

영 어 어 문 교 육 10 권 2 호 2004 년 여름

Wh-movement in the L2 Learner's Initial Syntax¹⁾

Jung-Tae Kim

(University of Incheon)

Kim, Jung-Tae. (2004). *Wh*-movement in the L2 learner's initial syntax. *English Language & Literature Teaching*, 10(2), 1-23.

This article reports a bi-directional interlanguage study designed to investigate the initial state of L2 acquisition with regard to English and Korean *wh*-questions. Based on the UG system in line with the minimalist theory, it was hypothesized that the L2 initial state is characterized by the most economical form of syntax in which no overt *wh*-movement to Spec-CP is assumed. Results of the early interlanguage study showed that 1) L1 Korean learners of L2 English predominantly produced *wh*-questions with the fronted *wh*-word, but without productive *wh*-movement to the Spec-CP position; and 2) L1 English learners of L2 Korean overwhelmingly produced *wh*-questions with the *wh*-word remaining *in-situ*. These results were interpreted as supporting the minimalist account of the L2 initial grammar in that no overt syntactic *wh*-movement were adopted in early interlanguages of both English and Korean regardless of the learner's L1.

[*wh*-movement/interlanguage/minimalist theory *wh*-이동/중간언어/최소주의이론

I. INTRODUCTION

-
- 1) This article is a revision of a part of my doctoral dissertation. Part of it appeared in the Proceedings of the 27th Boston University Conference on Language Development (2003) and Proceedings of the Korean Association for the Study of English Language and Linguistics International Conference (2003).

Recently, several Universal Grammar (UG)-based studies of second language acquisition have focused on investigating the initial state of second language grammar. The central issue is what characterizes the L2 learner's initial grammar and how L1 is related to the initial state of L2. Several different claims have been made on this issue. Schwartz and Sprouse (1994, 1996), for example, claimed that the entirety of the L1 grammar excluding the phonetic matrices of lexical/morphological items transfers to the L2 initial state, and that UG is available for the subsequent development of L2 (Full Transfer/Full Access Hypothesis). Epstein et al. (1996) suggested that UG is directly available for L2 development, implying that adult L2 learners will start over UG-guided language development for L2 acquisition. Another claim made by Vainikka and Young-Scholten (1994, 1996a, b, 1998) is that functional projections such as IP and CP are not present in the early stage of L2 interlanguage while the headedness of the L1 lexical categories can transfer to the L2 initial state. White (1990/91) and Eubank (1993/94) investigated if the learner's L1 strength of agreement inflection is transferred to the L2 initial state: White claimed that the strength of agreement inflection of the L2 initial state is determined by the parametric value transferred from the learners native language; Eubank, on the other hand, argued that the feature strength does not transfer into the L2 initial state, but, it is initially valueless or 'inert'.

With the development of the minimalist theory (Chomsky, 1995), some of the important architecture of UG changed. As no generative grammar-based Second Language Acquisition (SLA) research can be made independently of the theory of UG, it is necessary to consider whether the newly-developed UG principles can provide fresh insight into the UG-based language acquisition and initial state research. This paper investigates the early interlanguages of English and Korean *wh*-questions, and examines whether a minimalist hypothesis can provide a better explanation for the L2 initial state with regard to the construction. I will first show how the minimalist framework legitimates the hypothesis that the language learner's initial syntax is the most economical syntax, in which no overt syntactic movement is involved. Then, I will argue that the data of early *wh*-questions in L1 English acquisition are not in conflict with the hypothesis of the most economical initial syntax. A bi-directional

experimental study will be reported next, in which the early L2 English and Korean *wh*-questions produced by L1 Korean and English speakers, respectively, are investigated. Based on the results of the experimental study, I will discuss the role of UG, as represented by the economy principle, and the adequacy of the minimalist account in explaining the L2 initial state.

II. THE PRINCIPLE *PROCRASTINATE* AND THE INITIAL SYNTAX

In the minimalist design of grammar (Chomsky, 1995), the derivational procedure is constrained by the economy principle of derivation *procrastinate*. The principle *procrastinate* states that a syntactic operation such as movement must be avoided as long as possible because movement costs. Movement of an element should be held off until after Spell-out unless there is absolute need for an overt operation for a convergency of a grammar of a given language. The minimalist program, by positing this *procrastinate* as the principle of derivation, assumes that the UG pursues the economy in syntactic derivation.

The minimalist program may offer a logical basis from which to hypothesize that the initial state of human grammar is the most economical form of grammar. Chomsky (1986, 1995) has viewed language acquisition in terms of initial and final states of the mind: Language development starts from the initial state and passes through a series of states, reaching a relatively stable final state. He suggests that the theory of Universal Grammar may be seen as the theory of the initial state as he mentioned "The initial state appears to be uniform for the [human] species. we call the theory of the state attained its *grammar* and the theory of the initial state *Universal Grammar*"(1995, p. 14). If the UG can be seen as the grammar of the initial state, and the UG pursues the economy in syntactic derivation, it is reasonable to hypothesize that the initial state of human grammar is set for the most economical form of grammar. That is, if the UG constrains the initial state of the child language acquisition, the child will initially assume the most economical form of syntax, in which no overt syntactic movement is involved. Following the principle *procrastinate*, the child will keep procrastinating syntactic operation until after Spell-out unless disconfirming positive evidence clearly indicates that overt

operation is necessary in the language that the child is learning. As a result, the grammar initially assumed by the child would not contain overt syntactic movement.

