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**Bilingual language acquisition by Korean schoolchildren in New York City\***

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**Abstract**

This paper examines young Korean American children's bilingual language development with respect to their acquisition of English grammatical morphemes and the different plural marking

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systems of Korean and English. We address two specific issues: (1) 'do L1 and L2 learners acquire the grammatical features of a given language in the same sequence?' and (2) 'do L2 learners of different L1 backgrounds learn the grammatical features of a given second language in the same sequence?' Comparison of our results with those of other morpheme acquisition studies suggests that L1 and L2 learners of English do not acquire English grammatical features in the same sequence. Furthermore, there is evidence that first language influences the course of second language acquisition.

Results of an experimental study of plural marking suggest that the bilingual children in most, but not all, respects follow similar, but delayed patterns of first language acquisition of Korean and successive acquisition of English.

## **Introduction**

In this paper, we examine aspects of the bilingual language development of first-grade Korean American schoolchildren. Growing up as members of the Korean immigrant community in New York City, the children discussed here have all entered school with Korean as their mother tongue, and acquire English as a second language. In this introductory section, we briefly review relevant work on bilingual language acquisition, with a special emphasis on successive acquisition of a second language, specifically by young children. After setting out salient social and demographic features of the New York Korean community, we discuss methodological issues. In subsequent sections we first examine the New York City Korean children's acquisition of grammatical morphemes in English and compare the results with the patterns found in other studies of both first and second language learners of English. We then present the results of an experimental study designed to investigate plural marking and draw implications about the

extent of acquisition of Korean and English by the Korean-English bilingual children. The article concludes with a summary of major conclusions.

Much of the research on successive language acquisition by children has focused on whether young learners employ similar linguistic and cognitive strategies in the acquisition of a first and a second language. Following Brown's (1973) finding that there is a common, invariant sequence of acquisition for at least 14 bound morphemes by children acquiring English as their first language, several researchers have examined the developmental sequences followed by children acquiring English as a second language. These studies have attempted to determine whether the sequence found by Brown was also found in children acquiring English as a second language and whether children of different first language backgrounds acquire grammatical morphemes in the same sequence. While some scholars claim that L1 and L2 developmental sequences are similar (e.g. Ravem, 1968, 1974; Milon, 1974; Dato, 1970; Ervin-Tripp, 1974), other researchers argue that at least some aspects of the two processes are different – effectively that L2 child learners operate in a manner more similar to adult L2 learners than to children acquiring a first language (e.g. Wode, 1976, 1978; Cancino, Rosansky and Schumann, 1974, 1975; Hakuta, 1976).

More recently, researchers working in the tradition of Universal Grammar (UG) have proposed various theories of L1 and L2 processing. Specifically, a number of rationalist approaches to second language acquisition have assumed *fundamental differences* in first and second language acquisition (e.g. Felix, 1984; Clahsen, 1990; Meisel, 1991; Bley-Vroman, 1990). These scholars claim that while L1 learners have access to UG, L2 learners do not. To account for L2 acquisition, they propose a processing-oriented alternative to UG. In contrast, Pienemann (1998) argues that UG and language processing do not form a dichotomy, and

proposes a “Processability Theory” to account for both L1 and L2 acquisition while allowing *fundamental differences* between L1 and L2 acquisition to be maintained. Other researchers however argue that first and second language acquisition are similar and that adult L2 learners have access to UG (e.g. Vainikka & Young-Scholten, 1994; Schwartz & Sprouse, 1994; White, 1989). At present however, the central issues in this debate are difficult to resolve, chiefly because this linguistic research has to date made little use of - and indeed hardly seems to be cognizant of - relevant contemporary research in cognitive science and neuroscience (see further Carroll, 1998; Schachter, 1998). It is likely that only thus can advances be made in specifying details of processing models and of the grammars themselves which learners construct on the basis of available input. However, in addressing the issue of development of English as L2 by young Korean-English bilingual children, we provide evidence in this article which is relevant to the debate.

Aside from comparing L1 and L2 developmental sequences, some studies, especially those concerned with second language pedagogy, have taken up the question of whether common developmental sequences are found in second language learners with different first-language backgrounds. Early cross-sectional studies by Dulay and Burt (1973, 1974) found that some 250 Spanish- and Chinese-speaking children, aged six to eight, learning English in the USA, exhibited statistically significantly related accuracy ordering of 11 English bound morphemes elicited using the Bilingual Syntax Measure (BSM), a picture-elicitation device using colored cartoons. In comparing subjects’ success rate in correctly supplying a morpheme in an obligatory context, they measured accuracy of use, which was assumed to reflect order of acquisition.

Given the very different grammars of Chinese and Spanish, Dulay and Burt argued that

universal language processing strategies are the basis for the child's organization of a second language, and that it is the L2 system, rather than the L1 system that guides the acquisition of the second language. Several studies of adult English learners using the Bilingual Syntax Measure (BSM) (e.g. Bailey, Madden and Krashen, 1974; Larsen-Freeman, 1975;) also indicate that despite differences in amount of instruction, exposure to English, and first language, there is a high degree of agreement as to the relative difficulty of the set of grammatical morphemes studied (see also Larsen-Freeman & Long (1991: 88-92) for a review of subsequent morpheme studies done using different data collection and analysis procedures). Zobl and Liceras (1994) drew similar conclusions from their analysis of earlier studies of English L1 and L2 morpheme acquisition orders based on a functional categories framework.

However, some research on English morpheme acquisition does not support the conclusion of a universal order of acquisition among all second language learners. Hakuta and Cancino (1977) have argued that the semantic complexity of the morphemes varies in accordance with the learner's native language. They claim that a second-language learner whose first language does not make the same discriminations as the target language experience more difficulty in learning to use these morphemes than learners whose first language makes the semantic discrimination. For example, Hakuta's (1976) Japanese-speaking child experienced great difficulty with the definite/indefinite contrast – Japanese being a language that does not mark this distinction in the same way as English. Vainikka & Young-Scholten (1994) argued that the sequence of acquisition of German phrase structure by adult Korean and Turkish learners of German is influenced by their L1.

Hakuta (1976) also showed that the acquisition order of his Japanese subject was very different from that of Dulay and Burt's (1974) Chinese-speaking and Spanish-speaking subjects.

Similarly, Pak (1987), who employed BSM elicitation procedures, showed that the order of English grammatical morpheme acquisition of a group of Korean-speaking children living in Texas was significantly different from that of Dulay and Burt's (1974) subjects. These studies provide a basis for examining the New York City Korean children's morphological developmental patterns. In a later section, we compare our own data in turn with those of Brown's (1973) monolingual English-speaking subjects, Dulay and Burt's (1974) Chinese-speaking and Spanish-speaking children, Hakuta's (1976) Japanese-speaking child and Pak's (1987) Korean children to assess the extent of similarities and differences among the acquisition orders of the various groups.

The question of whether or not first and second language developmental sequences are the same where young children acquire two languages successively has been addressed in research with Turkish children in Germany and in the Netherlands (e.g. Pfaff, 1992, 1993, 1994; Boeschoten, 1990; Verhoeven, 1988; Verhoeven & Boeschoten, 1986; Verhoeven & Vermeer, 1985). These studies investigate in particular the grammatical development of the first language (i.e. Turkish) by Turkish-German and Turkish-Dutch bilingual children. Tracing the development of Turkish-German bilingual children in a longitudinal study, Pfaff (1993) found that while the bilingual children of her study made relatively few errors in Turkish morphology, there were nonetheless systematic differences in grammatical errors in Turkish made by Turkish-dominant children and German-dominant children. She found that Turkish development of German-dominant children was slower than that of their Turkish monolingual peers in an L1 setting, reaching a point of stagnation in comparison with that group. For example, it has been reported that monolingual Turkish children complete the acquisition of finite and non-finite gerunds in Turkish by the age of 2 (Slobin, 1988). However, Pfaff (1993) found that gerund

forms were present in the speech of her Turkish-dominant bilingual subjects but absent in the speech of German-dominant bilinguals.

