

Acquisition of L2 English DP by Korean children*

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Abstract. This paper examines English L2 development of Korean children with respect to the English determiner, one of the key functional categories in English. We address the issue of crosslinguistic influence in child Second Language Acquisition, otherwise known as L1 transfer, in particular, whether there is an L1 transfer effect and if there is, how great it is. On the basis of a cross-sectional experimental study of the English determiner acquisition, this paper supports the full transfer view, according to which all lexical and functional categories are carried over at the start of L2 acquisition.

1. Introduction

Recent theoretical and empirical advances in language acquisition studies over the last decade and more have led to the consensus that careful investigation of L2 acquisition can contribute quite significantly to an understanding of the cognitive processes specific to language learning, and especially regarding an innately specified language faculty consisting of a restricted set of highly abstract Universal Principles, namely, Universal Grammar (UG).

Within this framework, L2 grammatical development is deemed as setting parametric values for the target language utilising whatever input is available to the learner. In the parametric value-setting 1) L1 and L2 could share the same setting environments in respect to a particular parameter, 2) a parameter in L1 may be set differently from L2, and 3) a parametric value set in L1 may be absent in L2 or vice versa. Furthermore, since L2 learners have previous knowledge of L1, it is generally assumed that they may use this knowledge in some way. Therefore, some of the most frequently debated issues in Second Language Acquisition (SLA) have been:

1) whether L1 grammar influences L2 grammar positively or negatively,

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- 2) whether L2 grammar learning is the same as L1 grammar learning, and
- 3) whether L1 may influence some areas of L2 grammar learning but not all.

Researchers interested in the above issues have made different claims and often presented conflicting evidence based on their experimental studies.

1.1 Generative studies on SLA

Within the generative SLA research in the 1980s, one of the most controversial issues has been the role of UG principles, parameters and parameter (re)setting in SLA. How L2 learners make use of UG principles and parameters in acquiring an L2 has been a major issue of debate among researchers. There are three main views regarding the degree of the UG availability to L2 learners: 1) No access to UG, 2) Partial access to UG, 3) Full access to UG.

The *No Access Hypothesis*, or the Fundamental Difference Hypothesis, was developed by Clahsen & Muysken (1986), Clahsen (1988) and Bley-Vroman (1990). According to this view, child L1 learners, but not adult L2 learners, have access to UG. Adult L2 learners use general learning strategies for L2 learning.

The *Partial Access Hypothesis* has been proposed to account mainly for L2 development of functional categories (Martohardjono & Gair 1993, and Hawkins & Chan 1997). According to this perspective, some UG subparts are fully available while other subparts are inaccessible or partially accessible to the language learner. In L2 acquisition, Vainikka & Young-Scholten (1994) argue that adult L2 initial grammar (and probably child L2 initial grammar as well) projects only lexical categories, while functional categories (FCs) follow later. Eubank (1993/1994) and Hawkins & Chan (1997) assert that not only lexical categories but also FCs are projected from the L2 initial state. However, not all the features of FCs are projected; for example, in the IP projection, Agr or Tense may be underspecified and in the CP projection, wh-operator movement may be missing.

The *Full Access Hypothesis* (Epstein, Flynn & Martohardjono 1996, Schwartz & Sprouse 1994, Penner & Weissenborn 1996, Grondin & White 1996, and Paradis & Genesee 1996, 1997) claims that principles of UG are available throughout the initial state, intermediate states and the steady state so that the early grammars of L2 incorporate functional as well as lexical categories from the very beginning.

1.2 Functional categories in L2 acquisition

For adult SLA, the controversy is yet to be resolved over UG accessibility. However, when it comes to pre-puberty child SLA, there is a general consensus that UG is fully accessible since the final state of child L2 grammar is not much different from that of the monolingual L1 grammar. What is still at issue is the role of L1 in L2 acquisition. Recently, the question of what constitutes the L2 initial state has been another issue in Principles and Parameters Theory (Schwartz & Eubank 1996). Unlike L1 acquisition, L2 learning has an L1 foothold to start with, part of which is prior knowledge of L1 (Gair 1998 and Schwartz & Eubank 1996). However, the exact nature and extent of the interaction of the L1 grammar with the L2 acquisition process has not been thoroughly addressed. According to Schwartz & Eubank (1996:1), "There are no standard assumptions concerning the linguistic properties of the initial system which will be modified or elaborated upon by the interaction of input and UG during the course of L2 development". Concerning L1 influence on L2 development, there are also three views: *Full Transfer* (Schwartz & Sprouse 1994, 1996 and Schwartz 1998), *Weak Transfer* (Eubank 1993/1994 and 1996) and *Lexical Transfer* (Vainikka & Young-Scholten 1994, 1996a, 1996b and 1998). All three approaches assume that L2 acquisition is guided or constrained by UG. From these three, the *Full Transfer* approach makes it explicit that UG is fully accessible. The three L1 transfer hypotheses are similar regarding lexical projections, but they differ concerning the emergence of FCs. The main debate from the three hypotheses, in short, arises with reference to the timing of the projection of FCs.

Schwartz & Sprouse (1994, 1996) and Schwartz (1998) have a strong view of L1 parametric transfer, which holds that the L2 initial state is determined by parametric values transferred from the learners' L1. Their strong or full transfer view suggests that functional as well as lexical categories are carried over into the L2 initial state. According to this account, the whole of the L1 grammar provides the basis of L2 acquisition. In other words, the last stage of L1 grammar, whatever this stage may be, forms the beginning stage of L2 learning.

