its referential index), or

   ii. its evaluation time is bound by the local c-commanding T, or

   iii. its evaluation time is fixed as the speech time when there is no local T to bind it.

d. Only Ts with the feature [+past] can bind other Ts.

In this theory, the English -ed specifies that $i \neq j$, and that if it shifts, it shifts to the past and $j < i$. Then, (15a) has the matrix ET index j bind the subordinate RT index j, so it represents the shifted reading because $k < j$. (15b) has the matrix T bind the subordinate T, so it represents the simultaneous reading. In both cases, the matrix RT index i is always identified with the utterance time (UT).

(15)

a.

$_iT_j$
[+past]

-ed

$_jT_k$
[+past]

-ed

b.

$_iT_j$
[+past]

-ed

$_iT_j$
[+past]

-ed

When a [+past] matrix clause has a [-past] complement clause (11a), as in (16), let us assume that the English [-past] tense is lexically specified to be evaluated with regard to the UT. This means that the pattern of indices in (16a) is impossible, so the other pattern in (16b) is the remaining option: The [+past] T binds the [-past] T. Further, the [-past] T will have the lexical specification that $i \in j$, producing the correct "double access" reading.

(16)   a.   b.

$_iT_j$ $_iT_j$
[+past]   [+past]
  | |
-ed $_jT_k$ -ed $_iT_j$
               [-past]   [-past]
                  | |
                -ed   -ed

How can this theory describe the Korean tense pattern? When a [+past] verb is embedded in a [+past] clause, the first must have a shifted reading, which requires that (15b) be impossible. Enç (2004) stipulates that the Japanese [+past] morpheme *-ta* cannot be bound. The same lexical specification will be applied to the Korean *-ess-*. On the other hand, a Korean [-past] tense embedded in a [+past] clause can have a simultaneous reading. This can be captured by specifying that unlike its English counterpart, the Korean [-past] tense is not necessarily evaluated with regard to the UT. With the index pattern in (16a), abstracting from directionality, it will have the simultaneous reading; with the other index pattern in (16b), it will produce the double access reading. The crosslinguistic difference between English and Japanese/Korean will be summed up as follows:

Table 1. Different Crosslinguistic Patterns of Morphological Realization

	+past	-past (i, j)
English	can be bound	i = UT; i ∈ j
Russian/Japanese/Korean	cannot be bound	i ∈ j

Stowell (2007) discusses interpretation of tense in a relative clause and notes that a tense has a dependent (past-shifted or simultaneous) reading at least when the relative clause containing it has a *de dicto* reading, where the descriptive content of the relative clause is attributed to the matrix subject. A treatment parallel to those for the previous cases will be possible for the dependent reading of relatives.

Translating Chung's (2001) into Enç's (2004) theory, we will assume that the head T of the Korean language can be [u past] which will have no morphological label. Then, we can describe those instances in (5)-(6) by saying that the C's *-se*, *-ca*, and *-koto* in (5) select for a [u past] TP, while *-ko* in (6) can.

This will produce a simultaneous reading unless forced otherwise contextually.

2.1.4. Learning points in the acquisition of the English tense system by L1
       Korean speakers

Summarizing the English-Korean comparison thus far in the tense system, we can identify the following five points that L1 Korean learners of L2 English must internalize.

- (A) The English -*ed* is a past tense marker and is more limited than its L1 counterpart -*ess*.
- (B) English has a separate syntactic device marking the perfect aspect or locating a situation that occurred in the past in a time span including the present moment [Past Tense-Present Perfect Distinction].
- (C) English is more restricted in using the historical present.
- (D) The English [+past] tense can be bound.
- (E) The English [-past] must be evaluated with respect to the UT.

2.2. Previous studies on tense acquisition by L1 Korean learners of L2 English

Previous studies on L2 English tense acquisition by L1 Korean learners can be grouped into two: Studies in one group compare L1 Korean and L1 Chinese learners of English, while those in the other focus on L1 Korean learners of L2 English.

2.2.1. Comparison of L1 Chinese and L1 Korean learners of English

Kim (2001) administered a cloze test and two story-telling tasks to Korean and Chinese learners of English at the graduate level; the Korean group generally used the past tense forms better than the other, but the two groups showed no statistically significant difference except with stative predicates in the story telling task based on the movie script (almost 80% vs less than 50%).

Park (2004b), on the other hand, tested 111 Korean college students and 154 Chinese college students; he found out that Korean students were better than Chinese students at recognizing and using the past tense forms; the two groups' performance was reversed with regard to perfect aspect forms. These studies showed that Korean learners of English tend to be "weaker" at the acquisition of the perfect aspect system than of the past tense system [Learning Point B].

2.2.2. Studies on L1 Korean speakers' use of the past tense

Hahn (2005) studied diary entries in English on any topics produced by 2nd-year non-English-major university students (with novice-mid or novice-high proficiency levels in the ACTFL guidelines for speaking). She classified the subjects into 3 groups characterizing their writings with the two properties: [+/-SVO] (word order) and [+/-Subject] (overt subject). Her results include the observation that Groups 1, 2, and 3 provided past tense forms in about 50%, 60%, and 80% of the obligatory past contexts.

A similar survey was done with a different task for college students by Park (2004a). He administered a 12-item cloze-type test to 111 Korean learners of English classified into three groups based on their placement test results (55 beginners (56-68 scores; group 1), 33 intermediate learners (69-75 scores; group 2), and 23 advanced learners (76 or more scores; group 3); all college students) and to 18 native controls. He obtained the result that the subjects used past tense forms in the 83% of their obligatory contexts, while their correct use of present perfect forms reached only up to 46% [Learning Point (B)].