Platzack (1996) noticed this logic of the initial minimal grammar and described the initial state of the syntax in relation to the concept of markedness: strong features are marked, and weak features are unmarked. In the minimalist program, the distinction between strong and weak features of functional categories explains phonological manifestation of a syntactic movement. Interface levels LF and PF must contain only interpretable symbols (principle of *full interpretation*), and grammatical features which are not interpretable at the interface levels must be eliminated through syntactic movement before the derivation arrives at the *interface levels*. However, weak features are not visible at PF and needs not be eliminated before Spell-out. On the other hand, strong features are visible at PF and must be eliminated before Spell-out. Therefore, strong features trigger overt syntactic operations while weak features trigger only covert operations (or no movement at all). Platzack's proposal is that, if the principle *procrastinate* is a part of UG, every human child must start out with the hypothesis that all syntactic features of functional categories are weak, and consequently, postpones all syntactic operations until after Spell-out, making only covert movement in the LF component of grammar.

Platzack claims that evidence supporting his proposal can be found in child L1 acquisition of Swedish: Swedish children do not produce errors with respect to the weak positions while they often make errors with strong syntactic features, suggesting that they initially assume only weak features for functional categories. Also, Swedish children with special language impairment went back to the initial unmarked grammar and supposed weak C_0 position for Swedish. In addition, he argues that the existence of null subjects in child language regardless of their native languages (Hyams, 1986), is related to a weak feature of a functional category which children initially assume as an unmarked parameter setting.

For the L2 initial state, Platzack proposes that L2 learners would initially go back to the minimal initial syntax. That is, like the child acquiring L1, the adult learning L2 would initially assume weak functional features only, thus

adopting no overt syntactic movement. Platzack argues that support for this proposal may be found from the observation that Swedes learning German make errors with regard to verb second, although German and Swedish are both verb second languages. Verb second word order is the result of a strong head feature at the beginning of the sentence (in C_0) and, according to Platzack, verb second word order is not assumed to exist in a grammar based solely on the initial unmarked grammar. The errors made by Swedes learning L2 German may be explained by the learners' initial assumption of a weak head feature of C_0 . The difference between L1 and L2 acquisition, Platzack further suggests, is that L1 is "engraved" in the child's brain, while no such biological mechanism occurs for adult L2 acquisition, meaning that although a good learner may come close to mastery of the L2 grammar, it will be vulnerable in situations where the speaker is not in full control for such reasons as stress, tiredness, and intoxication (p. 381).

III. EARLY L1 ENGLISH *WH*-QUESTIONS AND *WH*-QUESTIONS WITHOUT SUBJECT-AUXILIARY INVERSION

The difference between languages with overt *wh*-movement, such as English, and languages without overt *wh*-movement, such as Korean, can be explained in terms of the dichotomy of the strength of the Q feature. The feature Q, which introduces interrogative sentences, is one of the formal features of the functional category CP. According to Chomsky (1995), the Q feature is plainly interpretable, and thus, unless it is strong, it need not be checked. If the Q feature is strong, however, it must be checked before Spell-out. In languages like English, the Q feature is strong and needs to be eliminated before Spell-out for the derivation to converge. The elimination of the feature is accomplished by raising a *wh*-phrase overtly into the Specifier position of CP (Spec-CP), where the Q can be checked off by the *wh*-feature carried by the *wh*-phrase¹); In languages like Japanese and Korean, the Q

1) The feature Q is to be checked off by attracting its corresponding morphological feature to its checking configuration. The *wh*-feature carried by a *wh*-phrase is the Q feature's corresponding morphological feature. In Chomsky (1995), movement is

feature is weak, and the *wh*-phrase need not be overtly moved, and therefore, remains *in-situ*²⁾

If a language learner's initial syntax is constrained by the principle *procrastinate*, it will be the weak Q feature that is initially assumed by the child for the production of *wh*-questions, regardless of the language that the child is exposed to. L1 English children, for instance, would assume weak Q feature in the initial syntax even though adult English adopts strong Q feature. In the rest of this section, I will show that a careful review of the literature reveals that English-speaking children's early *wh*-question data are not in conflict with the idea of the minimal initial syntax.

Earliest L1 English *wh*-questions are known to follow a formulaic pattern *wh*-(contracted *be*)-*NP* (Brown, 1968; Bloom, Merkin, and Wooten, 1982; and Radford, 1990). Seventeen- to 24-month old children produce the earliest forms of *wh*-questions which are characterized by the *Wh-word* + ('s) + *NP* pattern, in such examples as *What's that?*, *What that?*, *What's this?*, *Who's that?*, *Who that?*, *Where's helicopter?*, *Where helicopter?*, and *Where mummy?* As O'Grady (1997) and Radford (1990) suggest, these utterances are instantiations of a mere template rather than a reflection of linguistic competence.

At a later stage, *wh*-questions using verbs other than the copula are produced, but subject-auxiliary inversion are rare in those questions. Examples include *Where go?*, *Where Mary go?*, and *Where Daddy go?* (examples cited by Vainikka, 1993/94, p. 287). *Wh*-words are placed in the sentence-initial position in these questions, but without subject-auxiliary inversion. Since the *wh*-words are fronted, it appears that *wh*-movement has occurred in these sentences. However, scholars such as de Villiers (1990) and Vainikka (1993/94) suggest that the mere presence of *wh*-questions with a fronted *wh*-word in the child's *wh*-questions does not necessarily mean that *wh*-movement has been made to the Spec-CP. De Villiers (1990) found evidence from the CHILDES database that may be interpreted as supporting the hypothesis that the absence of subject-verb inversion in *wh*-questions is related to the absence of

triggered by the feature checking needs of the target *K* (the Q feature for *wh*-movement), not by the checking need of the element which moves (*wh*-feature).