Eubank (1993/4) proposes a weak transfer view instead, according to which lexical and functional projections of the L1 transfer, but morphology driven values of features like the strength of agreement do not transfer. In other words, FCs are carried over but in a defective sense. For instance, French speakers learning English would show neither strong agreement nor the strong tense characteristics of French, nor the weak

inflectional characteristics of English, for the initial representation of English.

The other hypothesis, which is referred to as *lexical transfer* here, posits that lexical categories transfer but not FCs. The proponents of the lexical transfer hypothesis, Vainikka & Young-Scholten (1994) posit as few positions and projections as are needed to account for the relevant data analysis for the development of a phrase structure. They call this a *minimal tree* structure. Having conducted a cross-sectional study on Turkish and Korean adults acquiring German in a naturalistic setting, Vainikka & Young-Scholten (1994) argue that there are three stages of syntactic development; VP, FP (FiniteP), and AgrP (alluding that CP will follow). They hypothesise that, during the initial stages of L2 acquisition, a VP projection is present but not functional projections such as IP and CP. Researchers, however, such as Epstein *et al.* (1996), based on Japanese (L1) – English (L2) data, and Schwartz & Sprouse (1994), using Turkish (L1) – German (L2) data, have argued against Vainikka & Young-Scholten's position, claiming that functional projections such as IP and CP are present from the very beginning of L2 acquisition.

In child SLA, Lakshmanan (1994) argues that the functional projection of IP and the Case Filter Principle are present from the very beginning stages of child L2 grammars of English. Grondin & White (1996) have argued that DP, IP and probably CP are present from the very beginning in child L2 acquisition of French. Lakshmanan & Selinker (1994) also argue against Vainikka & Young-Scholten, saying C and CP are operative from the very beginning. Varlokosta (2001) also argues that DP, IP and CP are present from the early stage of L2 acquisition of Greek.

Zobl & Liceras (1994) re-evaluated the old data of L2 morpheme acquisition studies of the 1970s in light of a functional category perspective and found that functional projections in L2 develop cross-categorically and L2 morpheme orders show a difference between bound and free morphemes. Zobl & Liceras suggest that the old acquisition order studies support the view which says that FCs are available from the beginning of L2 acquisition (Schwartz & Sprouse 1994, 1996, Epstein *et al.* 1996, 1998), rather than the opposing claim (Vainikka & Young-Scholten 1994, 1996). Zobl & Liceras did not discuss whether the L2 FCs are available from the beginning through the mechanism of UG or L1. Although Zobl & Liceras's reinterpretation of the old data does not bear directly on L2 acquisition of FCs, their findings are nevertheless relevant to the present study. Nominal categories antedate verbal categories in L1, indicating category specific development of functional projections whereas L2 development is cross-categorical.

If FCs are present from the very beginning of the L2 developing grammar, then, Grondin & White (1996) ask what the source of the L2 learners' knowledge of these FCs would be. Lakshmanan (1995, 1998) directly addresses this question: "Are functional projections operative in the early stages of L2 grammars because children have direct access to UG or because they have transferred the functional projections of the L1?" (Lakshmanan 1998:12). Grondin & White (1996), Epstein *et al.* (1996) and Varlokosta (2001) suggest that this knowledge source is due to direct access to UG rather than L1 transfer intervention. However, the Full L1 Transfer Hypothesis suggests that L1 is responsible for this knowledge. At present, the resolution of this issue is not clear.

Each L1 transfer hypothesis has been argued for, either using different L2 data, or using the same L2 data but placing a different interpretation on it. Different theoretical stances may crucially affect what one looks for as evidence. At present, further study seems necessary.

In this paper, we test the Full or Absolute L1 Transfer Hypothesis (Schwartz & Sprouse 1994, 1996 and Schwartz 1998), which argues that all the L1-instantiated principles and parameter values are immediately carried over as the initial state of an L2 on first exposure to input from the target language. This means that L2 learners will immediately use parametric values related to the FCs if the same FCs are found in the L1. We test this claim against child Korean (L1)-English (L2) data and compare our results with those of relevant studies.

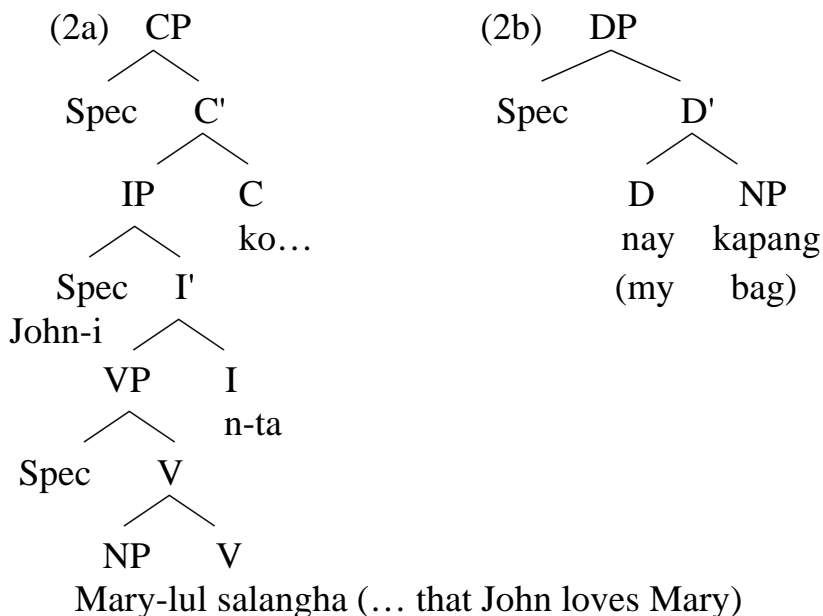
1.3 Korean and English determiners

Quirk, Greenbaum, Leech & Svartvik (1985) classify determiners into three broad distributional categories: predeterminers, central determiners and postdeterminers. English articles, demonstratives and possessives are mutually exclusive and come under central determiners. These central determiners form the key determiner group in phrase structure theory. However, Korean central determiner-like categories are not mutually exclusive and Korean does not have the same classificatory system for determiners as English. Korean does not have the English equivalent of indefinite and definite articles, but it does have demonstratives and possessives. Even so, the distributional properties of Korean demonstratives and possessives are different from those of English. Korean possessives and demonstratives work like adjectives in that they can co-occur simultaneously. The following example (1) shows the distribution of Korean demonstratives and possessives compared with English constructions.