Lee's (2005) study was more comprehensive in selection of subjects. She selected not only 60 non-English-major university students (group 1), but also 10 English-major graduate students (group 2) and 10 college teachers who spent 5 years or more in an English-speaking country for their PhD's (group 3). Then, she gave them a task where they were asked to modify given bare-verb cues and fill the given "verbal group" blanks in 20 sentences that were presented along with their Korean translations. The following 3 items were in the category of the past tense.

(17) a. My father (was) a teacher when he was young.
     b. He usually (got up) at five o'clock in those days.
     c. After he (finished) supper, he began to read the novel.

This research produced the following results: that Group 1 committed errors on 52% of the obligatory contexts; group 2, 50%; and group 3, 27%. The details of the errors are given in the following table:

Table 2. Tense-Aspect Errors by Korean Learners of English

Groups Items	1 (n=60)		2 (n=10)		3 (n=10)	
	Divergences	Freq (%)	Divergences	Freq (%)	Divergences	Freq (%)
(17) a	had been	9 (15)	had been	3 (30)		
	has been	7 (12)	has been	1 (10)		
	is	7 (12)				
	has	2 (3)				
(17) b	get up	18(30)				
	gets up	11(18)	gets up	6 (60)	gets up	4 (40)
	has gotten up	5 (8)				
(17) c	finish	13(22)			finishes	1 (10)
	had finished	10(17)	had finished	3 (30)	had finished	3 (30)
	has finished	5 (8)	has finished	2 (20)		
	had finish	2 (3)				
	have finish	3 (5)				
	has finish	1 (2)				

[Lee 2005: 161]

She counted *had finished* as a wrong answer for (17c), but it can be controversial because it can be perfectly used to describe a past event which occurred before a temporal point in the past. If we deduct the frequencies of the sequence, the three groups' error rates are adjusted as follows: group 1, 40%; group 2, 33%; and group 3, 17%.

In summary, the three studies reviewed thus far showed that L1 Korean L2 English learners eventually use correct past tense forms in around 80% of their obligatory contexts, which is roughly in accord with the report by Johnson & Newport (1989) that US immigrants who immersed three or more years in English from their age of 17 or later showed more than 25% rate of errors with the past tense.

Table 2, however, reveal some aspects in use of the past tense which are more relevant to the present concern: Expectably by now, first, many divergencies are observed especially in non-advanced levels with regard to the distinction between the past tense and the present perfect aspect [Learning Point (B)]: *has been, has gotten up,* and *has finished* were, for example, chosen in place of past forms.

With regard to (17c), second, 22% of the basic level learners chose the bare or present-tense form *finish,* instead of its past tense form to produce (18c) below

[Learning Point (D)]. This form will be expected if the learners haven't learned the inflectional morphology of English yet, or if they are still under the influence of their mother tongue and don't fill in appropriate tense morphemes especially when they are in the scope of a higher tense operator.

To fill in the blank in (17a), which has a past-tense adjunct clause, third, 12% of the basic level learners preferred the present tense form *is* to produce (18a), and to fill in the blank in (17b), which has a PP denoting a period of time in the past, further, 48% of the basic level learners and 60% of the intermediate level learners favored the non-perfect present-tense forms *get(s) up* to produce (18b). These results in fact indicate that even learners who have acquired a system of tense inflection failed to use past tense forms correctly. Both of these, further, are "novel" forms not to be indorsed by the grammar of their L1 Korean nor of their L2 English. This strongly suggests that Korean learners of English develop novel tense systems which are not directly found in their L1 or L2 grammar.

(18) a. My father is a teacher when he was young.   [M -past [Sub +past]][7]
     b. He usually get(s) up at five o'clock in those days.   [M -past [PP +past]]
     c. After he finish supper, he began to read the novel.   [[Sub -past] M +past]

Based on these observations, we can make the following predictions: (i) Regarding Learning Points (A)-(E), (some) Korean learners will develop a tense system that reflects some properties of their L1 Korean tense system at some point of their syntactic development: e.g., (18c); (ii) they (or some of them) will develop a tense system that allows the examples in (18a) or (18b) or both. Then, we can ask the following questions:

Question 1: Will these predictions be born with an individual learner of English?
Question 2: Are forms as in (18a-c) still UG-constrained?

This research will be an attempt to answer these questions.

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[7] In this paper, *M(ain)* and *S(ub)* stand for matrix and subordinate clauses, respectively.

3. The Method

3.1. The Subject and Data

The subject of this study came back to college after two years of military service, during which he had little chance to use English. His nine writings were collected as part of his college course work in the spring semester, 2005.

As a set of assignments, students including the subject, who took English Syntax, were asked to write and submit learner journals on any topic related to the course or anything else. Five points were allotted to 10 journals submitted: 0.5 points per a submission. This means that students submitted their journals almost every week except for the mid-term and final examination periods.

3.2. Data treatment

All finite forms of the verbs in the nine writings were tagged as <V: prs> ('present') or as <V: pst> ('past'). Progressive forms were not separately tagged, so past progressives were regarded as past-marked. Subject-verb errors were generally disregarded. Obligatory past contexts were identified mainly on the basis of their contextual meanings, and an asterisk was added to incorrect forms so that *prs** and *pst** represent overused present tense and past tense, respectively. When cases were not clear, I interpreted them as fairly as possible. Last of all, I consulted Roger Hawkins about cases I cannot make a firm decision on.