Compared with the Turkish children in Germany, the use by bilingual children in the Netherlands of gerunds of any type is extremely restricted (Verhoeven, 1988). Verhoeven reports only three occurrences of participles and gerunds in narratives by eight children, interviewed twice at the ages of 7 and 8. There were no instances at age 7, and only three at age 8. However, to achieve their communicative goals the children made extensive use of adverbial cohesive devices of a kind typically used by 5 year old monolinguals in Turkey. Verhoeven suggests that this “stagnation” is related to restricted L1 input in the second language environment and characterizes the use of adverbials as a “compensation strategy” used to achieve cohesion. However, data reported by Boeschoten for twelve younger children, interviewed three times at ages 4, 5 and 6, show considerable individual variation (Boeschoten, 1990). Only five of the children used any gerund forms at all, while all used adverbials, usually in combination with non-finite gerunds or with complex verb finite forms.

In contrast to this picture of relatively error-free, if restricted, acquisition of Turkish morphology, German morphology is far more difficult for the bilingual children than for monolingual German-speaking children (Pfaff, 1994). For example, Pfaff found that even the German-dominant children in her study made many errors in German, thus approximating more closely to patterns of second language acquisition of German observed for adults and older children than to patterns of first language acquisition of German by monolingual children. Pfaff suggests that this apparent difficulty with German morphology is not simply due to the structural complexity of German. Like Verhoeven (1988), Pfaff (1994) suggests that the bilingual children of her study have little effective contact with German, receiving restricted input in the second



language environment. Verhoeven & Vermeer (1985) found that the rate of acquisition of Dutch by Turkish children in the age range from 4-8 years clearly lags behind that of their Dutch peers. With the results of these investigations of successive language acquisition by children in mind, we report later the results of an experiment which investigates the manner in which the New York City Korean children handle differences in nominal pluralization systems in both Korean and English. Whereas plural nouns are regularly formed by attaching the appropriate allomorphic plural suffix morpheme //s// to the noun in English, plurality in Korean is marked by a numeral and a classifier placed after the noun, which itself is morphologically simple. Following the procedures spelled out by Pfaff in particular, data elicited from the bilingual children of this study are compared with patterns reported for monolingual English-speaking and Korean-speaking children of the same age. We turn first however to an account of the social context of language acquisition for the Korean-American children of our study.

### **The New York City Korean community**

Korean Americans are among the more recent immigrant groups to enter American society, with over two-thirds of the present Korean population in the United States having arrived after 1970 since the passage of the U.S. Immigration and Naturalization Act of 1965. Of the Asian and Pacific Islander population in the U.S., Koreans ranked fifth in number (about 800,000 in 1990) after the Chinese, Filipino, Japanese and Asian Indian immigrants. The 1990 U.S. Census indicated that Korean Americans are urban dwellers: 95% of Korean Americans lived in cities while only 5% lived in rural areas. New York state contained the second largest Korean population (76,029) after California among the 50 U.S. states.

First-generation immigrant conversations among Korean Americans takes place very largely in Korean; several surveys have indicated that this language is used for over 75% of spousal communication and 72% of parent-child communication (Kim, Sawdey and Meihoefer, 1980; Hurh and Kim, 1984). For the most part, Korean Americans contract informal social ties primarily with other Korean Americans, regardless of socioeconomic status, geographic location, or the size or concentration of the local Korean population (Kim, B.-L., 1988:265). Hurh and Kim's (1984) study of the Los Angeles Korean population indicated that high proportions of Koreans (75-90 percent) reported a network of close kin, neighbors, and friends who were also Korean. More than half of the kin and a third of the neighbors were persons with whom they had daily contact. Only a third had white friends, and these were mostly people they had met through the workplace. Many Koreans work in racially mixed settings and those who operate small businesses often have regular commercial contact with Caucasian and African American, Chinese and Latino American customers (Kim, I, 1981; Hurh and Kim, 1984; Goldberg, 1995). However, these relationships are confined to the workplace and remain for the most part formal and of secondary importance. Korean social networks are thus typically composed of other Koreans who may be family, friends, recreational colleagues, and fellow church congregants. The informal social organization of the community in which the children described below live and interact is thus very likely to provide them with opportunities to speak and hear Korean.

## **Subjects**

### ***Korean children***

Twelve Korean children, six male and six female, participated in this study. The

twelve subjects were selected on the basis that they were all in the same first grade class of 27 students and had Korean as their native language. Each child's name, sex, age at the beginning of the fieldwork period (May, 1995) and order of birth are listed in Table 1. Besides Matthew, Joshua, Abel, and Kyung who were born in the U.S. and Gina who was born in Argentina, all other children were born in Korea and subsequently moved to the United States with their families. Kwon's family had moved to Mexico soon after his birth and came to the United States when he was four. Except for David whose first contact with English was in Mrs. Kim's first grade class, all eleven children attended English-speaking kindergarten in the U.S. before becoming first graders. At the time of this study, ten out of the twelve Korean children were enrolled in a daily pull-out Korean/English bilingual class and ESL class. Matthew and Kyung had passed the school board's English proficiency test in the beginning of the school year and thus were exempt from the two classes. When the test was administered again in April, 1995, Grace, Kathy, Gina, and So Hee also achieved passing scores and would be exempt from the bilingual and ESL classes when they started second grade.

*(Place Table 1 about here)*

The high proportion of recent immigrant population in this part of New York City is reflected in the composition of the class. Aside from the 12 Korean students, there are 5 Chinese, 1 Afghan, 1 Russian, and 6 Hispanic students whose native languages are something other than English. Only 2 out of the 27 students are native speakers of English. Out of about 970 students enrolled in the school, around 700 speak English as a second language. Furthermore, more than half the student population at this school is of an Asian

descent.

### ***The teacher***

Mrs. Kim, the homeroom teacher, immigrated to the United States at the age of seven with her family from Korea. Since then, she has received her elementary, secondary, and college education in the States. While her ability in Korean has not advanced much since her move to America, Mrs. Kim can converse in Korean well enough to communicate with the monolingual parents of her students. There is no trace of Korean accent in her English, but some of her Korean students attempted to speak to her in Korean in the beginning of the school year. Mrs. Kim reported having specifically instructed her Korean students not to speak to her in Korean out of consideration for the non-Korean students in her class. The fact that ten of her twelve Korean students had the opportunity to speak Korean in the daily pull-out bilingual Korean/English class also led her to insist on English as the main language in her classroom. However, although she did not allow her Korean students to address her in Korean, Mrs. Kim did not attempt to prevent them speaking Korean among themselves.

### **Data collection**

#### ***Recording equipment***

Each subject wore a small light-weight wireless radio microphone, from which sound signals were transmitted to the radio receiver connected to a cassette-recorder placed in a box in the back corner of the classroom. This light-weight wireless transmitter-receiver system recorded speech from any part of the classroom while

allowing children to move freely in their customary fashion.

***Elicitation procedures for spontaneous speech***

The fieldworker (the first author), a bilingual Korean/English speaker adopted the role of a classroom assistant, participating in the daily routines of the class. This allowed her to collect a tape-recorded corpus of spontaneous speech and to observe children's language choice and language mixing patterns without imposing her presence as a researcher. Such participant observation procedures allow observation of classroom participants with minimum observer effect (Milroy, 1987; see also Moffatt & Milroy 1992 for a report a similar study of a group of bilingual children at school).

Based upon Mrs. Kim's evaluations of students' language proficiency, the twelve Korean students were organized as six pairs such that members of each pair showed comparable proficiency in both English and Korean, as shown in Table 2.

*(Place Table 2 about here.)*

Audio-recordings were made in three situations:

- 1) *storytelling*: telling to the partner a spontaneously created story or some other account based upon an activity in class.
- 2) *math*: this activity type involved counting in some form, such as in buying and selling toy goods in an imaginary store, sorting and counting different plastic shapes, or measuring how far a snail travels in a given amount of time.
- 3) *play*: as part of the "Learning Center" in which children are free to play educational

games with one another (e.g., various board games, wooden blocks, and jigsaw puzzles).