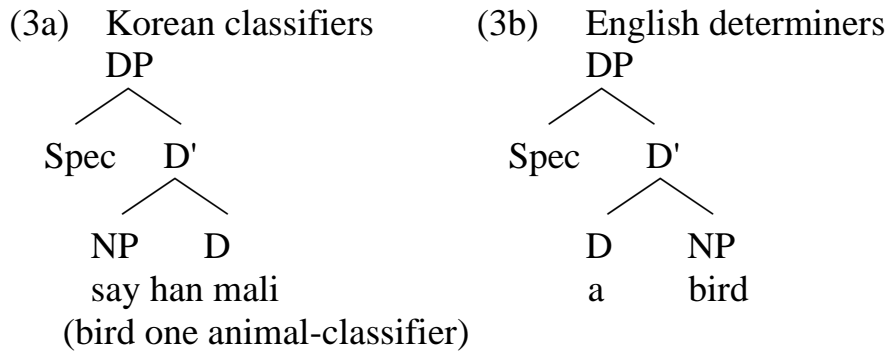
- (1a) i khun cip
this big house
'this big house'
- (1b) khun i cip
big this house
'this big house'
- (1b') *big this house
- (1c) nay ce khun kapang
my that big bag
'that big bag of mine'
- (1c') *my that big bag
- (1d) ce khun nay kapang
that big my bag
'that big bag of mine'
- (1d') *that big my bag

Unlike their Korean counterparts, English equivalents in (1b') to (1d') are not grammatical. Considering the distributional properties of Korean demonstratives and possessives like (1), O'Grady (1993) suggests that they are a type of adjective.

Assuming that Korean demonstratives and possessives may be analysed as determiners, then their projections could be represented as in (2b) below. The question, then, is why they are an exception in terms of headedness in Korean. Compare the head positions of C, I and V of the Korean CP structure in (2a) with the head position of D given the tentative DP analysis in (2b) below.



Given that C, I and V take head-final positions and only D in (2b) takes the opposite head-initial position, it could be assumed that D is an exception in terms of head directionality. However, this assumption may not be justified. Unlike possessives and demonstratives, numeral classifiers in Korean behave like real determiners. They project their own head and furthermore, their headedness is in agreement with other XP constraints in Korean. The numeral classifier structure of Korean is shown as in the following (3a) with its English DP structure in (3b).



Unlike (2b) above, (3a) is in agreement with XP head-direction elsewhere in Korean, and the Classifier projects its own head just as English determiners do. According to Lee (1989), the order of Noun+Numeral+Classifier order is unmarked in Korean and the head of DP, the classifier, requires an agreement within the DP system since entities are perceived in masses in Korean and simple common nouns without a numeral classifier refer to (in)definite items or have a generic meaning.

Although there are no English equivalent articles like *a/an* and *the* in Korean, we cannot rule out their functional existence. Compare (4a) with (4b) and (4c) with (4d) below.

- (4a) (i) yesnale **han** epu-ka sal-ass-ta.
Once **a** fisherman-nom live-past.
‘Once there lived a fisherman.’
- (ii) **ku** epu-nun kananha-yss-ta.
The fisherman-top poor-past.
‘The fisherman was poor.’
- ?(4b) yesnale epu-ka sal-ass-ta. epu-nun kananha-yss-ta.
Once fisherman-nom live-past. fisherman-top poor-past.
‘Once there lived ?(0) fisherman. *(0) fisherman was poor.’

- (4c) onul sinay-ese chayk **han kwon**-kwa sinmun **han pu**-lul sa-ss-ta.
 Today town-in book **one copy** and newspaper **one copy**-acc buy-past
 ‘Today *(I/you/...) bought a book and a newspaper in town.’
- (4d) onul sinay-ese chayk-kwa sinmun-ul sa-ss-ta.
 Today town-in book and newspaper-acc buy-past.
 ‘Today *(I/you...) bought *(0) book and *(0) newspaper in town.’

In the existential sentence (4a)(i), the Korean numeral *han* (‘a’ or ‘one’) shows the indefiniteness of *fisherman*. The following mention of *fisherman* in (4a)(ii) is marked as definite by *ku* (‘the specified’). On the other hand, in (4b) both of these are absent. Omission of *han*, the indefinite-like function word, in the first sentence does not make much difference in acceptability or normality of the clause, however when the definite-like function word *ku* is omitted in the second sentence, a grammaticality problem seems to arise. In (4c), there is a numeral classifier *han*, but this is not obligatory, as illustrated in (4d). Lee (1989) observed the difference of (in)definiteness of a noun in Korean with different grammatical markers like *-ka* (Nominative) and *-nun* (Topic). For example, if in (4a)(i), *han epu* receives the topic marker *-nun* instead of the nominative marker *-ka* and *ku epu* in (4a)(ii) gets the nominative marker *-ka* in place of the topic marker *-nun*, then, certainly a grammaticality problem arises. The marker change between *-ka* and *-nun* is key to the distinction of an entity being definite or indefinite. In addition, *Wh*-question words like *who*, *which* and *what* used as a subject take only the nominative marker *-ka*, which shows further compelling evidence for the distinction of the two particles.