The ratios of suppliance in obligatory contexts were calculated by the formula of *pst*/(*prs**+*pst*): that is, by dividing the number of *pst*'s by the summed number of *pst*'s and *prs**'s.[8] This formula didn't involve the number of over-used past tense morphemes (*pst**'s). If the over-used cases are included, the participant's use of past tense will get worse in accuracy.

Subordinators and complementizers were tagged as <Comp>, <Comp: Zero>, <Conj: sub>, or others to indicate the syntactic environments of the finite verbs. Along with the corpora characteristics of the files containing them, then, their occurrences were collected with the concordancer of Wordsmith 3.0, file by file, and were counted manually by the researcher. Then, relevant percentages were calculated using the MS Excel program.

The divergent forms in the obligatory past contexts were also classified on

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[8] Cases of present tense over-use and past tense over-use were deducted from the numbers of *prs**'s and *pst**'s.

the basis of their syntactic environments into the following 11 types: (i) the main clause verb that is incorrectly marked as non-past (**Main-**), (ii) the complement clause verb that is incorrectly marked as nonpast (**Comp-**), (iii) the main clause verb that is incorrectly marked as non-past and is preceded by an adjunct subordinate clause with a past-tense verb (**Sub+, Main-**), (iv) the incorrectly non-past marked verb in an adjunct subordinate clause that precedes the main clause verb in the past tense (**Sub-, Main+**), (v) the incorrectly non-past marked verb that is in an adjunct subordinate clause which follows the main clause past-tense verb (**Main+ Sub-**), (vi) the incorrectly non-past marked verb in the main clause that precedes a subordinate clause with a past-tense verb (**Main- Sub+**), (vii) the incorrectly non-past marked verb in the main clause that is preceded by a relative clause with a past-tense verb (**Rel+ Main-**), (viii) the incorrectly non-past marked verb in a relative clause preceding the main clause verb that is in the past tense (**Rel- Main+**), (ix) the incorrectly non-past marked main clause verb preceding a relative clause with a past-tense verb (**Main- Rel+**), (x) the incorrectly non-past marked verb in a relative clause that follows the main clause verb in the past tense **(Main+ Rel-)**; and (xi) an incorrectly non-past marked verb in a "coordination" structure (**Coor-**).

The (Main- PP+) type as in (18b) was not counted, and vague cases like the following were excluded as well:

(19) a. I thought I will do well in class but couldn't <Aux V: pst> understand lecture at all. [Journal 1]
  b. I knew that most fo my friends don't think so. [Journal 2]
  c. When I said I still do the chores, they made a strange expression. [Journal 2: present habit?? RH]
  d. I had a great experience and knew that there are still many people who fought for justice. [Journal 3]

As Roger Hawkins (personal communication) pointed out, without *that* the complement clause in (19a) can be regarded as a case of direct report; the complement clauses in (19b) and (19d) might have been valid at the time when it was used; and the complement clause in the adjunct clause in (19c) might have described the then habit of the writer. I have conservatively excluded such examples. I also disregarded irrelevant cases such as *liked* below in (20a) or V-*ed* forms with a clearly passive reading such as *punished* in (20b).

(20) a. I still didn't liked her [Journal 4]

   b. If I didn't eat, I punished. [Journal 2]

Then, the ratio(s) of suppliance in the obligatory contexts were calculated. Finally, then, the divergent cases were analyzed qualitatively and discussed.

4. Results and Discussion

4.1. Frequency data

In terms of size, as in Table 3, the subject's writings contained 2734 word tokens, 749 word types, 233 sentences in total. 307 obligatory contexts for past tense were identified by the researcher mainly based on their contexts, and 275 past tense forms were found to have been supplied in the nine writings. The subject began supplying the correct forms in 75% of the obligatory contexts. From his fourth journal, he generally came to supply the correct past tense in more than 90% of the obligatory past contexts, except in Journal 7; by then, he perhaps had "restored" his pre-soldiership writing skill. The general trend of improvement is graphically represented in Figure 1 below. The mean of the suppliances in the obligatory contexts is 90%.
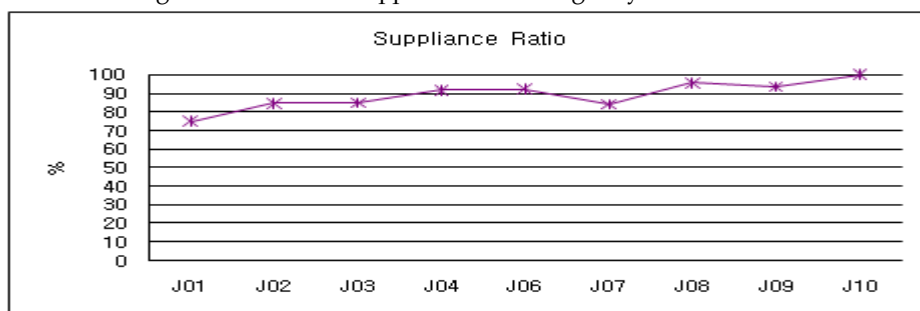
Table 3. Corpus Details and Rates of Suppliances in Obligatory Past Contexts [9]

	J01	J02	J03	J04	J06	J07	J08	J09	J10	Total
Tokens	205	403	245	368	356	393	345	301	118	2734
Types	108	177	132	173	181	178	172	143	80	749
Sentences	19	29	24	37	36	31	30	16	11	233
OPC	4	13	46	49	65	44	23	47	12	307
SOC	3	11	39	45	60	37	22	44	12	275
OU(past)	3	0	0	3	0	2	0	1	0	9
UC(past)	0	2	1	0	0	1	0	1	0	5
SOC/OPC*100 (%)	75	85	85	92	92	84	96	94	100	90

Even with the most stringent criterion on acquisition (Brown 1973), we can conclude that he had acquired the past tense form -*ed* in his L2 English [Learning Point (A)].