### ***The Data***

The recordings for each Korean-Korean student pair for each activity type lasted between 20 and 75 minutes (for an average duration of 33 minutes), yielding a total of approximately ten hours of recorded speech. Only monolingual English sentences were used and mixed Korean and English utterances were excluded from the analysis. The resulting corpus contained a considerably larger number of morpheme tokens for each subject than the total reported for each subject in Dulay and Burt (1974). Thus a larger number of tokens for each morpheme can be balanced against the smaller number of subjects in the current study.

### ***Scoring procedures for the morpheme study***

The procedures for scoring morphemes employed by Dulay and Burt (1974) in their cross-sectional study have been adapted here. Although so called ‘morpheme studies’ of the type exemplified by their work have been subject to considerable criticism (see further last paragraph under *Comparison with other morpheme studies*), we shall see shortly that the findings which emerge from them are rather consistent. This is probably because, despite problems in their design and in their assumptions about the nature of the acquisition process, they reflect underlying processing constraints of the kind which current theories such as those of Pienemann (1998) would wish to capture. A particularly important factor in our decision to follow a morpheme-scoring procedure is the availability of earlier work of this type on both Korean and Japanese, as discussed below. Taken together with substantial research on the

acquisition of the morphemes of English and those of other languages distant from Korean, the findings of Fathman and Hakuta allow us to relate our own findings to those of other investigations which are methodologically at least partly comparable. Table 3 shows the 10 English grammatical morphemes investigated.

*(Place Table 3 about here.)*

The analysis incorporates the notion of “obligatory occasion” adapted from Brown’s study, adopted also by Dulay and Burt. Obligatory occasions are defined as stretches of talk consisting of more than one morpheme to create utterances where particular grammatical morphemes are required. For example, in the utterance “She is eating” mature native speakers English do not omit the morpheme *-ing*, which is obligatorily attached to any verb in English in the context **BE V\_#**. A child who is in the process of learning a second language will instantiate such obligatory occasions, but may not furnish the required forms. They may be omitted altogether, as in “he like hamburgers,” or misformed, as in “he eated his lunch,” where the regular past form *-ed* is incorrectly supplied. Each obligatory occasion for a grammatical morpheme was treated as a ‘test item,’ and scored as follows:

no morpheme supplied	= 0 (She take it)
misformed morpheme supplied	= 1 (She taked it)
correct morpheme supplied	= 2 (She took it)

Details of items scored are as follows:

1) Pronoun case: pronouns were scored for correct case-marking whenever they appeared, i.e., in

subject position (i.e., *he, she, they, we, I*), in indirect or direct object position (i.e., *him, her, them, us, me*), and immediately following prepositions. *It* and *you* could not be scored for case as the form remains the same in all positions.

- 2) Article: tokens of both *a* and *the* were combined under the general category “article.”<sup>i</sup>
- 3) Copula: singular and plural as well as present and past copula tokens were tallied together.
- 4) Progressive: -ing was tallied when preceded by past or present forms of BE. Gerunds were not included in the tally.
- 5) Plural: only the so-called “short plurals” were included, i.e. /s/ and /z/ allomorphs attached to nouns such as desk-s and circle-s.<sup>ii</sup>
- 6) Auxiliary: Present and past as well as singular and plural forms of *be* were combined under one category. This category excluded modals (e.g. *may, can, will*).
- 7) Past regular: All allomorphs of the past regular (/t/, /d/, and /ɪd/) were included.
- 8) Past irregular: these included only main verbs, such as *ate, stole, got, and fell*. In cases where a child offered “eated,” past irregular was scored as a misformation.
- 9) Possessive: possessive marker ‘s on nouns as well as possessive pronouns were tallied.
- 10) 3rd person singular: these were scored whenever a singular noun phrase or pronoun appeared in subject position immediately followed by a main verb. *Does* and *has* used as main verbs were not included in the tally.

The group score for a particular morpheme is obtained by computing a ratio whose denominator is the sum of all obligatory occasions (where each occasion is worth two points) for that morpheme across all twelve children in the group, and whose numerator is the sum of the scores for each obligatory occasion of that morpheme across all children, and multiplying the



resulting quotient by 100. To illustrate the scoring method, consider five utterances produced by three children and compute the group score for the Past Irregular.

Past Irregular

		Raw Score	Occasion
Child 1:	He eated it.	1	2
	This man taked it away.	1	2
Child 2:	He bite it.	0	2
Child 3:	He stole it.	2	2
	The dog took it.	2	2
Total		6	10

$$\text{Group Score} = 6/10 \times 100 = 60$$

The procedure then was to rank the 10 grammatical morphemes according to decreasing group score. The New York City Korean children's rank order of acquisition is compared in turn with the following: Brown's (1973) monolingual English-speaking subjects; Dulay and Burt's (1974) Chinese-speaking and Spanish-speaking children; Hakuta's (1976) Japanese child learning English; Pak's (1987) group of Korean-speaking children learning English in Texas. The results of a series of Spearman Rank Order Correlation tests are discussed with reference to previous claims regarding second language acquisition of grammatical morphemes.

***Materials for the experimental study on plural marking by New York City Korean children***

This experiment used 48 laminated flashcards (8 ¾" X 5 ½") with either photographs or

colored drawings of common objects or animals to elicit children's responses. Each card illustrated either one or two of a given item and presentations were ordered so that a single item card preceded a card with two of the same items (e.g., card #1 illustrated one watch, card #2, two watches, card #3, one chair, card #4, two chairs, card #5, one sock, card #6, two socks, and so on). Two matched stacks, each with 24 cards (12 different items), were prepared as shown in Table 4. Stack #1 was presented with instruction in English and Stack #2 with instruction in Korean. Every item illustrated in Stack #1 corresponded to a semantically related item in Stack #2. Care was also taken to ensure that a word which is a known established borrowing in Stack #1 (e.g., camera) would correspond to such item in Stack #2 (e.g., TV). One group of six students received Stack #1 before Stack #2, while the other six received the stacks in the opposite order (see Table 2 above).

*(Place Table 4 about here.)*

### ***Elicitation procedures for the experimental study on plural marking***

The primary goal of the experimental study was to investigate the manner in which the Korean American children manage differences in plural marking between Korean and English nouns, and at this point we need to comment briefly on relevant differences between the two language systems. English expresses quantification in various ways, often as adnominal modification of the noun ("two candies") or of a representative counter ("two pieces of candy"), or as a noun substitute ("I want two [of them]). Different languages show different degrees of flexibility in the quantificational structures that they allow. Korean is fairly flexible, but some of the possible constructions occur more frequently than others. Similar to the English allomorph plural suffix //s//, a suffix, **-tul** marks plural in Korean. However, **-tul** is optional and is used

relatively infrequently in the language and is almost never used on inanimate nouns (Martin, 1992). Two classes of words modify the noun in Korean: numerals and classifiers. A classifier which occurs after a numeral can be one of mainly two types: unit and measure. A unit classifier counts individual instances of a countable noun as in (1) through (3).

- (1) **chayk han kwen**<sup>iii</sup> book one [CLASS] ‘one book’
- (2) **kay twu mali** dog two [CLASS] ‘two dogs’,
- (3) **pay sey chek** boat three [CLASS] ‘three boats’.

In comparison, a measure classifier registers the amount of a measurable noun as in (4), or of money as in (5).

- (4) **cha han can** tea one [CLASS] ‘one cup of tea’,
- (5) **chen wen** thousand [CLASS] ‘a thousand wen’.

Some Korean countable nouns have specific unit classifiers but many others lack specific classifiers and number is expressed by the numeral alone; in fact, the bare numeral without a classifier can be used to count any noun. While it is possible for some nouns to occur in constructions where a numeral is placed prenominal, as would be the case when a unit counter (e.g. **salam** ‘person’ in **haksayng han salam** ‘one student’) is used as a free noun (e.g. [**salam**] **han salam** ‘one person’), the most common order in Korean is Noun-Num-(CLASS) (Martin, 1992). For example, while **thokki hana** -- rabbit one, ‘a rabbit’ and **talk hana** -- chicken one, ‘a chicken’ are acceptable, **\*han thokki** -- one rabbit, ‘a rabbit’ or **\*han talk** -- one chicken, ‘a

chicken' are not.