Some English mass nouns make use of so called partitives to specify the quantitative difference between them. However, they are subsumed under Determiner analysis whereas Korean classifiers are more specific and form a distinct category. In short, the major differences between the Korean and English DP system lie in the optional or obligatory usage of definite or indefinite articles, distributional properties of possessives and demonstratives, and usage of classifiers. Although Korean does not have articles as such, specificity or (in)definiteness of an entity is marked by particle markers, classifiers or the designating particle *ku*.

Before we sum up this section, we briefly look into quantifiers and plural markers. Although Korean has a plural marker *-tul* like English, its usage is constrained. When plurality information is given by specific numerals like ‘two’, or ‘three’ with relevant classifiers, *-tul* is not used;

when quantifiers like ‘many’, ‘some’ or ‘a few’ are used, then the plural marker *-tul* is optionally used:

- (5a) secem-e **manun** chayk-i iss-ta.
 bookshop-in **many** book-nom exist.
 ‘There are **many** books in a bookshop.’
- (5a’) *There are many book(0) in a bookshop.
- (5b) secem-e **manun** chayk-**tul**-i iss-ta.
 bookshop-in **many** book-s-nom exist.
 ‘There are **many** books in a bookshop.’

As for demonstratives, English demonstratives have plural forms, *those* for *that* and *these* for *this*, whereas Korean demonstratives do not have any plural forms. *Ku* is classified as a type of demonstrative in Korean resulting in three demonstratives *i* (‘this’), *ce* (‘that’) and *ku* (‘the specified’). As discussed in the examples of (4a) and (4b), the third demonstrative type *ku* carries the function of the English definite article *the* for a specific definite case, whereas indefiniteness of an entity is not necessarily marked and subsumed under the nominative and topic marker difference.

1.4 Hypotheses

Having reviewed the distinctive features of the Korean and English Determiner category, we turn to our research question and hypotheses. Our research question is: *Are there any crosslinguistic transfer effects in acquiring the English functional category, determiner, if there are, to what extent?* To address this question, we adopt as a starting point the Full L1 Transfer Hypothesis proposed by Schwartz & Sprouse (1994, 1996), and Schwartz (1998). According to this hypothesis, the entire L1 grammar is the departure point in L2 acquisition. In other words, all the principles and parameters of L1 are carried over into L2 acquisition. If this claim is correct, then we would expect Korean child L2 learners of English to perform better on L1-instantiated determiner types like possessives and demonstratives than L1-absent articles in the course of English determiner acquisition. We formed the following hypotheses:

- H1. Korean children learning English as an L2 (henceforth KE2) will mark *the* better than *a*. Although there are no articles, the third demonstrative type *ku* in Korean shares some properties of *the*, but no form to match *a*.
- H2. KE2 will mark possessives better than articles.
- H3. KE2 will mark demonstratives better than articles.

H4. KE2 will mark the regular plural better than articles. Even if the usage is constrained, there is a plural marker in Korean but no articles.

2. Methodology

2.1 The subjects

The total number of children involved in this study is 50. There are two groups of subjects. Korean children living in the UK form the experimental group whereas English native children serve as the control group. We have divided these two groups by age into two subgroups (A and B), making four groups in total. See Table 1 for a summary.

Table 1 Subjects

Subject Group	Boys	Girls	Mean Age	Total
Korean Experimental Group A	6	9	6;02	15
Korean Experimental Group B	9	6	8;01	15
English Control Group A	6	4	4;07	10
English Control Group B	6	4	6;06	10

Gender differences are not part of our design, but we ensured reasonably balanced numbers of boys and girls in each group.

There is an age difference between the experimental group and the control group. Without this, the control group would be far too advanced in their linguistic development. To compensate for the L1-L2 gap, we slightly lowered the age band of the control group, to pair up English 4 year-olds with Korean 5-6 year-olds and English 6 year-olds with Korean 7-8 year-olds.

In the experimental group, previous exposure to English in the form of formal classroom instruction before coming to the UK varied from 2 and a half years to none and intensity or quality of exposure was different from subject to subject. A preliminary pilot test suggested that the effect from the formal classroom instruction was minimal in acquiring L2 FCs. After arrival in the UK, school entry is more likely to be the regular form of exposure to English but arrival in the UK itself cannot be overlooked in the light of exposure to media such as TV, video and others. All the subjects in the experimental group have UK exposure for about 5 months to a year and a half.

2.2 Elicitation measure

The research design takes the form of a cross-sectional study and looks into the L1 (Korean) transfer effect on the development of L2 English determiners. We acknowledge that although generalised group data can show the general steps of L2 development, we cannot assume that every child would go through the same developmental stages. Having this in mind, instead of spreading out the range of subjects, we decided to limit the age and the exposure period so that we could take data samples of children passing through similar stages of linguistic development.

We took the imitation task used in Epstein *et al.* (1996), but adapted it by changing the words to make it more subject-friendly.

Imitation Task

Each stimulus is controlled by the syllable length. Every sentence has 16 syllables in total with the number of words ranging from 9 to 11. The imitation task assumes that a learner is not capable of generating a certain syntactic structure, e.g. one containing FCs, if s/he has not already got the functional system in his/her grammar. In other words, the learner will miss out FCs unless his grammar already contains them, assuming that the task is reconstructive. To achieve the prospective result, however, this task requires that lexical training be given before the testing session. Thus, we sent out an English-Korean bilingual word list to the parents of the subjects at least a week in advance with specific instructions for how to go over the words. Before the testing session, we went over each word to make sure the subject was familiar with them and understood their meaning. We also gave out the word list in advance to the English control subjects with similar instructions for the subjects and the parents to follow. The complete list of stimulus sentences is in the appendix.