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[9] This table uses the following abbreviations: OPC ('the number of obligatory past contexts'), SOC ('the number of supplied past forms in the obligatory past contexts'), OU(past) ('over-used cases of past tense'), and UC(past) ('unclear cases of past tense').

Figure 1. Rates of Suppliances in Obligatory Past Contexts

4.2. Qualitative data

In this section, we will examine the qualitative data regarding the acquisition of the past-tense more closely. Before we move on, a couple of comments are in order on cases which will not be considered seriously. The participant produced a few cases which seem to suggest that he hasn't quite acquired the perfect aspect system. Examine the following cases.

(21) a. I had lived in Gwang-Ju since I have been born. [Journal 4]
b. I couldn't watch the basketball game since I have live in Seoul to go to college.
c. Since I have came back school, I didn't go hometown because of school life and mid-term exam.

(21a) shows that the participant used *have been* in the environment where the past-tense form *was* should have been used respectively. Similar comments can be added for the remaining two cases.

The small corpus also included the following sentence, which might be taken as suggesting something about the subject's knowledge of the historical present tense.

(22) I couldn't stand his behavior any more. I roar with anger "Are you cray?" [Journal 3]

All these cases, however, are regarded as constituting no sufficient ground for any firm conclusion.

This much said on such data, we now turn to the data of divergence in the

obligatory past-tense environments, in view of their complex syntactic environments.

4.2.1. In verb phrasal conjunction type 1: $[[_{T'} \; ... \; [\text{-past}] \; ...] \; \text{Conj} \; [_{T'} \; ... \; [\text{+past}] \; ...]]$

The data of verb phrasal conjunction type 1 include conjoined T's whose first conjuncts have bare verb forms which seem to depend on the past tense marking in the seconds.

(23) a. ... they calm down and came to me. [Journal 3]
    b. Next day, we see Soando and left for home. [Journal 6]
    c. I thought my father seemed to think that teacher is low social status and wouldn't earn a lot of money. [Journal 9]

In (23a), for example, the first conjunct contains a non-past form (*calm*) while the second contains the past-tense form (*came*). Note that this pattern is distributed quite widely over journals 3, 6, and 9.

4.2.2. In adjunct clauses

The data showed cases of divergence in adjunct clauses when their matrix clauses are past-marked. Consider the following three types of cases.

(24) **Main+ Sub-** $[_{CP} \; [_{TP}... \; \text{+past} \; ... \;][_{CP} \; ... \; \underline{\text{-past}} \; ...]]$
    a. ... I refused the chores because I just don't want to do it. [Journal 2]
    b. I had lived in Gwang-Ju since I have been born. [Journal 4]
    c. I couldn't watch the basketball game since I have live in Seoul to go to college. [Journal 7]
(25) **Sub-, Main+** $[_{TP} \; [_{CP} \; ... \; \text{-past} \; ...] \; [_{TP} \; ... \; \text{+past} \; ...]]$
    I was desperate that no matter how do my best, my record didn't improve. [Journal 9]
(26) **Main+ Rel**- $[_{CP} \; ... \; \text{+past} \; ... \; [_{DP} \; ... \; [_{CP}... \; \text{-past} \; ...]]$
    She ,also, helped people who live in our village. [Journal 4]

In the examples in (24) and (25), in whichever order they occur, the main verb is past-marked while the adverbial clauses are non-past marked. In (26), the verb in the relative clause is non-past marked.

4.2.3. In complement clauses

Divergent forms occur in complement clauses. When the matrix verb is past-marked, verbs in this environment are sometimes non-past marked.
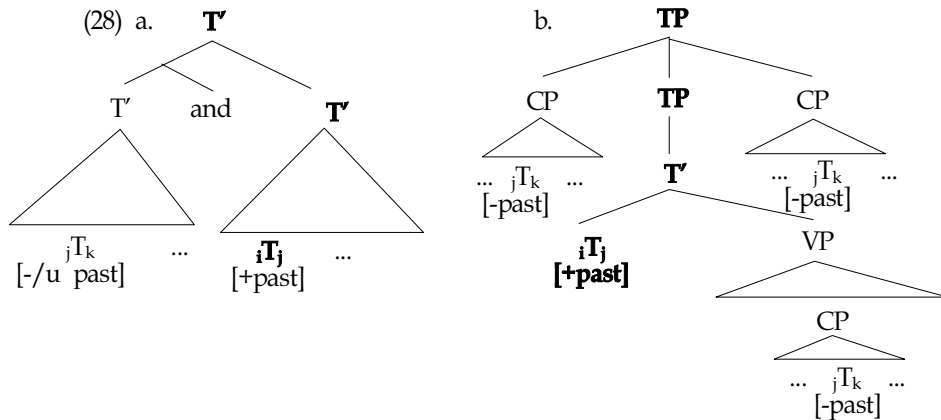
(27) **Complement Clauses**   [CP ... +past ... [CP ... -past ...]]
      a. I thought her mouth have no time to rest. [Journal 4]
      b. I thought that dark sea is very beautiful. [Journal 6]
      c. I thought that they have no sympathy. [Journal 6]
      d. But the important thing was that there has no sleep. The house had only one room. [Journal 6]

The L1 presence and L2 absence of the property that a [-past] tense need not be linked to the UT is most typically related to this complex environment which involves a complement clause. In (27a), for example, the embedded verb *have* is in a non-past form, while the matrix verb *thought* is in the past tense.