The experimental study on plural marking consisted of two different tasks – the experimental task discussed above and the game task. These tasks, which we shall describe in turn, were administered approximately two weeks apart. In the experimental task, each child sat individually with the experimenter (the first author) and responded to what was being asked in a setting similar to an oral interview. In the game task, a more spontaneous type of language data was obtained by having two students in a pair administer the task to each other. Both parts of the experimental study were audio-recorded.

The experimental task procedure was as follows. Two stacks of flashcards, one to be presented with an instruction in Korean and the other with an instruction in English (see Table 4) were separately placed facing down on the table in front of the child. The experimenter requested the child to pick up a card on the top of the designated stack, place it in front of him and state the name of the item (e.g. “watch/a watch”). If the child did not mention the number (i.e., “one”), the experimenter asked “how many?” to which the child responded “one.” The experimenter then rephrased the response by saying emphatically, “ONE watch, right?” The child agreed and then picked up the next card from the pile, placed it on top of the first card and stated “two watch(es).” Again, if the child did not mention the number (i.e., “two”), the experimenter asked “how many?” to which the child responded “two.” The experimenter then said “Okay, so there are TWO--- what?” to which the child either responded “watches” or “watch.” The experimenter then repeated the child’s response by saying “Can you say two watch(es)?” After three or four repetitions, children understood the desired pattern of responses and phrased their answers accordingly. After this procedure was completed with the rest of the stack, the second stack of flashcards was introduced in the other language by the experimenter.

In order to minimize the order effect, six subjects were randomly selected to receive flashcard Stack #1 with the English instruction first and the remaining six subjects received Stack #2 with the Korean instruction first (see Table 5). Two native speakers of English in the same class performed the same task as a control group, with instructions for both stacks given in English.

*(Place Table 5 about here.)*

The game task was designed to investigate whether the children's use of the plural marker in the interview setting was consistent with their use in spontaneous speech. Two Korean children in a pair (see Table 2) sat facing each other across a table. One child was given Stack #1 and the other Stack #2, and both children were instructed in English to play a game in which each child describes items shown on the cards to his/her partner. The experimenter instructed the children not to show their cards to their partners until they finished describing them. It was explained that they were to provide each other with descriptions of objects shown on the cards including size, shape, color and number so as to enable the partner to visualize it. What we expected to obtain from the game task were occasions for the plural morpheme embedded in spontaneous speech which included various parts of speech such as verb, noun, number, and adjective. Both stacks contained cards in the same order as in the experimental task. After presenting these instructions, the experimenter left the area to ensure that the children spoke with each other rather than with the experimenter.

## **Acquisition of Grammatical Morphemes in English**

### ***Results of the Morpheme study***

Figure 1 shows in descending order accuracy rates achieved by the New York City

Korean American group for each English morpheme. On seven out of the ten morphemes, scores are higher than 90%. The three morpheme types that fall well below this level are the article, 3rd person singular *-s*, and plural *-s*. Similar findings are reported by studies that have investigated the patterns of acquisition of English grammatical morphemes by Korean and Japanese speakers. For example, Pak (1987) who examined the acquisition rate of English morphemes by Korean children (ages 5 through 12 years) living in Texas reported that the indefinite article, the 3rd sing.*-s*, and the plural morpheme presented the greatest difficulty for her Korean subjects. Furthermore, Hakuta (1976) showed that scores for the English plural never reached the criterial level for acquisition during his 13 months of investigation of a young Japanese child learning English as a second language.<sup>iv</sup> As can be seen from the comparisons in Figure 1, the NYC Korean children, like the Texas Korean children, experienced particular difficulty with the indefinite article, the 3rd person singular *-s*, and the plural morpheme. But it was the regular English plural morpheme which presented the greatest difficulty for this group as for Hakuta's Japanese subject. Their very low score can be interpreted as incomplete acquisition of this particular grammatical feature, an issue to which we return when we discuss the results of the experimental study on plural marking (However, see below in this section for a discussion of Korean phonology regarding word-final /s/).

*(Place Figure 1 about here.)*

Turning now to errors involving articles, it appears that the absence of this grammatical category in Korean influences its acquisition by the NYC Korean children. The article system is moreover semantically complex in English, encoding a contrast between definite and indefinite reference. It appears from the work of Hakuta (1976) and Fathman (1975) that children whose

first language is Japanese or Korean (neither of which has an article system) have more difficulty learning the English article system than for example, Spanish speaking children who have natively acquired a language with an article system. Interestingly, Frauenfelder (1974) reports that English-speaking children in a French immersion program in Canada never confused the definite-indefinite contrast, although they made many errors involving gender on articles – a distinction not present in English. Referring to these findings, Hakuta (1987) argues that it is the absence of a grammatically marked semantic distinction between definite and indefinite reference which causes problems for the Japanese and Korean children, rather than a conceptual problem with this distinction. We shall provide additional support for this claim in the next section.

The problem with the 3rd person singular morpheme, the final element shown in Figure 1 to present problems for the NYC Korean children, seems to be of a rather different kind, since investigations of both first and second language acquisition of English have found this morpheme to be acquired relatively late (Brown, 1973; De Villiers & De Villiers, 1985; Hakuta, 1976; Dulay and Burt, 1974). Low perceptual salience has been discussed as a major factor in its late acquisition by both first- and second-language learners, and it is moreover variably deleted in some dialects of English (see for example, Labov, 1972; Cheshire & Milroy 1993). Besides these plausible explanations however, a phonological factor other than saliency may also be involved in Korean children's difficulty with the English 3<sup>rd</sup> person singular agreement marker (as well as the English plural marker discussed above) – namely that no words in Korean ever end in /s/. When this phoneme occurs word-finally, it is either neutralized to /t/, as in **os** 'clothes' (pronounced [ot]), or is deleted, as in **kaps** 'price' (pronounced [kap]). This could impede Korean children's ability to take note of the English morphemes that are realized as word-final

/s/. In the following section, we compare in more detail the results shown in Figure 1 with those reported in other studies of English grammatical morpheme acquisition.

### ***Comparison with other morpheme studies***

In this section we attempt systematically to address the two major issues set out in the Introduction, which have also been alluded to above. The first question is whether L2 learners of English acquire the English morphemes in the same sequence as L1 learners, and the second is whether second language learners acquire the English morphemes in the same sequence, regardless of L1 background. If second language learners of English acquire the grammatical morphemes in the same sequence as speakers of English as a native language as some studies have claimed, we should see a statistically similar rank ordering of the grammatical morphemes in Brown's (1973) monolingual English-speaking children and the Korean children of this study. On the other hand, a different rank ordering would suggest that acquisition by the two groups does not proceed in the same manner at least with regard to the set of grammatical morphemes examined. Furthermore, if children reconstruct English syntax in similar ways regardless of first language background, we should see a common ordering of the morphemes by Korean, Chinese, Japanese and Spanish-speaking children (Dulay and Burt, 1974; Hakuta, 1976). On the other hand, statistically significant differences in the rank orderings would argue against universal language processing in SLA.

Following Dulay and Burt (1973) in assuming that accuracy rank reflects order of acquisition, we can compare the rank orders of acquisition of the ten English morphemes for the Korean children with those reported elsewhere. Table 6 shows the rank order for native speakers of English (column English); for Spanish and Chinese children (column Sp.&Ch.)<sup>v</sup>; for a



Japanese child (column Japanese); for the NYC Korean children (column NYC K.); for another group of Korean children in Texas (column Texas K.). Since the order of acquisition for the four second-language groups (Sp.&Ch., Japanese, NYC K. & Texas K.) is clearly different from that of the first-language group (English), our own New York study, in conjunction with the data reported here, support the claim that children who acquire English as a second language do not acquire the grammatical morphemes in the same sequence as children who acquire English as a first language (see further Hakuta (1987); Clahsen (1990); Meisel (1991)).

Dulay and Burt (1973) attributed this discrepancy between first- and second-language acquisition patterns to the different cognitive and conceptual abilities of children at different stages of development, so that the acquisition patterns of more sophisticated older learners are necessarily different from those of younger first-language learners of the same language. Hakuta further suggests that a 5 year old second language learner behaves more like an adult second language learner than a 5 year old first language learner. These arguments, together with our result, support the assumption that there are fundamental differences in first and second language acquisition, otherwise known as the Fundamental Difference Hypothesis (Bley-Vroman, 1990).