2.3 Procedure

Before administering the task, the experimenter went over each word in the list asking the subject to translate it into Korean or, if this was not possible, to paraphrase it in English. If the subject did not come up with an equivalent word in translation, or a paraphrase in English, we showed pictures for the subject to point to, or compare with or explain. For this purpose, we had a scrapbook of pictures cut out from books and magazines.

Before the task, we collected some biographical information, using a standard information sheet. We formed some ice-breaking questions based

on this. For the actual task, the experimenter and the subject sat face to face, with an audiotape cassette recorder next to the subject with a microphone plugged into the system. Before the task, the experimenter briefed the subject in Korean as follows: *I am interested in how you (name) learn English. I would like to see whether Korean children have difficulty in learning English because of Korean. So we will do something, copying a few English sentences after listening to my reading twice. It is very simple. There is nothing difficult, it will not take long. We can finish it in no time. There are only 15 sentences to copy after listening to me reading a sentence twice* (instruction given in Korean). After this, the exercise sentence was read out twice in English and the subject had a chance to practise and then moved on to the main task.

In most cases, we collected data at subjects' homes. Parents were welcome to stay on during the recording session if they wanted to, but this was not always the case.

2.4 Analysis

For the data analysis, we assume that FCs project their own heads following the recent developments of generative grammar (Chomsky 1986 and Grimshaw 2000). For the NP analysis, we follow the DP hypothesis (Abney 1987), in which D is the head of the NP rather than its specifier. In other words, NPs are in fact complements to projections of a functional head, determiner. Now the DPs can be divided into two categories, lexical NPs and pronominals. Lexical NPs can be further divided into an NP with an overt determiner and one without a specific determiner, or in other words, a zero determiner. The present study is more interested in the specification of NPs, therefore pronominals are not of great concern here. We classify NPs with determiners:

Overt Determiners with an NP

- Article + N; a book, the book...
- Possessive + N; my book, their book, my mum's friend...
- Demonstrative + N; this/these book/s, that/those book/s...
- Numeral (quantifier) + N; one book, two books, a few books...

When possessives, demonstratives or numerals are used with plural marking at the end we count each item separately.

Scoring categories

The imitation task is scored according to a scheme which we describe here. The data from whole and partial utterances are to be scored and reported. As the focus of the present study is the Determiner, substitution of other words is not taken into account. Different lexical choice can be a good example of lexical transfer but not of functional transfer as in the examples of *lunch* for *dinner*, and *go* for *come*. In abandoned utterances, we scored the determiner with a noun or a noun phrase. However, we did not score items containing only a determiner without a noun following, as in (6):

- (6a) I can't say **a**>
 (6b) Which teacher read the the **the**>

Compared to the English control group data, we found a few pronunciation errors in the Korean group data such as *leading* for *reading*, *blackfast* for *breakfast*. These pronunciation errors are not taken into account in our study.

We also did not score self-corrections or other reformulations, whether these were grammatically right or wrong, or determiners used in the wrong places as in (7):

- (7) It was made in **the** England.

It might be argued that the morphemes appearing at wrong places should be scored negatively, but how much score we should deduct could not be easily established. Determiner representation is dependent on the context. One noun may require an overt determiner in one context while the same noun suppresses the specification of a determiner or requires a zero determiner in another context.

Scoring scale

For the analysis of the data, we used a scoring scheme on a scale of 0-3. For example, when a determiner is correctly marked, it gets 3 points; when it is attempted but partially right, it gets 2; when it is substituted with some other form different from the target, then it gets 1. When no form is given, then it gets 0. For example, when the targeted item is 'my daddy', if 'my' is used then it gets 3 points. However if 'our' is used then it gets 2. If 'the' is used, then it gets 1. But if nothing is given, then it gets 0.

For the demonstration of the scoring system, we begin with determiners and list determiner-occurring environments in Table 2. We score those noun groups that require determiners from the task.

Table 2 Number of target determiners by type

Determiner type	No
1 A + N	5
2 The + N/s	6
3 Pos(essive) + N/s	10
4 Dem(onstrative) + N/s	4
5 Pl-s (Quantifier)+ N/s	5
Total	30

Category 4, Dem + N/s contains 2 instances of the wh-determiner ‘which’. Illustrative determiner samples and scores are given in Table 3.

Table 3 Illustrative data samples and scores from the imitation task

N Groups	3	2	1	0
1 A + N	a helper a flower	the	her	
2 The + N	the playground the party	a a	our, her	
3 Pos + N	my teacher her office your teacher	Our she’s, his my	the which you	teachers
4 Dem + N (wh + N)	that computer this picture which girl which book	this that what girl what book	my, the his this, a a	
5 Pl-s (N+s)	computer skills strawberries holidays			the/a N the/a N his N

The score is assigned with reference to the feature specification of Person, Number, Gender, and Case of the relevant N or NP. When one NP has two functional morphemes, possessive his and plural-s as in ‘his favourite honey nut cornflakess’, we scored each item. Therefore such NPs would get 6 points when correctly marked.

3. Results

For data analysis, an ANOVA general linear model was used. The means for determiner performances are as in Table 4.