In summary, concerning Learning Points (D)-(E), we can conclude that the subject's grammar still seems to have an L1 Korean characteristic of the lexical specifications of tenses, so that the [+past] tense is marked with the main clause verb while the [-past] tense is suppressed in other subordinate clauses in its scope. In this analysis, regarding the divergences in verbal conjunction type 1 (presented in section 4.2.1), we surmise that the participant mapped the Korean type of verb phrasal conjunction onto his L2 English parsing where the second conjunct is regarded as heading the entire coordinate phrase and the T there functions as the binder of the T in the adjunct verbal phrase. If this is the case, the conjunction *and* will combine with the first conjunct making it a kind of "adjunct" (28a).[10] This is in accord with the fact that a Korean conjunction is a bound suffix and must form a constituent with its first conjunct.

For the divergences in adjunct and complement clauses (presented in sections 4.2.2 and 4.2.3), we can say that the ET index of the matrix T functions as the binder while the RT index of the T in an embedded clause functions as a bindee (28b). In these analyses, the T-projections that have the widest scope are marked in thick letters.

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[10] As pointed out by a *Studies in Generative Grammar* reviewer, the previous analysis that presumed the conjunction *and* to take the second T-phrase as its complement was not explicit as to how the second conjunct heads the entire structure.

(28) a.

```
            T′
          /    \
        T′   and   T′
       /  \        /  \
     jTk    ...   iTj    ...
  [-/u past]    [+past]
```

b.

```
                    TP
                /    |    \
            CP      TP      CP
           /  \      |      /  \
      ... jTk ...    T′   ... jTk ...
        [-past]     /  \     [-past]
                  iTj    VP
                [+past]  /  \
                        CP
                       /  \
                   ... jTk ...
                     [-past]
```

That is, both cases can be described in terms of Enç's index binding if c-command is defined in terms of m-command.

This aspect will support any theory that recognizes transfer in second language acquisition, e.g., Schwartz & Sprouse's (1994, 1996) Full Transfer Full Access Hypothesis or others'. That is, the participant seems to preserve the parameter setting of the Korean lexical specifications and attribute them to the English tenses (cf. Table 1).
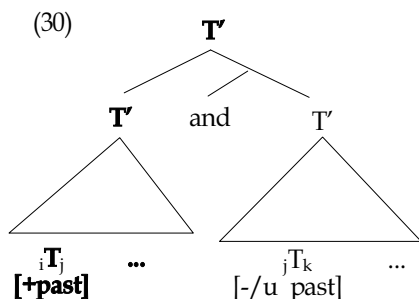
4.2.4. Novel aspects of the inter-language tense system

What is interesting about interlanguage grammars is that they seem to have properties which are not attested in the learners' mother tongues or target languages. The subject of the present study also produced cases of divergence which are not found in Korean or English.

(29) **verb phrasal conjun**ction **Type 2**: $[[_{T'} \ldots +past \ldots]$ Conj $[_{T'} \ldots [-past] \ldots]]$
    a. I ignored them and take a piss. [Journal 3]
    b. ... one of them shot up the cigarette smoke to me and grind a cigarette butt under his foot. [Journal 3]

Observe that in (29a), for example, the first conjunction has a [+past] verb while the second has a [-past] or [u past] verb. This pattern is not allowed in his target language, which requires both to be [+past]-marked. It is not allowed in his mother tongue, either, where the second conjunct is [+past]-marked while the first can be [-/u past]-marked. This pattern will be conceivable, for example, only

when we say that the headedness parameter has been reset but the lexical specification parameter hasn't yet.

(30)

In (30), the first conjunct is analyzed as the head unit while the second along with the conjunction *and* functions as an adjunct. This is an analysis presuming a Korean influence on the subject's inter-English grammar.

Although this does not sound unreasonable, this perhaps might not show the correct picture. This is so because the participant produced the cases in (31), which cannot be analyzed in a parallel way. Here, the adjunct clauses contain past-tense verbs which precede [-/u past] marked matrix verbs.

(31) **Sub+, Main-**   cf. (18a-b)
   a. when I was at home alone, I have to set the table and eat. [Journal 2]
   b. When we arrived at the theater, there are filled with people to see a movie. [Journal 3]
   c. When I arrived no one is home. [Journal 7]
   d. Even though Suns lost the game, I really enjoy the watching game. [Journal 7]
   e. While we went around to buy it, I envy him. [Journal 8]

This pattern, which was found in M.-A. Lee's results presented in Table 2 and (18) as well, is observable neither in English nor in Korean.

In an abstract sense, this type of marking is found in Chinese: A dependent element denotes a time period in the past as in (18b) and the (matrix) verb is not explicitly marked as past. C and T share the tense feature (Stowell 1981, Chomsky 2005). This means that adjunct clauses in (31) are marked [+past], and seem to be functioning as the temporal markers of the matrix clauses. This is a

type reminiscent of (18a).[11]

A third type of novel pattern is found when the relative clause is in the past tense and the matrix is in a non-past tense.
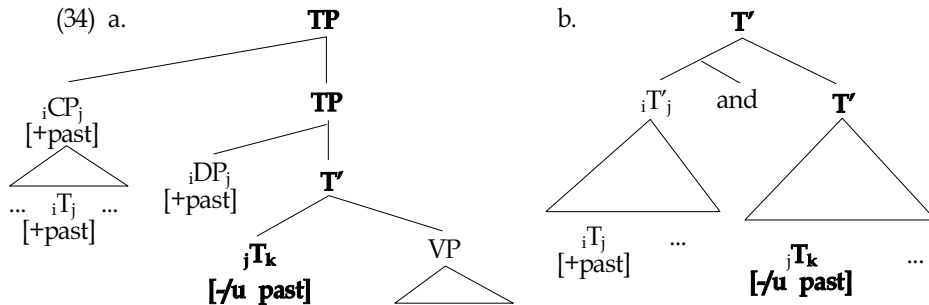
(32) Rel+ Main-
        ... other people who took a piss in the toilet help me. [Journal 3]

The relative clause is not directly related to the matrix verb, so this case apparently looks more problematic than those in (31). It, however, can be related to the fact that DPs are sometimes marked for temporal information.