We can address the second issue set out at the beginning of this section - whether second language learners acquire the English morphemes in the same sequence, regardless of L1 background by comparing the four second-language groups (Columns Sp.&Ch., Japanese, NYC K., Texas K.) in Table 6. In fact, clear differences are evident between the rank orderings reported by Dulay and Burt (1974) (column Sp.&Ch.) and those in the other three studies (Hakuta (1976), current study, and Pak (1987); columns Japanese, NYC K., Texas K.)<sup>vi</sup> Hakuta reported that the acquisition order of his Japanese subject (column Japanese) was very different from that of Dulay and Burt's subjects (column Sp.&Ch.) with a Spearman rho of +.20 for the 9

morphemes that the two studies had in common. Likewise, results of Spearman rank order correlation for Dulay and Burt's subjects (column Sp.&Ch.) with the NYC Korean children (column NYC K.) and also with the Texas Korean children (column Texas K.) show that the accuracy ordering of each of the two Korean groups is significantly different from that of the Spanish and Chinese groups of Dulay and Burt's study.

*(Place Table 6 about here.)*

A series of Spearman Rank Order tests on the data reported in Table 6 revealed the following correlations:

NYC K. and English	+0.07 (not significant)
NYC K. and Sp.&Ch.	+0.35 (not significant)
<b>NYC K. and Japanese</b>	<b>+0.78 (<math>p &lt; .01</math>)</b>
<b>NYC K. and Texas K.</b>	<b>+0.90 (<math>p &lt; .001</math>)</b>
Sp.&Ch. and Japanese	+0.20 (not significant)
Texas K. and Sp.&Ch.	+0.35 (not significant)
<b>Texas K. and Japanese</b>	<b>+0.77 (<math>p &lt; .025</math>)</b>

It is clear then that order of acquisition for the two Korean groups and the Japanese group is similar, but that these groups differ from the English, Spanish and Chinese groups. This result is especially noteworthy because the two Korean studies differed from the Japanese study with respect to both data collection and scoring procedures; while both Korean studies were cross sectional and ordered the morphemes in terms of accuracy of use, the Japanese study was

longitudinal and reported a sequential order of acquisition. We may surmise that if the data collection and scoring procedures had been uniform across the three studies, the correlation would have been stronger. In any event, the strongest correlation among the five groups in Table 6 is found between the two Korean studies (NYC K. and Texas K.). The fact that the results of these studies converge despite differences in elicitation procedures (Pak employed the Bilingual Syntax Measure (BSM) while the current study used spontaneous speech) strengthens the findings of both. Furthermore, when Pak (1987) is compared with Dulay and Burt (1974) (columns Texas K. and Sp.&Ch.), the rank orderings do not correlate significantly even though both studies used the BSM and similar scoring procedures. Both these results have implications for the reliability of the pattern reported for the NYC Korean children, suggesting that the absence of a significant correlation between the acquisition order of the NYC Korean children and Dulay and Burt's subjects can not be accounted for by different methodologies. Rather, it is the first language of the different groups of bilingual children which seems to determine correlation between orders of acquisition.

Since Korean and Japanese are very similar in morphology, syntax and general typological criteria (Martin, 1966; Kim, Y., 1997), the high correlation between the Korean and the Japanese rank orders shown in Table 6 may further be explained by the similarities between the two languages. Although the historical relationship between the two languages is still controversial, it is likely that Japanese is related to Korean (Martin, 1966). However, Korean is syntactically and morphologically very different from Chinese although it has borrowed numerous Chinese words (Martin, 1992). And of course there is no relationship at all between Spanish and Korean.

Given these facts about morphosyntactic similarities and differences in the languages

involved in our comparison, it appears that the child's native language indeed plays a role in the acquisition of the second language, contrary to the claim that all second language acquisition is guided by some sort of universal processing strategies. Particularly, given that both Korean and Japanese child learners of English consistently perform poorly on the English article and the plural -s and given that both of these languages lack these grammatical categories, it seems reasonable to conclude that the learner's first language influences the acquisition of the second language, at least with respect to the acquisition of grammatical morphemes. Vainikka & Young-Scholten (1994) draw similar conclusions regarding the influence of L1 on the acquisition of German phrase structure by adult Korean and Turkish speakers. It is therefore surprising that the two groups of children with Spanish and Chinese as first language backgrounds studied by Dulay and Burt (1974) acquired English morphemes in a similar order, since these two languages are structurally very different. We shall take a moment at this point to consider these apparently inconsistent findings, which in fact are indicative of an unresolved issue in the literature.

Several studies using the Bilingual Syntax Measure (BSM) have reported a high level of similarity in the difficulty experienced by both children and adults across a variety of L1 backgrounds in acquiring particular grammatical elements (Dulay and Burt, 1973, 1974; Bailey, Madden, and Krashen, 1974). However, it is not clear whether the reported similar orderings are to some extent an artifact of the speech elicitation measure (but see the discussion above of Pak's use of this measure). Other criticisms of the methodology used in morpheme studies are well known, and are noted here (for reviews see Long and Sato, 1984; Ellis 1994: 90-96).

One of the main concerns about morpheme order studies is the scoring procedure using aggregated, cross-sectional group data. While some researchers claim that the order obtained

from cross-sectional group data is not sustained by longitudinal data on individuals (e.g. Rosansky, 1976), others claim that individual and grouped morpheme data correlate significantly (e.g. Krashen, 1977; Andersen, 1978). One wonders whether the surprising finding reported by Dulay and Burt that Spanish and Chinese children do not differ in morpheme orders of acquisition is a consequence of grouping diversified individual data. Another major criticism of morpheme order studies is the 'weak' nature of the inferential statistical tests such as Spearman or Kendall rank order correlations for establishing the similarity of orders of acquisition (Brown, 1983). Alternative procedures for comparing developmental sequences have included implicational scaling (Andersen, 1978) and target-like use (TLU) analysis, in which subjects' performance in supplying morphemes in non-obligatory contexts in addition to obligatory contexts is examined (e.g. Lightbown, Spada, & Wallace, 1980; Lightbown, 1983). However, these approaches are not without problems of their own. For example, Stauble and Larsen-Freeman (1978) point out the inadequacy of implicational scaling for the study of second language acquisition, namely that it distorts the gradient and variable nature of the interlanguage of a second language learner since acquisition or non-acquisition must be treated as categorical. Fasold (1990: 196-9) discusses a number of criticisms (including this one) which have been leveled by sociolinguists at implicational scaling techniques as a procedure for capturing structured variability in the speech community. Thus, despite their limitations, which are acknowledged here, we judged the morpheme order approach to provide a reasonable means of comparing cross-sectional language data with longitudinal developmental data. In the case of the research reported here, the similarity in acquisitional order of morphemes among the Japanese and Korean groups is important, despite different data collection and analysis procedures. Larsen-Freeman and Long (1991) report that a number of studies using different data collection

and analysis procedures with subjects from Indo-European and non-Indo-European L1 backgrounds have found common orders of acquisition of morphemes. However, the results of our own analysis reported above do not support these findings, since they reveal a correlation between Korean and Japanese orders of acquisition which does not emerge when comparable data from English, Spanish and Chinese groups is considered.

### **Bilingual acquisition patterns and language choice**

In this section we discuss results of the two part experimental procedure described above (the experimental task and the game task respectively) which investigated acquisition of the different plural marking systems of English and Korean. We then present information on the Korean children's language choice patterns which emerged both in the course of peer conversations. This information is included for the insight it grants on the preference of particular children for one language or the other, which appears to some extent to reflect language ability. Finally, crosslinguistic differences in language acquisition are discussed with specific reference to the Korean acquired by the NYC Korean children.

#### ***Results: Experimental task***

Recall that the experimental design (described under *Elicitation procedures for the experimental study on plural marking*) provided for instructions to be presented to the children in both English and Korean. Readers may wish to refer to the accounts set out there of differences in number marking systems in Korean and English.