Table 4 The overall mean performance on determiners

Group	Experimental	Mean	Control	Mean
All		48.1%		80.0%
Gender	Boys	41.4%		78.1%
	Girls	54.9%		81.9%
Determiner Types	A	39.5%		90.5%
	The	36.4%		70.0%
	Pos	61.4%		81.9%
	Dem	80.4%		76.3%
	Pl-s	22.7%		81.2%

On the performance of different determiner types, the ANOVA general linear model showed that Language ($p < 0.000$), Age group ($p < 0.000$), Gender ($p < 0.001$) and Determiner type ($p < 0.000$) were all highly significant factors. Language and Determiner type showed a highly significant interaction ($p < 0.000$). As expected, the English control group did better than the Korean experimental group on English determiners (group mean 80.0% vs. 48.1%). Gender difference was minimal between English control subjects (girls 81.9% vs. boys 78.1%). However gender made a difference to Experimental subjects (girls 54.9% vs. boys 41.4%), so the significant effect of gender was only due to the Korean children. The overall performance on 5 different determiner types is shown in Figure 1.

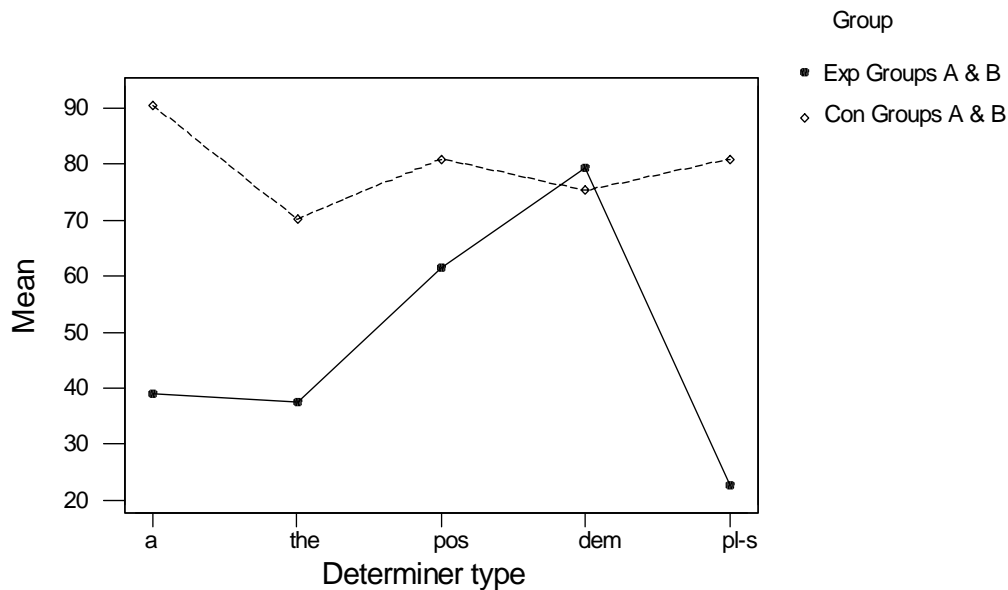


Figure 1 Mean performance on 5 English Determiners, Experimental and Control Groups

Figure 1 shows that the performance on the determiner type by Control groups does not fluctuate greatly but the performance by Experimental groups exhibits a great difference subject to the determiner type. Incidences of 'a' (39.6%), 'the' (36.4%) and plural-s (22.8%) are very low whereas possessives (61.5%) and demonstratives (80.5%) are quite high. A significant interaction between Language and Determiner type is clearly demonstrated with regard to demonstratives in Figure 1. In this particular type, the Experimental group did better than the Control group.

By breaking down the control group and the experimental group into subgroups we can see that the older groups do better than the younger groups. Results of determiner performance by each subgroup are as in Table 5.

Table 5 All four subgroup results on determiner performance

	Exp Group A	Exp Group B	Con Group A	Con Group B
A	35.5%	42.2%	81.3%	100%
The	24.4%	50.3%	65.0%	75.5%
Pos	51.7%	71.5%	72.6%	89.3%
Dem	76.1%	83.3%	65.8%	84.1%
Pl-s	13.3%	32.0%	72.0%	90.0%

Results for the experimental subgroups appear in Figure 2, and those for the control subgroups in Figure 3.

Between the younger experimental subgroup A, and the older subgroup B, the ANOVA general linear model reveals that Age group ($p < 0.000$), Gender ($p < 0.001$) and Determiner type ($p < 0.000$) were highly significant. The Stay period in the UK itself was not a significant variable ($p < 0.073$). Between variables, some had significant interactions; Age group and Age ($p < 0.027$), Gender and Age ($p < 0.020$), Age group, Gender and Age ($p < 0.001$), Age group, Age and Stay period ($p < 0.038$).