2) See Bach (1971), and Huang (1982) for more discussion on the languages that do not employ syntactic *wh*-movement.

wh-movement in children's early *wh*-questions. According to her examination of the CHILDES data, the embedding of a *wh*-word precedes subject-auxiliary inversion with the *wh*-word. That is, the appearance of a *wh*-word in an embedded clause (e.g., *I know what you eat*) precedes the onset of inversion (e.g., *what do you eat?*). De Villiers argues that the appearance of the *wh*-word in medial position enables the child to subcategorize a *wh*-word as a part of CP and tells him/her that the appropriate position of the *wh*-word is the Specifier of CP. This re-analysis makes the C₀ position into which the auxiliary can move available, leading to the appearance of inversion in the matrix clause. Absence of subject-verb inversion in simple *wh*-questions, in this sense, suggests that children at this stage do not know that the appropriate position for the *wh*-word is in the CP. That is, the fronted *wh*-word questions without inversion do not provide evidence that *wh*-movement to Spec-CP position has occurred at this stage. Consequently, the fronted *wh*-words at this stage do not indicate that the English native child assumed a strong Q.³⁾

In fact, Radford (1990) suggests that children's initial *wh*-questions involve *wh*-phrases located *in-situ*. He noticed that a 23-month old child named Claire produced a *wh*-question *Doing what there?* (as a reply to an adult's question *What are they doing there?*) Although Claire imitated an adult's *wh*-question involving a preposed *wh*-phrase, her imitation clearly contains the *wh*-word *what* base-generated *in-situ*. Radford insisted that this kind of utterance is not atypical of children of Claire's age. Another type of evidence claimed by Radford (1990) came from the observation that even the children who had mastered the system of subject-verb agreement in English produced sentences like *What's these?*, *Where's my hankies?*, and *What colour is these?* In these sentences, the copula verb 's agrees with the preceding singular *wh*-expressions (e.g., *what colour*), not with the following plural elements (e.g., *these*). Radford argued that these sentences may be seen as evidence that children misanalyze initial *wh*-phrases in copula constructions as subjects. If this analysis is correct, *wh*-phrases which are placed in the sentence initial position by virtue of

3) While the observed data can be used as evidence that the L2 learners at the early stage have not developed the CP yet, the same data may well be explained without giving up the strong continuity hypothesis by proposing that the learners already have CP, but they initially assume the weak Q feature. See Weissenborn, (1990) and Poeppel and Wexler, (1993) for arguments for the Strong Continuity Hypothesis.

their subjecthood, not by virtue of having been preposed into the Spec-CP position. That is, a child's early *wh*-phrase is base-generated without adopting any *wh*-movement. Again, this analysis is consistent with the idea that children will start out with the most economical form of syntax in which no overt syntactic *wh*-movement to the Spec-CP position is involved.

IV. EARLY L2 *WH*-QUESTIONS: EXPERIMENTAL STUDY

1. Introduction

In order to investigate the L2 learner's initial syntax with regard to *wh*-construction, I conducted a bi-directional study designed to see the early interlanguages of English and Korean, produced by L1 Korean and English speakers, respectively. This bi-directional design allows us to determine whether a transfer of a linguistic parameter value from L1 to L2, if any, was an authentic transfer. If the transfer of a linguistic parameter is in one direction and not in another, it might indicate that there is some mechanism other than a simple transfer of parameter value at work for second language acquisition. On the other hand, if the transfer is bi-directional, then the effect of L1 transfer will be verified as an important mechanism underlying the development of interlanguage grammar.

Two competing hypotheses were set up as working hypotheses with regard to the L2 initial state from the minimalist perspective:

A. Minimal Initial Syntax Hypothesis: L2 learners will start out with the most economical form of syntax (or the 'unmarked' syntax in Platzack's terminology), in which the functional feature Q is weak, and thus, no *wh*-movement to Spec-CP is initially adopted.

B. L1 Transfer Hypothesis: The parametric value of the functional feature Q instantiated in L1 will transfer to the initial state of L2, and therefore, L2 learners will start out with their L1 parametric value.

2. Subjects

A total of ninety-two students in the United States and Korea participated in the cross-sectional study. Subjects consisted of two groups of L2 learners: forty-four English-speaking learners of Korean and forty-eight Korean-speaking learners of English. Each group of subjects included beginning level learners who had studied the target language less than 16 months. The English-speaking learners of Korean were students in the first and second-year-level Korean language classes at the University of Texas at Austin and Washington University in the United States, aged between 18 and 23. Twenty-three of these students were from the first-year Korean class while twenty-one students were from the second-year classes. The Korean-speaking learners of English were students of a middle school in Seoul, South Korea. Twenty-five of them were first-year students while twenty-three were second-year students, aged 12 to 15.⁴⁾

Although all of the subjects were considered to be in their early stages of L2 development, we expected to find more traces of the initial state from the first-year students than the second-year students. At the time of data collection, the first-year subjects had been learning their L2 for less than eight months and the second-year subjects for less than 16 months.