*(Place Table 7 about here.)*

Table 7 sets out responses elicited by twelve items presented to the children with

instructions in English, and the high numbers in column “Incorrect” shows that most of the NYC Korean children generally do not mark nouns for plural at all. While the item ‘chair’ is marked correctly by two children, the items ‘watch’, ‘sock’, and ‘block’ are each marked correctly by only one child (column “Correct”). Recall that the Korean plural suffix **-tul** is optional and occurs infrequently. This fact may contribute to the apparent difficulty that Korean-speaking children have with the obligatory English plural suffix morpheme. The general pattern of no plural marking on either singular or plural nouns can be observed in all of the word items with the exception of ‘sock’. All but one of the children mark as plural both singular and plural forms of this word (column “Overmark”), most probably because ‘sock’ is more often used and so has been learned in the plural rather than the singular form.

In Table 8, which sets out the children’s responses to the Korean instruction, the number of possible response patterns increases to five because some children chose to respond in English while others responded in Korean -- Kathy, Kwon, Jae and Gina consistently responded in Korean for the entire stack of cards while the other eight subjects responded in English with occasional Korean mixed in. All the children appeared to be aware of the change in the language of the instruction, and when the Korean instruction was read, some children explicitly asked if they should respond in Korean. The order in which the two sets of flash cards were presented did not appear to influence the observed response patterns -- the six subjects who heard the Korean instruction first did not necessarily produce more Korean responses or more incorrect plural markings in English than the six subjects who responded to the English instruction first.

*(Place Table 8 about here.)*

Columns “Incorrect”, “Correct”, and “Overmark” of Table 8 show the same pattern of English responses evident in Table 7. Although the number of responses for column “Incorrect”

is fewer in Table 8 than in Table 7, the general tendency to avoid plural marking on both singular and plural nouns remains clearly evident.<sup>vii</sup> Note also that responses for the item ‘shoe’ in column “Overmark” show a pattern similar to that shown for ‘sock’ in Table 7. Since ‘shoe’ is also mostly used in the plural form, this result supports the explanation offered earlier for the ‘sock’ pattern. Korean responses were either correct (column “Correct K”), as exemplified by (6) and (7), or incorrect (column “Incorrect K”), as exemplified by (8) and (9), depending on where the number marker was placed in relation to the noun.<sup>viii</sup> Although (9) is acceptable with some Korean nouns, the most common order is that found in (6) and (7) (i.e. Noun + Number + (Classifier)) (Martin, 1992). The word order shown in (9) appears to represent a borrowing from English (for further discussion of the variant word order, see the final paragraph in this section).

(6) **swupak han kay**  
 watermelon one CLASS  
 (‘one watermelon’)

(7) **swupak hana**  
 watermelon one  
 (‘one watermelon’)

(8) \* **han kay swupak**  
 one CLASS watermelon

(9) ? **han swupak**  
 one watermelon

The Korean responses show that these bilingual children experience some difficulty in using Korean classifiers, and also raise the issue of whether they acquire the classifier system in the same way as monolingual children acquiring Korean. Lee, K. (1997) investigated patterns of acquisition of a number of Korean classifiers by monolingual Korean children aged 2 through 7.



Recall that Korean has several dozen classifiers which mark different semantic categories of noun in the noun phrase (e.g., **ccak** for shoes, **mali** for animals such as dogs and birds, **songi** for flowers, and **tay** for airplanes). Lee, K. found that the number of responses with correct classifiers generally increased with age. In the first part of the experiment where utterances were elicited without the provision of specific classifiers, 67% and 72% of the responses given by 6 and 7 year olds respectively contained correct classifiers. In the second part of the experiment, the children were provided with a classifier in the question and the rate of correct responses increased to 93% for the 6 year olds and 96% for the 7 year olds. Based on these results, Lee, K. concluded that by the age of 7, Korean monolingual children are more or less able to correctly use and distinguish various Korean classifiers.

In contrast, the NYC Korean children failed to produce appropriate classifiers for different classes of nouns. The only classifier that the NYC Korean children use for all of the nouns is **kay**, which according to Unterbeck (1994) and Lee, J. (1995), is a general classifier covering a wider semantic scope than other Korean classifiers. While this item co-occurs with nouns referring to small- and medium-sized countable objects, it also replaces other more specific classifiers which are used with various inanimate objects. For example, the classifier for volumes of papers, '**kwen**' in '**chayk han kwen**' ('one book') can be replaced by '**kay**' as in '**chayk han kay**'. Lee, J. (1995) reports that monolingual Korean children overuse **kay** in the early stages of acquisition and gradually decrease its use as other classifiers are acquired. She attributes this phenomenon to the wide semantic scope occupied by **kay**. It seems then, based on these observations, that the NYC Korean children are at an earlier stage of acquisition of Korean as compared with their same-age monolingual Korean peers.

However, the overall picture of the children's Korean acquisition is complicated by the

fact that, in addition to overusing the classifier **kay**, the NYC Korean children produce incorrect word order (i.e. number + (classifier) + noun), a pattern not found in monolingual Korean speaking children. Thus, it seems that Korean-English bilingual children follow monolingual Korean children's acquisitional patterns with respect to the management of the semantics of Korean classifiers, but not with respect to word order in the noun phrase. This finding is similar in important respects to Pfaff's (1993:126) finding that the Turkish development of German-dominant bilingual children is like that of monolingual Turkish children only in some respects, while some structures do not develop to the same extent, if at all. Furthermore, Pfaff (1996) reports that her Turkish-German bilingual subjects show similar patterns of acquisition of word order as monolingual Turkish children. Given that the canonical word orders of the language pairs in question are parallel (i.e. Korean – SOV, English – SVO; Turkish – SOV, German – SVO), our own result, along with Pfaff's (1996) result, raises the question of whether word order acquisition should be treated as an issue separate from acquisition of grammatical morphemes.

### ***Results: Game task***

As described earlier, the game task was designed to supplement the experimental investigation of how the Korean children handled English plurals. The goal of this task was to elicit an approximation to natural speech by enabling the children to describe the pictured items to one another without the researcher's intervention – and of course this meant that a good deal of control over the form of the data was relinquished.

Interestingly, all twelve children chose to carry out the game task in English. One of the difficulties in analyzing the results of the game task was that a straight one-to-one comparison

with the results of the experimental task was impossible. Since the experimenter did not intervene, some children spoke much more than their partners. It was also not uncommon to see some children swapping cards with their partners or sometimes skipping some items altogether. Despite these difficulties however, certain general patterns emerged.

As we might expect from the results of the experimental task, none of the twelve children marked all of the English nouns correctly, but a higher proportion of plural nouns were realized with the plural morpheme *-s* than in the experimental task (Tables 7 and 8). In the less structured game task, 19 out of the total 24 word items elicited carried the plural *-s* at least 50% of the time and only in the remaining 5 items was the plural realized 40% of the time or less. As for why the latter five words (i.e. ‘knife’, ‘camera’, ‘airplane’, ‘watermelon’, ‘TV’) were more problematic for the Korean children, there are some plausible explanations. ‘Camera’ and ‘TV’ are attested loanwords into Korean, and as such were possibly treated by some of the children as Korean words. In addition, the children’s difficulty with ‘knife’ may reflect the fact that it exhibits an exceptional stem-final alternation in the plural (i.e. ‘knives’, not \*‘knifes’). One may also question whether the problem with ‘airplane’ and ‘watermelon’ was caused by the fact that they are the only compounds in the task. As in the experimental task, the items ‘shoe’ and ‘sock’ always carried the plural *-s* whether singular or plural was intended.

Since grouping data often masks individual variation (see Rosansky (1976); Krashen (1977); Andersen (1978) for discussions of individual vs. grouped data), Table 9 shows responses to the game task set out according to subject. The twelve NYC Korean children differed widely in terms of correct English plural marking, as shown by the broad range of % *-s* marking on plural nouns (14% - 83%). Eight of the twelve children marked the plural correctly at least 50% of the time while four children scored 43% or below. The lowest rate of correct plural

marking is seen in David (14%), the least proficient speaker of English among the twelve Korean-English bilingual children.