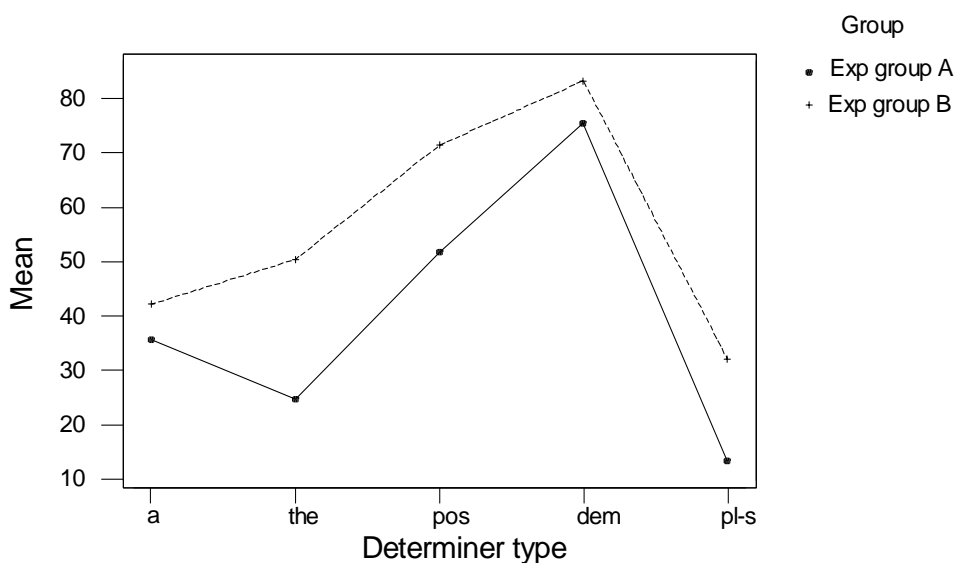


Figure 2 Mean performance on 5 English Determiners, Experimental Groups A and B

The overall contour in Figure 2 is the same except that the older group B did better on *the* than *a* whereas the younger group A show the opposite. In fact, the Experimental subgroup B was the only group that did better on *the* than on *a*.

Between the younger Control subgroup A and the older subgroup B, the ANOVA general linear model shows that Age group ($p < 0.000$) and Determiner type ($p < 0.001$) were highly significant but not Gender ($p < 0.216$). However, Gender turned out to interact with other variables; Group and Gender ($p < 0.041$) and Group, Gender and Age ($p < 0.001$). The performance of Control subgroups A and B is shown in Figure 3.

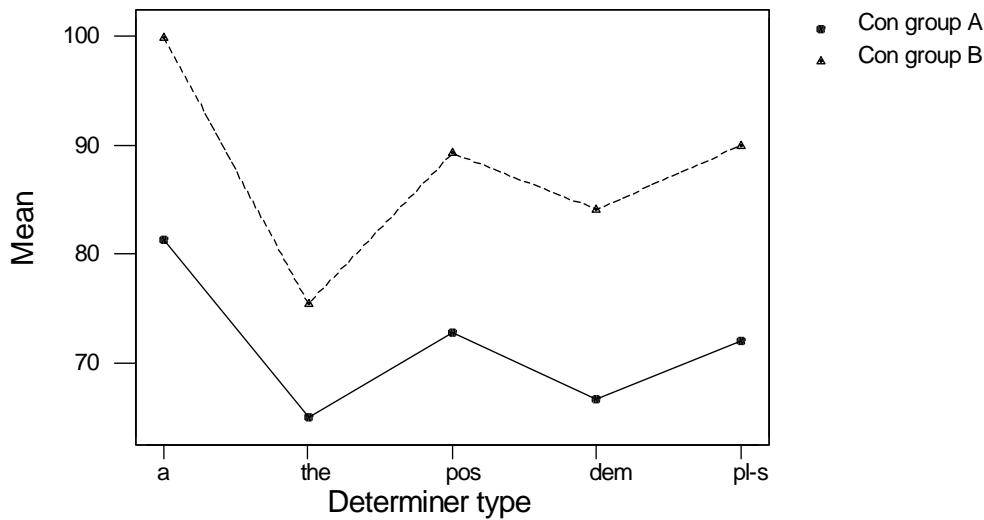


Figure 3 Mean performance on 5 English determiners, Control Groups A and B

Figure 3 shows that the older Control subgroup B did better all across 5 types than the younger Control subgroup A. Nevertheless, the performance pattern between the two subgroups is the same. Compared to the Experimental group, articles and plural-s stay more or less on the same level as possessives and demonstratives for the Control group.

4. Discussion and conclusion

None of the three transfer hypotheses discussed in 1.2 has investigated determiners closely. However, results on the performance of 5 different English determiner types by Korean children support the claim that L2 acquisition begins with full transfer of L1 parameters, which includes functional and lexical projections at least in the area of the L2 determiner. Our findings indicate that the Korean experimental group shows significant performance differences depending on the determiner types. If only lexical categories are carried over as suggested by the lexical transfer view, the older and the younger children should perform more or less the same when it comes to different determiner types. It is difficult to explain why there is a large discrepancy between different determiner types evidenced by the results of the present study. Another point to make here is

that the stay period was not a significant variable. If L2 input were more responsible, then the children who stayed longer should have more advantage in L2 development. The fact that the older children are doing better than the younger children all across 5 different types is further evidence in favour of the full L1 transfer hypothesis. The low performance on the morpheme-based plural *-s* by the Korean experimental group could be taken as evidence supporting the weak transfer view. However, if this hypothesis were on the right track, it would predict that another morpheme-based possessive *'s*, which shares the same allophones as plural *-s* and both attached to the noun, would not be transferred whereas lexical possessives like *my* and *your* would. Conversely, Hakuta's data (1976) contradict this prediction. Grondin & White (1996) subscribe to the idea that L1 has an effect on the L2 determiner acquisition. Their reanalysis of a corpus data shows that English (L1) children supplied French (L2) determiners in obligatory contexts correctly in respect to definiteness and number but not gender. Further L2 morpheme acquisition studies are now discussed in light of transfer.

According to Dulay & Burt (1974), Dulay, Burt & Krashen (1982) and Bailey, Madden & Krashen (1974), children and adults learning English as an L2 have a universal order of English morpheme acquisition irrespective of their first language background. These studies were based on correct usage of morphemes. Bailey *et al.* (1974), however, admitted that L2 adults did make errors arising from L1 interference. Nevertheless, they downplayed L2 adults' errors mostly as intralingual rather than interlingual and attributed them to the use of universal language processing strategies. Dulay, Burt & Krashen (1982) admit that articles and the short plural¹ have some variability between the groups tested.