There was an asymmetry in age ranges between the two groups of subjects. This was due to the difficulty of finding Korean adults who are in the early stage of L2 English learning. Although this type of asymmetry in a research design is not desirable, we assumed that it would not critically affect the results of our research of L2 interlanguage. Studies of effect of age on L2 learning revealed that the process of acquiring an L2 grammar is not substantially affected by the age of learners, although age may have effects on the rate of learning and the learners final achievement of the L2. Bailey et

4) The experiment was conducted a year before Korean students who learned English in elementary schools entered the middle school, and none of the first- and second-year middle school students in this study had been offered classroom English during elementary school years. For both L2 Korean and English learners, the actual hours that they had been exposed to their L2s were not taken into account, admittedly allowing the possibility that the overall amount of time exposed to the L2s can be different between the two groups.

al.(1974) showed that the order of acquisition of English morphemes was the same for children and adults. Harley (1986) also noticed that acquisition processes of L2 French by speakers in two different age groups were remarkably similar.

3. Data Collection Procedure

Two types of production tasks were given to the subjects. The subjects were first asked to compose *wh*-questions using vocabulary items given to them. For each question composition, a *wh*-word, a subject NP, and a verb were presented in L2 forms, and an object NP was given as necessary. Students were allowed to add other words and conjugate the verb forms as needed when they make *wh*-questions. A total of twelve questions were asked to be made. In the second task, they were asked to make *wh*-questions that are appropriate in given situations. For this task, instead of vocabulary items, a conversational situation and a stimulus picture were presented for each question to help the students understand the situation in which the question might occur. Students were instructed to include an overt sentence subject in every question. This was to prevent the participants from using a null subject along with a *wh*-word. If a null subject is used in a *wh*-question (e.g., *What eat?* for *What do you eat?*), the researcher would not be able to determine the position of the *wh*-word in relation to the sentence subject. Six questions are to be made by this task.

Throughout the testing session, L2 English and L2 Korean learners received the same instructions in their L1s. Identical pictures and conversational situations were given to both groups, although the names of male and female figures who appeared in the pictures and instructions varied so as to use popular names in L2 cultures. The stimulus vocabularies and sentences were given in the L2. The tasks were given to the subjects as part of their classroom activities, and the subjects were allowed to use a dictionary or to ask the test administrators about particular vocabulary items in case they needed to look for L2 words.

4. Results

Among the *wh*-question data collected from the subjects, I excluded all sentences that were not appropriate for investigating the learners interlanguage grammar of *wh*-movement. The excluded sentences are: 1) sentences including simple repetitions (or near repetitions) of vocabulary words supplied with the test sheet to elicit the learners' responses; 2) sentences without a *wh*-word; 3) sentences which contained a *wh*-word, but for which it was not possible to decide the position of the *wh*-word in relation with the subject and verb due to the lack of a subject or a verb, or both; 4) questions which contained two or more *wh*-words in a clause (e.g., what does she meet how?).

From the Korean interlanguage data, a total of 761 *wh*-questions could be used as reliable data, 390 of them from the first-year group and 371 from the second-year group. Two predominant patterns were identified: Wh-S-V and S-Wh-V. Examples are given in (1).

(1) a. Wh-S-(X)-V Pattern

mwuet-ul	pang	an-uy	namca-ka	mek-eyo?
<i>what-acc</i>	<i>room</i>	<i>inside-poss</i>	<i>man-nom</i>	<i>eat-pres.end</i>

'What does the man in the room eat?'

b. S-(X)-Wh-(X)-V Pattern

pang	an-uy	namca-ka	mwuet-ul	mek-eyo?
<i>room</i>	<i>inside-poss</i>	<i>man-nom</i>	<i>what-acc</i>	<i>eat-pres.end</i>

'What does the man in the room eat?'

Note that *wh*-words in Korean remain *in-situ* in question formation in overt syntax, and that the basic word order for a *wh*-question sentence is S-Wh-V.⁵⁾ Therefore we coded the S-Wh-V pattern in the Korean interlanguage as the *wh-in-situ* pattern. On the other hand, we analyzed the Wh-S-V pattern as

5) Questions in Wh-S-V pattern such as (1a) are also allowed in Korean syntax, but it is not result of a syntactic *wh*-movement, but rather a focus movement. In Korean word order, any element except a verbal complex can be preposed when it receives a focus (e.g., *sakwa-lul pang an-uy namca-ka mek-eyo*, roughly translated into 'it is an apple that the man in the room eats').

reflecting fronting of the *wh*-word.

Table 1 shows distribution of the major patterns of Korean *wh*-questions produced by English-speaking learners of Korean.

TABLE 1
Number of Korean *Wh*-questions in Different Patterns Produced by
L1 English Speakers

	1st year group	2nd year group	Overall(1st+2nd year group)
Wh-S-V	61(15.64%)	68(18.33%)	129(16.95%)
S-Wh-V	308(78.97%)	278(74.93%)	586(77.0%)
Others	21(5.38%)	25(6.74%)	46(6.04%)
Total	390(100%)	371(100%)	761(100%)

The Korean interlanguage speakers predominantly employed the S-Wh-V pattern (77.0% overall). The first-year-level subjects produced this pattern in 308 cases out of a total of 390 questions (78.97%), and this tendency was continued in the second-year-level group (278 cases out of 371, 74.93%). On the other hand, the Wh-S-V pattern was produced less than 20 percent in both the first and second-year groups. Overall, only 129 sentences out of 761 sentences were in Wh-S-V pattern (16.95% overall). In Korean interlanguage data, no other patterns appeared in substantial number except S-Wh-V and Wh-S-V patterns.⁶⁾

In the English interlanguage, six major patterns were observed: Wh-(*is/s*)-NP (e.g., *Why is bread?*), Wh-S-V (e.g., *What the busy man eat?*), Wh-Aux/*do*-S-V (e.g., *What does the pretty woman eat?*), Wh-V-S (e.g., *When goes Mary Chicago?*), S-V-Wh (e.g., *The man in the room drink beer why?*), and S-Wh-V (e.g., *The man in the room what eat?*). In addition to these major patterns, some subjects produced unique patterns which were not

6) Only five instances of S-V-Wh pattern was found among all the data. One of those sentences is shown below.