*(Place Table 9 about here.)*

Since discrepancies of the kind reported here between experimentally elicited and more spontaneous data are reported elsewhere in the literature (e.g. Marcus et al., 1992; Marcus, 1995), it is worth suggesting here some possible reasons for the children's apparently greater success in correctly marking English plurals in spontaneous speech. First, it is likely in a general way that experimental conditions imposed artificial constraints on the children's responses, and as hoped the game task made possible the gathering of more spontaneous data by reducing the amount of interviewer input and allowing the children to converse freely with one another. More specifically however, it is possible that the focus on lexical identification along with number words and classifiers in the experimental task reduced the communicative motivation for marking the noun as plural, since the experimenter specifically elicited the numeral elements in each response. These numerals already marked the noun as plural. Plausible as this explanation might be however, it is important to note that the rate of English plural marking by the NYC Korean American children still falls short of that of the two native English speakers who scored perfectly on all items even in the more constrained setting of the experimental task.

When we examine the spontaneous monolingual English speech of the NYC Korean children gathered outside of the game task, we find that English plural nouns are in fact variably marked, similar to the pattern observed in that task. Examples such as (10), (11) and (12) are quite common in the monolingual English corpus and confirm the results of both the experimental and the game tasks.

(10) Yooni: I like two shape up there.

(11) Kathy: Balloon is fifty dollar.

(12) Joshua: That'd be hundred dollar.

In acquisitional terms, the variable marking of plurals which emerges both in spontaneous and in experimentally elicited speech indicates that the NYC Korean-English bilingual children have not fully acquired this feature of English grammar. We noted the studies of Turkish children in The Netherlands (Verhoeven & Boschoten, 1986; Boschoten, 1990; Verhoeven, 1988; Verhoeven & Vermeer, 1985) which revealed that the Turkish-Dutch bilingual children's development in the two languages is generally slower than that of their Turkish-speaking and Dutch-speaking monolingual peers in an L1 setting. Similarly, the Korean-English bilingual children of the current study are in a developmental stage in which they fall short of the acquisitional level of both English-speaking and Korean-speaking monolingual children of the same age.

### *Language choice*

Recall that each child who participated in the experimental task described above selected the response language. The children's choices illuminated their language preferences, and were skewed in an interesting way. For while neither the Korean nor the English instruction specified which language should be used, the Korean instruction elicited some English responses, but the English instruction only English responses. It is probable that the children who responded in English to both the Korean and the English instructions selected English as the preferred (and indeed official) classroom language. However, the preference of the children who used some

Korean is most plausibly explained not by the effect of situational norms but by a superior Korean competence. Shin and Milroy (forthcoming) present data suggesting that code-switching is motivated by a limited competence in English on the part of one of the participants in the conversation. Similarly, Extract (1) below shows examples of code-switching motivated by a limited competence in Korean by Kyung, one of the most proficient speakers of English among the twelve Korean American children.

In line 1, the researcher elicits Kyung's response for the item 'watch' in Korean. Notice that Kyung's English response in line 2 (i.e. 'one clock') is incorrect since the elicited item is a watch rather than a clock. However, this response is probably related to the fact that the Korean term **sikyey** ('watch', 'clock') covers the semantic range of both 'clock' and 'watch' in English. In line 4, apparently interpreting the researcher's repair initiator 'um? (what?)' as a request to switch languages, Kyung reformulates her response in Korean. A three second gap here is probably best interpreted as a processing pause while she remembers the correct Korean word for the item. In line 11, the card with a picture of a table elicits the response 'han uyca' (one chair). Note that in addition to an English word order (i.e. numeral + noun) which shows the effect of English, Kyung has not produced the correct lexical item, probably due to a gap in her bilingual vocabulary.

After the researcher's repeated request for clarification in lines 12 and 13, Kyung attempts to repair her response in English (line 14) but subsequently starts to reformulate her response in Korean (line 15) knowing that a Korean response is required. However, the one second pause, followed by a switch to English when she offers the word 'desk' suggests that she does not know the Korean word for 'table' and so is unable to complete the utterance in Korean. Referring to switches of this kind, Moffat and Milroy (1992) suggest that one of the

motivations for code-switching in children is to fill lexical gaps in the bilingual vocabulary. In general, Kyung seems to be more comfortable with English nouns as she chooses to respond in English (lines 18, 20 and 22) despite the researcher's consistent use of Korean.

Extract (1):

- 1 Res: **ike mwe ya?/**  
           this what is  
           (what is this?)
- 2 Kyung: one clock?/
- 3 Res: **um?/**  
           (what?)
- 4 Kyung: I mean (3.0) **sikyey/**  
                                   Watch (or clock)  
                                   (I mean watch (or clock).)
- 5 Res: **um/**  
           (yeah)
- 6 **ike nun?/**  
           this TOP  
           (How about this?)
- 7 Kyung: **sikyey?/**  
           (watch?)
- 8 Res: **myech kay isse?/**  
           how many classifier is  
           (How many are there?)

- 9 Kyung: **twu kay/**  
two classifier  
(two)
- 10 Res: **um/**  
(yeah)
- 11 Kyung: **han uyca?/**  
one chair  
(one chair?)
- 12 Res: **ikey uyca?/**  
this chair  
(this is chair?)
- 13 (2.0) **uyca ya?/**  
chair is  
(Is it chair?)
- 14 Kyung: I I mean/  
15 **han (1.0) I mean one desk?/**  
(one)
- 16 Res: uh huh/  
17 **ike mwe ya?/**  
this what is  
(what is this?)
- 18 Kyung: two table/  
19 Res: **Ike-n mwe ya?/**



This-TOP what is

(As for this, what is it?)

20 Kyung: one shoes/

21 Res: **Ike-n** **mwentey?/**

This-TOP what would be

(As for this, what would it be?)

22 Kyung: two shoes/

Kyung's preference for English is shown even more clearly in Extract (2) where after she has offered several English responses to questions in Korean, the researcher explicitly directs her to speak Korean (line 3). Note that in line 6, the mixed utterance 'two **swupak**' (two watermelon) again shows the effect of English word order (i.e. number + noun). From line 9, all of Kyung's responses are in English for the rest of the session, and several attempts by the researcher to induce her to respond in Korean are apparently unsuccessful as Kyung repeatedly goes back to using English. Thus, language preference associated with a greater competence in English seems to have largely determined language choice in Kyung's case. However, as noted in Shin and Milroy (forthcoming), the role of the interlocutor in determining language choice is also important. We might surmise that the children's knowledge of the researcher's bilingualism affected the outcome of the experiment, in that a monolingual Korean speaker administering the Korean portion of the test might have elicited more Korean responses.

Extract (2):

1 Res: **Ike-n?/**

This-TOP

(As for this one?)

2 Kyung: a watermelon/

3 Res: **hankwukmal lo mal-halay?/**

Korean in talk-would

(Would you talk in Korean?)

4 Kyung: **swupak/**

(watermelon)

5 Res: **um/**

(yeah)

6 Kyung: two **swupak/**

(watermelon)

7 Res: uh huh/

8 **Ike-n mwe ya?/**

This-TOP what is

(As for this, what is it?)

9 Kyung: um (2.5) one ball?/

10 Res: uh huh/

11 **Ike nun?/**

this TOP

(How about this?)

12 Kyung: two ball/

In the following section, we shall describe patterns of the children's bilingual language acquisition, suggesting how inherent differences in the structure of languages can help explain the patterns of acquisition in a bilingual child.

### *Crosslinguistic differences in language acquisition*

Crosslinguistic investigations of first language acquisition (e.g., Slobin, 1985, 1997) have identified significantly different patterns of development in morphosyntactic marking of parallel constructions by children acquiring different languages. When we examine the New York City Korean children's patterns of use of inflectional morphology in Korean, we find that they are very similar to those of monolingual Korean-speaking children of the same age. This is true even for the English-dominant children in this study who make very few errors in Korean morphology in areas such as case and tense-mood-aspect marking. On the other hand, we have seen that the NYC Korean children acquire English grammatical morphemes in an order very different from that reported for monolingual English-speaking children. Aside from the fact that English is being acquired as a second language by the Korean children of this study, inherent structural differences in the two languages may explain differences in patterns of language acquisition.