(33) the then prime minister; the meeting last year; ...

Then, a DP containing a past-marked relative clause must be regarded as marking [+past] as well, so that [*other people who took a piss*] in (32) is a [+past] DP. Then, we can describe the structural properties of (31)-(32) as in (34a), and reanalyze (29) as in (34b).

(34) a.

$$\text{TP}$$

- $_iCP_j$ [+past]
  - ... $_iT_j$ ... [+past]
- TP
  - $_iDP_j$ [+past]
  - T′
    - $_jT_k$ [-/u past]
    - VP

b.

$$\text{T′}$$

- $_iT'_j$
  - $_iT_j$ [+past] ...
- and
- T′
  - $_jT_k$ [-/u past] ...

In this analysis, the dependents of T heads are marked for the [+past] tense and the heads are marked [-tense] or not morphologically marked at all. This assimilates an aspect of the partcipant's tense system to that of Chinese. How can we make sense of the situation that the L1 Korean learner of L2 English seems to have developed a pseudo-Chinese tense system?

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[11] An alternative analysis was proposed by a reviewer where the past tense morpheme indicates "event time differences between two clauses". Regarding the present case and (31b-c), the reviewer comments, "Even if both events are located in the past, the learner seems to indicate that there is time difference between the two past events." This is an interesting possibility, but must be left for future pursuit.

4.3. A proposal on the acquisition of the L2 English tense system

As sketched in section 2, English allows its [+past] T to be bound by a higher [+past] T, whereas Korean does not. Examining the data from the participant in sections 4.2.1-4.2.3, then, we have observed that this micro-parametric difference seems to have a rather tenacious influence on acquisition of the tense system of English as a second language. We have further observed in section 4.2.4 that a set of potentially wild patterns of tense marking shows up, which we have dubbed as the pseudo-Chinese pattern. How does this pattern come to emerge? Let us begin our discussion by considering cross-linguistic tense marking differences in a single clause.

4.3.1. A typology of intra-clausal tense marking

In section 2, we reviewed that English and Korean are the same in that they have past tense morphemes. Whether or not there are dependent constituents denoting a specific period of time in the past, the two languages both have the matrix verbs [+past]-marked. Let us characterize them as [+head marking]. Some languages are different in this regard, however: In languages like Chinese, tense is not marked on verbal heads. Only temporal adverbials or discourse temporal settings are the devices to locate a situation temporally, so let us characterize such languages as [-head marking] (cf. Koopman's (1997) classification of Spec-Head configurations).

According to Comrie (1985: 31), there are languages where either the verbal head is marked for tense, or the sentence has a temporal adverbial, but not both. Mam is such a language: [+/-head marking], with a sort of a doubly-marked tense filter! Tense is indicated by sentence-initial particles: *ma* 'recent past' (35a) and *o* 'past' (35b).

    (35) a. ma   chin jaw tz'aq-a
          recent:past   I   up slip I:singular
          'I slipped (just now).'
       b. o   chin jaw tz'aq-a
         past   I   up slip I:singular
         'I slipped a while ago.'

When *eew* ('yesterday') is present, the particle *o* cannot be inserted (36a); when *maaky'* ('a while ago') is present, *ma* cannot be inserted (36b).

(36) a. eew   z-ul   aaj   nan   yaa7
         yesterday   he/he hither return ma'am grandmother
         'Grandmother came yesterday.'
     b. maaky'   ∅ -jaw   we7
        a:while:ago he up   stand
        'He got up a little while ago.'

The complementarity in the distribution of the tense particles and other temporal constituents is reminiscent of the Doubly-Filled Comp Filter (Chomsky & Lasnik 1977), if we assume that the particles are T heads.[12]

Comrie also notes that Jamaican Creole has a similar trait: Tense is marked on the verbal head; tense markers are optional (preferably omitted) when an overt adverbial of time location is present.

(37) a. mi en   a   sing
         I   anterior progressive sing
         'I was singing.'
     b. yeside   mi (?en)   a   sing
        yesterday I   anterior progressive sing
        'Yesterday I was singing.'

Though it might look slightly premature, let us assume that this mixed type exists between the English/Korean and the Chinese type of tense marking. Then, we will obtain a crosslinguistic pattern of tense marking as in Table 4.

Table 4. A Crosslinguistic Pattern of Tense Marking

Language	Morphological Tense Marking	
	Head	Dependent
English, Korean [13]	+	±
Chinese	-	+
Mam, Jamaican Creole	+	-
	-	+

One thing to notice regarding this pattern is that English and Korean have a

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[12] A firmer proposal must be made after a more thorough analysis is done concerning how such tense morphemes are related to the verbal heads.

[13] As pointed out in section 2.1.1, Korean is more flexible than English in interpretation of its tense morphemes, so perhaps a more elegant distinction may be necessary in this slot.

relatively more explicit way of marking tense: Whether there is a dependent providing temporal information or not, the head T is consistently tense-marked. To the contrary, Chinese, Mam, and Jamaican Creole seem to have a more efficient, non-redundant way of tense marking: Temporal information is provided either through the head or through the dependent, but not through both. Although its basis is not very strong, as mentioned in section 2, let us say that this distinction might reflect a macro-parameter which might be called [±efficiency-oriented]. In the tense marking in the matrix clause, English and Korean are [-efficiency-oriented] while the other languages in Table 4 are [+efficiency-oriented].