Pappun namca-ka swul-ul masi-lul ha-yess-e way?
 busy man-nom alcohol-acc drink-acc do-pst-end (impolite) why?
 "Why did the busy man drink alcohol?"

substantially reproduced in other subjects data. These were classified as others in the analysis.

Among these six patterns, production of Wh-Aux-S-V pattern was taken as evidence that the L2 target structure is being acquired. The S-V-Wh pattern was analyzed as a *wh-in-situ* pattern: the L2 subjects would produce this pattern if they assumed that the *wh*-word would remain in the base position in question formation. On the other hand, the S-Wh-V pattern may be analyzed as reflecting the learners L1 influence, because in normal Korean *wh*-questions, the (non-subject) *wh*-word always occurs after the subject of the clause and before the verb (S-Wh-V pattern).

Table 2 shows the distribution of the six patterns of English *wh*-questions produced by Korean-speaking learners of English.

TABLE 2
Number of English *Wh*-questions in Different Patterns Produced
by L1 Korean Speakers

	1st year group	2nd year group	overall (1st+2nd year group)
Wh-(is/'s)-NP	28 (7.80%)	5(1.43%)	33(4.66%)
Wh-S-V	169(47.08%)	137(39.26%)	306(43.22%)
Wh-Aux-S-V	34(9.47%)	79(22.64%)	113(15.96%)
Wh-V-S	82(22.84%)	65(18.62%)	147(20.76%)
S-V-Wh	3(0.84%)	8(2.29%)	11(1.55%)
S-Wh-V	10(2.79%)	19(5.44%)	29(4.10%)
Others	33(9.19%)	36(10.32%)	69(9.75%)
Total	359(100%)	349(100%)	708(100%)

Both the first and second-year-level groups produced all six patterns. Wh-S-V pattern was the most common pattern in both groups (47.08% and 39.26% respectively). Both groups also frequently used Wh-V-S and Wh-Aux-S-V patterns. With respect to the Wh-(is/s)-NP pattern, 28 cases were observed in the first-year-level group (7.80%) and five in the second-year-level group (1.43%). Sentences of the S-V-Wh pattern were observed in both groups, but were few in number (0.84% in the first-year group; 2.29% in the second-year group). The S-Wh-V pattern also appeared in

both groups, but also few in number (2.79% and 5.44% in the first and second-year-level, respectively). Overall, the English interlanguage speakers used the Wh-S-V pattern most frequently (43.22%). The next common patterns were the Wh-V-S (20.76%) and the Wh-Aux-S-V (15.96%). A relatively small number of the Wh-(*is/s*)-NP, S-V-Wh, and S-Wh-V patterns were produced (4.66%, 1.55%, and 4.10% respectively).

5. Discussion

1) Overall Analysis

Korean interlanguage speakers, who developed only two major patterns, produced sentences with *wh-in-situ* (S-Wh-V pattern) overwhelmingly more than those with a sentence-initial *wh*-word (Wh-S-V pattern). This tendency was observed consistently from the first-year-level (78.97% vs. 15.64%) to the second-year-level (74.93% vs. 18.33%). These results show clearly that Korean interlanguage speakers have little difficulty in producing *wh-in-situ* sentences in the early stage of L2 development. In other words, the early Korean *wh*-productions by English speakers suggest that L2 learners tend to keep the *wh*-word in the base position without movement. This fact cannot be explained in terms of L1 transfer of parametric value because the subject's L1 has a strong Q feature and overt *wh*-movement. The result found here was consistent with the prediction made by the minimal initial syntax hypothesis that L2 learners have initially assumed that the *wh*-word remains *in-situ*, without any movement.

Our English interlanguage data, in some aspects, resemble the phenomenon shown in children's early production of L1 English *wh*-questions. As Radford noticed, *wh*-phrases were fronted in many cases of children's early L1 English, but inversion in *wh*-questions was infrequent. In our L2 data, *wh*-phrases occurred predominantly in the sentence-initial position for both the first- and second-year level groups. Overall, 84.6% of the total *wh*-questions were questions with a fronted *wh*-word (Wh-(*is/s*)-NP, Wh-S-V, Wh-Aux-S-V, and Wh-V-S patterns). However, overall, only 15.96% of the sentences were structurally target language-like, with the adoption of subject-auxiliary inversion

(Wh-Aux-S-V pattern). The first-year-level group adopted subject-auxiliary inversion only in 9.47% of the total sentences, and second-year-level group used subject-auxiliary inversion in 22.64% of the sentences. The majority of the *wh*-questions produced by Korean speakers were in Wh-S-V pattern without inversion of any kind.⁷⁾ It should be noted that existence of the Wh-(*is/s*)-NP pattern and *wh*-questions without inversion cannot be used as evidence that speakers have acquired strength of English Q feature and have adopted *wh*-movement to Spec-CP. As we have seen in a previous section, the Wh-(*is/s*)-NP pattern is best treated as an instantiation of a mere template rather than a reflection of linguistic competence (Radford, 1990; O'Grady 1997), and questions without inversion are believed to be insufficient to show *wh*-movement to Spec-CP because they can be analyzed without recourse to a CP (de Villiers, 1990; Vainikka, 1993/4). Therefore, we cannot take the predominant occurrence of the fronted *wh*-word in our early English interlanguage data as evidence that English L2 speakers initially adopt *wh*-movement to Spec-CP.⁸⁾