Language acquisition studies of monolingual Korean children indicate that Korean-speaking children have no difficulty producing both verbal inflections and nominal particles <sup>ix</sup> (Kim, 1997). Kim reports that a variety of verbal inflectional affixes expressing different tenses, aspects, moods, modalities, conjunctions, and speech levels are used productively before 2 years of age, and errors in the use of verbal inflectional endings are generally rare, if not totally absent. Verbal inflectional endings are present in the one-word stage, and children do not make errors in the serial order of inflections. Kim (1997) also notes that

children acquiring Korean as a native language begin to produce adult forms of negation as early as 1:7, and by the beginning of the third year, they use distinct lexical forms of negation to express different semantic functions such as non-existence, prohibition, rejection, denial, inability and ignorance. In addition, the emergence of relative clauses in children's production samples is early compared with reports from other languages; Korean children begin to produce relative clauses at around 2:0. The acquisition of complement phrasal constructions is also early; Korean children productively use different infinitival complement constructions between the ages 1:9 and 2:5. The NYC Korean children generally follow these patterns.

Kim (1997) notes that in general, Korean children's speech at very early stages is very similar to that of Korean adults, compared with their peers learning other languages such as English. If all children are born equipped with Universal Grammar, then why does it take considerably longer for English-speaking children to produce adult-like speech than for young Korean speakers acquiring Korean? It is suggested that the adult grammars of English and Korean may differ in crucial syntactic aspects, most probably with respect to functional categories (Kim, 1997: 436). Kim reasons that if some functional categories are absent or are syntactically inactive in Korean adult grammar -- for example, if nominative CASE is not assigned by INFL as in English, but by default -- some of the differences in the acquisition patterns between Korean and English would be readily accounted for.

A similar pattern of crosslinguistic differences in language acquisition is found by Pfaff (1993) who reports that although their early exposure to both languages initially led her to expect that the developmental patterns of her Turkish-German bilingual subjects would display the characteristics of simultaneous acquisition of two languages, her analysis indicated that they instead followed a pattern of Turkish first language acquisition with a successive acquisition of

German. While the children's acquisition of Turkish proceeded essentially on the lines that have been reported for Turkish monolinguals, their acquisition of German differed strikingly from that reported for German monolinguals and was in some respects similar to the patterns characteristic of natural second language acquisition of German by adults and older children. In addition, she found that the Turkish-dominant children's inflectional morphology was almost identical to that of Turkish monolingual children and even the German-dominant children in her studies made fewer errors in Turkish morphology than in their German morphology. Pfaff attributes the differences in the children's acquisitional patterns of Turkish and German to the relative opacity of German morphosyntax as compared to Turkish morphosyntax, (which is generally much more regular). Similarly, the NYC Korean children's almost error-free acquisition of Korean (except for word order in the noun phrase as discussed in the previous section) and error-ridden acquisition of English appear to be influenced by the inherent structural differences between those two languages.

## **Conclusion**

This article examined various aspects of the New York City Korean American children's bilingual language development by investigating the children's acquisition of English grammatical morphemes and by means of an experimental study of plural marking in both Korean and English. We have specifically attempted to address two issues in language acquisition: (1) 'do L1 and L2 learners acquire the grammatical features of a particular language in the same sequence?' and (2) 'do second language learners of different first language backgrounds learn the grammatical features of a given second language in the same sequence?' We found that among the ten English grammatical morphemes examined, the New York City

Korean American children demonstrated experiencing the greatest difficulty with the plural *-s*, the 3rd person singular *-s* and the article. When the different morpheme acquisition studies were compared, there were clear differences in rank order of acquisition of morphemes between monolingual English-speaking children and second language learners of English. The results suggest that L1 and L2 learners of English do not acquire English grammatical features in the same sequence. Moreover, contrary to the claim that second language acquisition follows the same sequential path regardless of the speakers' first language background, we have found evidence for first language influence on the course of second language acquisition. For example, there were clear differences in rank order of acquisition of English morphemes between Spanish-speaking and Chinese-speaking children on the one hand (Dulay and Burt, 1974) and Korean-speaking children on the other. However, the rank orders of the Japanese child and the Korean-speaking children correlated at a statistically significant level. Given the fact that Japanese and Korean are morphosyntactically very similar, this result suggests that there are language-specific influences on second language acquisition. So whether or not these young learners continue to access UG principles (and surely they must), their L2 acquisition strategies appear to be affected by the knowledge they have acquired of their first language.

With respect to the experimental study on plural marking, we found that the New York City Korean children generally do not mark English nouns for plural. Since monolingual English-speaking children of similar age produced the plural forms correctly, it was concluded that the Korean children have not, at least in this respect, reached the level of acquisitional maturity of their monolingual English-speaking counterparts. Similarly, the New York City Korean children were found to fall short of full acquisition of the Korean classifier system. For example, while monolingual Korean-speaking children of similar age are reported to be

producing various classifiers in Korean, the New York City Korean American children produced only **kay**, a general classifier which is documented to be overused in early stages of monolingual Korean children's acquisition of Korean classifiers. One confounding factor in this overall pattern of delayed acquisition of Korean is the children's management of word order in the noun phrase involving numeral and classifier. Specifically, while the acquisition of the semantics of classifiers is generally unaffected by the bilingual children's knowledge of English, variant word order in Korean is influenced by the children's knowledge of English word order.

Since the New York City Korean children appear generally to follow a pattern of first language acquisition of Korean and second language acquisition of English, this exception may suggest that word order acquisition patterns need to be considered separately. This general pattern is not unexpected, since the children's exposure to English is later in life, most significantly in school. However, whether and how the children's language preference/dominance patterns may change in the course of the development of the bilingual children remains to be seen. Based on available information on bilingual speakers in the Korean and other immigrant communities, it is expected that the Korean American children of this study would speak increasingly smaller amounts of Korean since the use of English is particularly encouraged in school and by American society. The children's current errors in English grammar are likely to disappear as they become fully competent in English, while their ability in Korean is likely to weaken progressively until eventually they can claim only a passive knowledge of their native language.

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Notes

<sup>i</sup> The three studies that are subsequently compared with the current study (i.e. Brown, 1973; Dulay and Burt, 1974; and Hakuta, 1976) combine indefinite and definite tokens in their scoring. To facilitate comparability, these two types are merged in the scoring of the NYC Korean children's data.

<sup>ii</sup> There were two separate categories for the plural in Dulay and Burt (1974): (1) “short plurals” -- /s/ and /z/ allomorphs, and (2) “long plurals” -- /Iz/ allomorph as in ‘churches’. However, there were only a handful of long plurals in the current NYC Korean children’s data that a fair comparison with short plurals could not be made. Therefore, the long plurals in the current data were excluded so that only the short plurals can later be compared with the short plurals in Dulay and Burt’s study.

<sup>iii</sup> We use the Yale System of Romanization for utterances in Korean (Martin, 1992).

<sup>iv</sup> Hakuta used Brown’s (1973) scoring methods where the point of acquisition was defined as “the first speech sample of three, such that in all three the morpheme is supplied in at least 90% of the contexts in which it is clearly required.” (Hakuta 1976: 334)

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<sup>v</sup> Dulay and Burt (1973) report that the order is virtually the same for both their Spanish and Chinese speaking subjects (Spearman rank order correlations of Spanish and Chinese groups:  $+0.95$  ( $p < .001$ )), an issue to which we return later.

<sup>vi</sup> The total number of morphemes investigated varies. Brown originally listed 14 morphemes, of which Dulay and Burt investigated a subset of 11. Hakuta investigated 17, the current study 10, and Pak 12.

<sup>vii</sup> The two monolingual English-speaking children tested as controls in the current study marked all 24 of the plural nouns correctly, including the items ‘sock’ and ‘shoe’ with which most of their Korean peers had difficulty. This result is consistent with earlier studies of monolingual English-speaking children (e.g. Brown, 1973; De Villiers and De Villiers, 1985) which have reported the plural *-s* as one of the earliest grammatical morphemes to be acquired by monolingual English-speaking children.

<sup>viii</sup> A small number of responses that have mixed Korean and English words (e.g. two **sinpal** ‘two shoes’) were assigned to either Column “Correct K” or “Incorrect K” depending on the word order.

<sup>ix</sup> For a detailed description of Korean grammar, see Martin (1992).