4.3.2. In complex sentences

In complex sentences, even when a T (or its index) binds another T (or its index), English has both Ts explicitly tense-marked; in contrast, Korean allows the bindee to be less explicitly tense-marked. Focusing on this difference, let us say that English is still [-efficiency-oriented] in embedded clauses, whereas Korean becomes [+efficiency-oriented] in there.

     At some point of his acquisition of its tense system, an L1 Korean learner of L2 English will inevitably notice this difference in embedded contexts: Unlike in his mother tongue, dependent clauses in English should be marked explicitly for the past tense when they have a simultaneous reading. This positive evidence will trigger resetting the micro-parameter in Table 1: from the Korean setting to the English setting. With alert learners, this experience will also trigger the resetting of the macro-parameter: from [+efficiency-oriented] to [-efficiency-oriented]. Not every learner, however, will be that astute. Some might have noticed that a dependent tense must be explicitly marked while they failed to notice the need to reset the macro-parameter of [±efficiency-oriented]. In that case, they might guess that English is [+efficiency-oriented] with explicit marking with dependent constituents: a pseudo-Chinese type that we observed in section 4.2.4 ([-head marking, +dependent marking]) will follow.

     Given this much, our participant seems to belong to the less astute group of L1 Korean L2 English learners. Since his grammar still occasionally allows the Korean micro-parametric setting, his inter-English might even look like it has a tense system of the Mam type: either the head T or a non-head is marked for tense. Of course, this may be a case of chronic optionality where alternative settings show up simultaneously in a transient fashion. Under this system, anyway, the novel cases in section 4.2.4. seems to be a version of Chinese tense

marking,[14] and it will alternate with the Korean type shown in sections 4.2.1-4.2.3. When it succeeds in switching completely into [-efficiency-oriented], then it will move into the English type.

Then, how should the type of (18b) be analyzed? Perhaps, the Chinese-type has spread from the cross-clausal realm onto the intra-clausal head-adjunct relation. As a reviewer points out, this is exactly what is expected if (some) Korean learners really adopt the Chinese value in the course of their acquisition of L2 English system of tense.

If the story imagined here is on the right track, we can say that acquisition of the L2 tense system by L1 Korean learners is still constrained by UG because the "wild" ingredient turns out to be more docile than expected.

4.3.3. Remaining cases

Remaining cases of divergence include the following:

(38) <u>Main-past</u>
    a. I'm discharged from the army services two month ago. [Journal 1]
    b. I couldn't stand his behavior any more. I roar with anger "Are you cray?" [Journal 3]
    c. She gave us to potatoes. It's very delicious. [Journal 6] [15]

Those in (38) have the present tense provided in the obligatory past contexts. (38a) seems to be focused on the resulting, present state. As a *Studies in Generative Grammar* reviewer pointed out, this looks of the same pattern as (18b) and is relevant to the core problem of the current discussion; we mention it here, though, because it was not clear how to calculate its ratio of suppliance in obligatory contexts.

(38b-c) seem to be cases where a tense marking in a sentence seems to have influence over a span of discourse, for which we would require a theory similar

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[14] A *Studies in Generative Grammar* reviewer convincingly argues that it is important to check how systematic the developmental stages are in the acquisition of the inter-English tense system, which will be possible in a future research that must be done in a longer term.

[15] In Journal 7, he produces two more cases of this type.
    (i) a. We had a drink. It's very cold.
       b. Anyway, it's sports weekend for me.
These cases may be anaylized in two ways: First, His interlanguage grammar may have the following correlation of contraction: *It's* = *It {is, was, ...}*. This means that "underlyingly" the three cases are not divergent cases. Alternatively, they are cases of the historical present tense.

to that for the modal subordination phenomenon as in (39) (Roberts 1989), where a condition is subordinated to a modal meaning, or to Suh's (1992) frame-elaboration hypothesis, which is to capture the phenomenon that a temporal frame is established first with a tense-aspect device and then its detailed actions or states are elaborated with another temporal device (40).

(39) a. If Edna forgets to fill the birdfeeder, she will feel very bad.
     b. The birds will get hungry.
(40) I've been to Paris last spring. I went to the museums, ...

We will leave this for a future research.

4.4. A Tense Acquisition Model for Korean Learners of English

Even though this case study cannot provide a very strong basis for the L2 English tense acquisition model for L1 Korean learners, as pointed out by *Studies in Generative Grammar* reviewers, the participant's tense system seems to have quite a clear pattern of tense-marking in complex sentences, which can reasonably be explained by means of transfer, the Universal Grammar theory of language acquisition, and Enç's (2004) theory of tense marking. This clarity tempts us to propose an initial approximant version of L2 English tense acquisition model for (some) L1 Korean learners.

In the L2 English grammar developed by the L1 Korean learner scrutinized in this study, the tense system seems to be formulated in two separate, though surely inter-related, tiers. In tier one, the past tense morpheme -*ed* is acquired in terms of its morphological, syntactic, and semantic properties, while in tier 2, the binding-related and more abstract properties of the tenses are acquired through resetting micro- and macro-parameters as in Figure 2.