To sum, analysis of the results of our bi-directional study showed that 1) Korean interlanguage speakers overwhelmingly produced questions with the *wh*-phrase remaining *in-situ*, showing the early adoption of weak Q feature; and 2) English interlanguage speakers predominantly produced questions in which the *wh*-phrase does not move to CP, suggesting that the learners do not assume the strong Q feature. These results were in support of the minimal

7) Similar observations of the *wh*-questions without productive subject-auxiliary inversion in early interlanguage were made in L2 German data by Italian and Spanish speakers (Vainikka and Young-Scholten, 1996a, b) and L2 English by French speakers (Eubank, 1993/94). An exception was the L2 German data by Korean and Turkish speakers for which Vainikka and Young-Scholten (1994, 1996a) reported that no *wh*-questions with a fronted *wh*-phrase were produced.

8) As one reviewer points out, high production of the Wh-V-S pattern in the English interlanguage needs an explanation. One possible explanation might be sought in terms of the developmental order: the Wh-V-S pattern may represent the interlanguage of the students who are in the intermediate stage between the Wh-S-V and Wh-Aux-S-V stages. Note that the first-year students produced more of the Wh-V-S pattern than the Wh-Aux-S-V pattern, while the second-year students generated the Wh-Aux-S-V pattern more than the Wh-V-S pattern. This explanation, however, is given here as a possibility, and has not proved appropriate yet.

initial syntax hypothesis in that no overt syntactic *wh*-movements were adopted in early interlanguages of both Korean and English regardless of the learners' L1.⁹⁾

2) *Wh*-constructions in the English Interlanguage Data and Adequacy of the Minimal Initial Syntax Hypothesis

Nonetheless, more consideration is needed before we reach a final conclusion because our English interlanguage data of the *wh*-construction does not, in fact, give straightforward evidence for the minimal initial syntax hypothesis. The minimal initial syntax hypothesis predicted that the *wh*-phrase would remain in the base position in English interlanguage, but our results showed that only a small number of questions were *wh-in-situ* (S-V-Wh) pattern (1.55 % overall). Given that the English interlanguage data have not shown the adoption of the strong *Q* feature, the reason why L2 English learners do not produce *wh*-word *in-situ* pattern requires special consideration. While one could argue that we must give up the whole idea of the minimal initial syntax due to the English interlanguage data, it is possible to suggest plausible explanations for the data without abandoning the notion of the minimal initial syntax.

One possible reason for the English interlanguage data is that, because of the L2 learner's more urgent communicative demands and/or some grammar-external factors affecting their performance, the initial assumption of L2 grammar can be partially overridden at the performance level. For this reason, L2 learners will outperform their UG-based initial grammar and produce more *target language-like* constructions. One grammar-external factor involved in our results may be the positional saliency. Newport et al. (1977) found that

9) A reviewer points out that our analysis of the results would be supported if the absence of the subject-auxiliary inversion (SAI) for both *wh*-questions and *yes-no* questions is observed at a same developmental stage. Our experimental study did not produce data of *yes-no* questions. L2 data in other studies are somewhat contradictory: Eubank's (1993/94) analysis of English L2 data shows that, at Stage 1, no SAI was evidenced either in *yes-no* questions or *wh*-questions (apart from prefabricated forms) while, at Stage 2, SAI becomes productive in both *Yes-no* and *wh*-questions; on the other hand, Bhatt & Hancin-Bhatt (2002) reports that Hindi learners of L2 English learned SAI for *yes-no* questions before learning SAI for *wh*-questions.

the children are biased to listen selectively to utterance initial items. According to them, children pay special attention to the beginnings of utterances, and if the beginning of an utterance is extremely unfamiliar, they are unlikely to attend to the rest of the utterance. It was also argued that children learn certain things faster if these are spotlighted in the first position with some frequency. Because *wh*-questions are mostly placed in the utterance-initial position in adults' *wh*-questions and they are semantically important for communication, *wh*-word would receive children's special attention and could be thought of as the 'always first' part of the question. This utterance-initial saliency phenomenon of the *wh*-word could have triggered fronted *wh*-phrases in early child English even before children acquired the strength of English Q feature. If the same proposal is possible for L2 acquisition, one could say that UG is overridden by the grammar-external factor (i. e. utterance-initial saliency) for *wh*-constructions in L2 English, resulting in fronted *wh*-phrases. Given the fact that the *wh*-phrase in our English interlanguage data occurred in the sentence initial position regardless of the syntactic constructions in which it appeared (e.g., Wh-NP, Wh-is/s-NP, Wh-V-S, Wh-S-V, and Wh-Aux-S-V), we could argue that the initial *wh*-word in our L2 data would be the result of the positional saliency of English *wh*-phrases. That is, the sentence initial *wh*-words in the English interlanguage data occurred due to the L2 learners formulaic memory of the *wh*-word always coming first, rather than productive use of *wh*-movement. Bardovi-Harlig (1987) proposed that salience perturbs the acquisition order predicted on the basis of language universal in L2 acquisition case. Her study of L2 English acquisition of 95 college-age learners showed that preposition stranding (typologically marked form) is acquired before preposition pied piping (typologically unmarked form), contrary to the markedness hypothesis which predicts that unmarked forms should be acquired before marked forms. Bardovi-Harlig suggested that salience also plays a role in determining L2 acquisition order of the two forms, when salience is defined in terms of availability of data. According to Bardovi-Harlig, this salience factor explains why this case is different from cases in which the markedness predictions are supported.

While the above explanation of English interlanguage data admits that the UG economy principle can be overridden by some other factors, it does not

seriously undermine the idea that L2 learners initially assume a weak Q feature. Sharwood Smith (1994) suggests emergence of 'wild grammar' as a deviation along the way with conformity to universal grammar in L2 acquisition. What he suggests is that even though it is possible to observe 'wild, structure-independent stages' in the acquisition of a certain L2 constructions, the learner's grammar itself may not be actually wild at all. It is only the performance of the learner under certain conditions that produces nonconformity. Sharwood Smith's (1994) view on this 'wildness' in the interlanguage grammar is expressed in the following passage.

The motive for allowing for the possibility of wild grammars (see Goodluck 1986, Sharwood Smith 1988, White 1990 for this possibility in L1 acquisition) would be to try to capture as many interesting developmental phenomena as possible without abandoning the potentially fruitful notion of an active UG in *interlanguage growth* on the basis of occasionally recorded deviation from UG. This would be especially desirable if it were observed that L1 development contained wild periods, i.e. periods in which children went astray and were entertaining analyses of the input that appeared to ignore UG constraints. ... One example of a theoretically impossible feature would be the creation of structure-independent rules whereby a word appeared in a given position (say, first or second) irrespective of the syntactic constructions in which it appeared. (pp. 158-159)

According to this view, the possibility of involvement of the *grammar-external* factor is further supported by the fact that the *wh*-phrases are commonly observed in the sentence initial position in L1 child English regardless of the internal structure of the question sentences (e.g., Wh-NP, Wh-*is/s*-NP, Wh-V, Wh-S-V, and Wh-Aux-S-V).

Of course, this account of the occurrence of *wh*-phrases in the sentence initial position will not be conclusive until we can explain the process by which UG is overridden by this structure-independent wildness.¹⁰⁾ I admit that

10) it is possible to hypothesize, as an alternative to saliency explanation, that the existence of the option of the *wh*-question with a fronted *wh*-word in Korean grammar (a construction not caused by *wh*-movement - see footnote 5) facilitate L1

positing a grammar external factor at the performance level to explain the observed data can be seen as a post hoc rationalization. As Birdsong (1989, and personal communication) points out, there is a logical problem in using performance data to investigate linguistic competence in SLA research. Performance mirrors learners' competence, but there is always a possibility of intervening variables. This possibility of intervening variables, in turn, can be conveniently used by researchers as outs for results that are less than robust (Birdsong, 1989, p. 112). Therefore, for our account of the occurrence of *wh*-phrases in the sentence initial position to be conclusive, an independent study will be needed to find out whether and how the grammar-external factor overrides the UG principle.

V. CONCLUSION

In our study, transfer effect of L1 parametric value to the L2 initial state was shown scanty with regard to *wh*-movement. Rather, the results of the study suggest that L2 Korean and English learners start out with a syntax in which no overt *wh*-movement to the Spec-CP position is required, supporting the idea that learners initially assume a simple and economical grammar for the target language. These results also seem to find support from the perspective of the learning process: a language learner would not start with a complex syntax before testing whether a simpler and economical syntax can satisfy communicative needs. That is, learners would start testing target grammar using the most economical syntax that does not involve complex syntactic computations such as *wh*-movement, and when the initial grammar does not match the target grammar, they would keep testing the grammar with more complex syntax.

Further studies are needed, however, to understand what causes the occurrence of *wh*-phrases in the sentence initial position in English

Korean learners' fronting of *wh*-words in early English *wh*-questions. However, this hypothesis still needs an explanation of why most L1 Korean learners chose the option of fronting of *wh*-words for English, given that both options of *wh*-*in-situ* and fronting of *wh*-words are available in Korean.

interlanguage when overt *wh*-movement to Spec-CP is not responsible for it. The positional saliency, which is suggested in this paper as a potential cause that produced a deviation from the UG-guided initial state, needs to be studied more comprehensively to find out how the grammar-external factor overrides the UG principle.

Pedagogical implication of the current study may be found for the lower level L2 instruction. Our results suggested that beginner level L2 learners experienced more difficulty with syntactic constructions associated with a strong functional feature than with those associated with a weak functional feature. This implies that more attention is needed to acquire constructions involving overt syntactic operations in the beginning level L2 learning. Our English interlanguage *wh*-construction data, for example, showed that the majority of students go through a stage in which *wh*-questions are made without subject-auxiliary inversion (Wh-S-V pattern). An awareness of this stage may help teachers and textbook developers to highlight relevant aspects of the input (e.g., presence and location of the auxiliary verb) in their teaching and material development. Further SLA studies involving functional features other than the Q feature and beyond the initial state may be helpful in determining the extent to which educators can predict learners' difficulties in acquiring L2 grammar, based on the minimalist view of L2 acquisition.

REFERENCES

- Bach, E. (1971). Questions. *Linguistic Inquiry*, 2, 263-269.
- Bailey, K., Madden, C., & Krashen, S. (1974). Is there a "natural sequence" in adult second language learning? *Language Learning*, 21, 235-243.
- Bardovi-Harlig, K. (1987). Markedness and salience in second-language acquisition. *Language Learning*, 37, 385-407.
- Bhatt, R. & Hancin-Bhatt, B. (2002). Structural minimality, CP and the initial state in second language acquisition. *Second Language Research*, 18, 348-392.
- Birdsong, D. (1989). *Metalinguistic performance and interlinguistic competence*.