In this model, the L2 English learner begins with the Korean-type tense system with the micro-parameter setting specified in Table 1: [+past] cannot be bound, and [-past] doesn't require that i=UT. This is realized as [+head-marking] in the matrix context, but as [-/u past] bindees in the subordinate context. At a more global level, the initial grammar will also have the [+efficiency-oriented] macro-parameter especially regarding the index binding of tenses and some other relevant properties such as agreement. Then, L2 English data are fed into the language acquisition device which exemplify the matrix [+head-marking] and the [+past] bindees in the subordinate context, and the [-efficiency-oriented] macro-parameter. On the one hand, the initial micro-parametric settings will be

transferred to the inter-English grammar; on the other, the English positive data will trigger resetting parameters; when the macro-parameter is maintained when the subordinate [+past] bindees are noticed, the learner may surmise that English is rather similar to Chinese in the tense system where the head T is not morphologically marked (cf. section 4.2.4). A continued encounter with English data will eventually help the learner to give up the wrong pseudo-Chinese setting and succeed at figuring out the target setting of the English language. Of course, astute learners will skip this pseudo-Chinese stage, and more rapidly and directly move toward the target setting.

Figure 2. A Parameter Resetting Model for the Acquisition of English Tenses

Korean Type
M: [+head marking]
S: [-/u past] bindee

 +efficiency-oriented

L2 English Data

M: [+head marking]
S: [+past] bindee

-efficiency-oriented

Korean Type
M: [+head marking]
S: [-/u past] bindee

 +efficiency-oriented

Chinese Type
M: [-head marking]
S: [+head marking]

The English Type
M: [+head marking]
S: [+past] bindee

-efficiency-oriented

A *Studies in Generative Grammar* reviewer of this work has suggested characterizing Korean as [-ST, -OTM][16] and English as having the positive value for both the "features", and has asked whether there is any implicational relationship between (the acquisition of) the sequence of tenses (or ST) rule and the overt/explicit tense marking (or OTM). This is a very interesting, empirical question whose answer will require an extensive empirical research. My hunch at the present moment is that OTM seems to be a necessary condition for the ST rule.
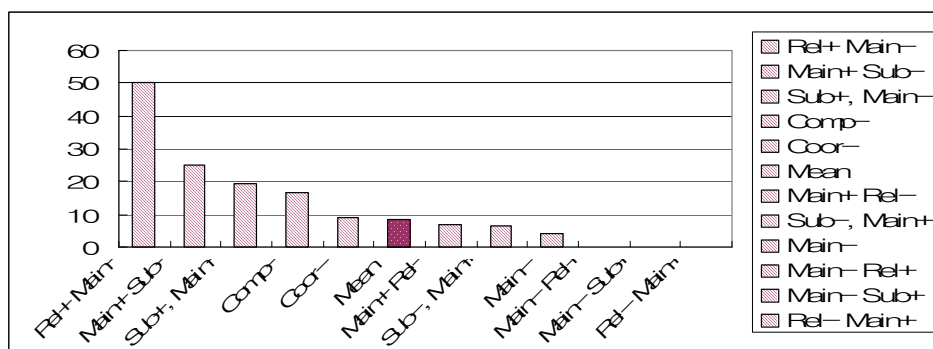
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[16] Here *ST* stands for "sequence of tense" (or the [+past] T's being bound, in Enç's terms) and *OTM*, "overt tense marking".

4.5. The weights of the divergencies

The different cases of divergence clearly have different weights in this study. In the context where a relative clause precedes the main verb, the divergence reached up to 50%, but in raw score it was one out of two cases only; hence, it can be attributed to a simple performance error. When the adjunct clauses followed the main verbs, however, the sentences were divergent in 25% of the total 12 cases and only the main verbs were marked with tense; when adjunct clauses preceded the main verb, however, only the subordinate clauses were tense-marked in 19% of the cases (5/26). Further, when the sentence had a complement clause, about 17% of the cases were divergent with the main verbs only tense-marked. Lastly, in VP conjunction environments, 5 out of 54 cases were divergent (9%). This is presented in Figure 3.

This clearly shows that the remaining 10% of the divergent cases are not randomly distributed. They show clear regularities which seem to shed some valuable light on the "dark" side of the inter-English grammar that has been formulated by the L1 Korean learner of L2 English.

Figure 3. The Rates of Divergence in Different Contexts (%)

5. Conclusions

The subject has successfully acquired the basic morpho-syntactic and semantic properties of the past tense morpheme. However, he still seems to have problems in distinguishing the present perfect from the past tense (21), and to have a tense system which reflects the Korean type in the case of complex sentences (sections 4. 2.1-4.2.2).

The subject has moved to a large extent over to the English-type tense system in morphology and semantics, but has also developed a novel system that is not found in his L1 or L2, which we have assimilated to the Chinese type of tense marking. We have argued that this might have resulted from an interaction of a micro-parameter which is recognizable more easily, a calcitrant, more abstract macro-parameter, and the relevant input from English, the participant's target language. Put together, the Korean and Chinese types seem to make the participant look as if he still fluctuates between the target-like system and a Mam-type tense system.

This implies that at least some L1 Korean L2 English learners seem to undergo a process of building up a new tense system, a Chinese-type (and hence apparently a Mam-type) tense system where only a dependent constituent is marked as in (18a) and the examples in section 4.2.4. If the tense-acquisition model in Figure 2 is on the right track, the novel tense system is still compatible with the view that SLA is subject to UG as well. It will make a fruitful research topic to check how strong and pervasive this tendency is among such learners.

Lastly, but not leastly, the results discussed thus far imply that about a 10% of divergencies can still be a valuable opening, a dormer, through which we can have a glimpse of an intricate structure of systematicity. This in turn calls for re-examination of previous results reporting optionality in tense-marking from this perspective.

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