- New York: Springer.
- Bloom, L., Merkin, S., & Wootten, J. (1982). *Wh*-questions: Linguistic factors that contribute to the sequence of acquisition. *Child Development*, 53, 1084-1092.
- Brown, R. (1968). The development of *wh* questions in child speech. *Journal of Verbal Learning and Verbal Behavior*, 7, 277-290.
- Chomsky, N. (1986). *Knowledge of language: Its nature, origin and use*. New York: Praeger.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- de Villiers, J. (1990). Why questions. In T. Maxfield & B. Plunkett (Eds.), *UMOP special edition—papers in the acquisition of Wh, GLSA* (pp. 155-173). Amherst: University of Massachusetts.
- Eubank, L. (1993/94). On the transfer of parametric values in L2 development. *Language Acquisition*, 3, 183-208.
- Epstein, S., Flynn, S., & Martohardjono, G. (1996). Second language acquisition: Theoretical and experimental issues in contemporary research. *Behavioral and Brain Sciences*, 19, 677-758.
- Goodluck, H. (1986). Language acquisition and linguistic theory. In P. Fletcher & D. Garman (Eds.), *Language Acquisition* (2nd ed.). Cambridge: Cambridge University Press.
- Harley, B. (1986). *Age in second language acquisition*. Clevedon, Aveon: Multilingual Matters.
- Huang, J. (1982). *Logical relations in Chinese and the theory of grammar*. Unpublished doctoral dissertation, MIT.
- Hyams, N. (1986). *Language acquisition and the theory of parameters*. Boston: Reidel Publishing Company.
- Kim, J.-T. (2000). *The Initial state of second language syntax: An investigation of L2 wh-movement and null subjects from the minimalist perspective*. Unpublished doctoral dissertation, University of Texas at Austin.
- Newport, E. L., Gleitman, H., & Gleitman, L. R. (1977). Mother, I'd rather do it myself: Some effects and non-effects of maternal speech style. In C. Snow & C. A. Ferguson (Eds.), *Talking to children: Language input and acquisition* (pp. 109-149). Cambridge: Cambridge University Press.
- O'Grady, W. (1997). *Syntactic development*. Chicago: University of Chicago Press.

- Poepfel, D and K. Wexler. (1993). The full competence hypothesis of clause structure in early German. *Language*, 69, 1-33.
- Platzack, C. (1996). The initial hypothesis of syntax: A minimalist perspective on language acquisition and attrition. In H. Clahsen (Ed.), *Generative perspective on language acquisition* (pp. 369-414). Philadelphia, PA: John Benjamins.
- Radford, A. (1990). *Syntactic theory and the acquisition of English syntax*. Oxford: Blackwell.
- Schwartz, B., & Sprouse, R. (1994). Word order and nominative case in non-native language acquisition: A longitudinal study of (L1 Turkish) German interlanguage. in T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 317-68). Amsterdam: John Benjamins.
- Schwartz, B., & Sprouse, R. (1996). L2 cognitive states and the full transfer/full access model. *Second Language Research*, 12, 40-72.
- Sharwood Smith M. (1988). Imperfective versus progressive. In W. Rutherford & M. Sharwood Smith (Eds.), *Grammar and language teaching* (pp. 124-145). Rowley, Mass.: Newbury House.
- Sharwood Smith, M. (1994). *Second language learning: Theoretical foundations*. New York, NY: Longman Publishing Company.
- Vainikka, A. (1993/94). Case in the development of English syntax. *Language Acquisition*, 3, 257-325.
- Vainikka, A., & Young-Scholten, M. (1994). Direct access to X' theory: Evidence from Korean and Turkish adults learning German. In T. Hoekstra & B. Schwartz (Eds.), *Language acquisition studies in generative grammar* (pp. 265-316). Amsterdam: John Benjamins.
- Vainikka, A., & Young-Scholten, M. (1996a). Gradual development of L2 phrase structure. *Second Language Research*, 12, 7-39.
- Vainikka, A., & Young-Scholten, M. (1996b). The early stages in adult L2 syntax: Additional evidence from Romance speakers. *Second Language Research*, 12, 140-176.
- Vainikka, A., & Young-Scholten, M. (1998). The initial state in the L2 acquisition of phrase structure. In S. Flynn, G. Martohardjono, & W. O'Neil (Eds.), *The generative study of second language acquisition*. Hillsdale, NJ: Lawrence

- Erlbaum, 17-34.
- Weissenborn, J. (1990). Functional categories and verb movement: The acquisition of German syntax reconsidered. In M. Rothweiler (Ed.), *Spracherwerb und Grammatik. Linguistische Untersuchungen zum Erwerb von Syntax und Morphologi* (pp. 190-224). Opladen: Westdeutscher Verlag.
- White, L. (1990). Second language acquisition and universal grammar. *Studies in Second Language Acquisition*, 12, 121-133.
- White, L. (1990/91). The verb movement parameter in second language acquisition. *Language Acquisition*, 1, 337-360.

예시언어(Examples in): English

적용가능언어(Applicable Languages): English/Korean

적용가능수준(Applicable Levels): Elementary/Secondary

Jung-Tae Kim
Department of English Language and Literature
University of Incheon
177 Dohwa-dong, Nam-gu, Incheon, 402-749
Tel: (032) 770-8109
Fax: (032) 770-8013
E-mail: jkimwustl@incheon.ac.kr

Revised in June, 2004
Reviewed in July, 2004
Revised version received in August, 2004