Dulay & Burt's hypothesis (1974) was that there was a natural sequence of L2 acquisition common to children of diverse language backgrounds. They claimed that the hypothesis was supported in the case of Chinese and Spanish children learning English, as the acquisition pattern contour was strikingly similar. However, they did not explain why Spanish children did better than Chinese children across all 11 mostly function-related bound and free morphemes. We suggest that the advantage for the Spanish children comes from L1 influence, the morpho-syntactic similarities between Spanish and English. Otherwise it is difficult to explain why they can do better than Chinese children across the board. Dulay & Burt's conclusion is that a universal cognitive mechanism plus the L2 system guides L2 acquisition rather than L1. Unless all Spanish

¹ The short plural refers to /s/ or /z/ whereas the long plural to /iz/.

children are equipped with better cognitive skills or higher intelligence, there should be some other explanation, and we consider that to be L1 transfer. Fathman's (1975) study demonstrates a clear example of L1 transfer effect as far as articles are concerned. Spanish and Korean children aged 6-14 years (60 Korean and 60 Spanish children) performing a picture description task showed a stark contrast in the article subtest.

The results of Hakuta's (1976) study run counter to the universal pattern of morpheme acquisition. Hakuta's case study on a Japanese girl gives a different story from the aforementioned studies. Possessives were ranked 2nd, articles 5th and plural -s 9th whereas Dulay & Burt (1974) place possessives 9th, articles 2nd and plural -s 5th. Hakuta believes that late acquisition of plural -s is evidence of transfer from Japanese. According to him, the reason why possessive -'s is marked better than plural -s is that Japanese has an obligatory possessive particle *no* but no morpheme for plurality. As for the development of articles *the* and *a*, these begin almost at the same point and then fluctuate, diverging from each other. Percentage of correct usage of articles shows that after what seems to be the initial stage or period *the* stays between 80% and 100% but *a* fluctuates between 55% and 80%. Then at a later stage *a* and *the* converge. Hakuta (1976) suggests that the late acquisition of full control of articles may be attributable to L1 transfer, the result of their distinction not being marked in Japanese. However, he does not explain why *the* is better marked than *a* in the course of article development. Our explanation for *the* being better marked than *a* comes from L1 transfer as in the case of possessives. Japanese has a three way demonstrative system *kono* (this), *ano* (that), and *sono* (the specified), and although, the usage of *sono* is different from English *the*, it nevertheless carries the function of definite specificity of an entity. Hakuta is not the only one disclaiming the universal pattern of morpheme acquisition. Shin & Milroy (1999) conducted a study on Korean children (n=12) acquiring English as an L2 in New York City. The subjects' ages ranged from 6;6 to 7;4 (mean age 6;9). Their research was based on both spontaneous and experimental data. They tested the accuracy rate of 10 morphemes. We discuss only 4 items relevant to DP here. Shin & Milroy found that subjects did very well on two types, pronoun case (100%) and possessive (97%) but they did very poorly on articles (61%) and plural -s (45%). Their study did not distinguish between indefinite and definite articles. From Shin & Milroy, we quote two relevant studies on morpheme acquisition; Pak (1987) and Frauenfelder (1974). Pak (1987) found that Korean children acquiring English have the greatest difficulty in the indefinite article and plural-s, and Frauenfelder (1974) found that English children acquiring French as an L2 made virtually no

errors distinguishing definite and indefinite determiner cases but determiner gender errors were quite common. Grondin & White (1996), based on a longitudinal case study of 2 English children learning French (L2), confirms Frauenfelder's results by claiming that L2 French Determiner errors on singular – plural distinction were almost nonexistent, whereas gender errors were quite frequently observed. We can find further evidence supporting the findings of Shin & Milroy, and Pak, in Johnson & Newport's (1989) results. Johnson & Newport carried out a grammaticality judgment task of spoken English sentences on 46 Korean and Chinese children and adults and found that, as age of the subjects increased, articles and plural -s posed the most difficulty whereas pronominalisation including possessives did not. To conclude, various studies despite different designs of data collection all point towards the full L1 transfer hypothesis regarding L2 English Determiner development.

Now we go back to our hypotheses:

H1. Korean children learning English as an L2 (henceforth KE2) will mark 'the' better than 'a'.

Since this hypothesis is based on the subtle differences between the indefinite article *a/an* and the definite article *the*, we did not expect it to be strongly supported. Indeed, it is supported only by Experimental subgroup B, and not by Experimental subgroup A. The older Experimental subgroup B did better on the definite article *the* than on the indefinite article *a/an*. The younger Experimental group A did better on the indefinite article *a/an* than on the definite article *the*, which is the opposite of our hypothesis. Shin & Milroy did not distinguish between *a/an* and *the*. Pak's study suggested that *the* ranks much higher than *a/an*. However, Hakuta's study gives out a mixed message at the initial stage but as development continues *the* always shows better performance and at a later stage *a* and *the* converge. Why our younger experimental group did better on *a* than *the* may have to be explored with other designs of study. If the spontaneous study like Pak's suggests Korean children do better on *the* than *a*, it is probable that the older Korean children do better at distinguishing different types of Korean demonstratives and using them correctly than the younger ones.

H2. KE2 will mark possessives better than articles.

This hypothesis is clearly supported as Figure 1 and Figure 2 show. One may wonder if subjects tested with different methodology would bring a different result. However, studies on Korean children and a Japanese child case study with longitudinal, spontaneous and experimental data combined

also support the hypothesis, which we take as being a strong indication that syntactic symmetry between Korean and Japanese brings out the same L1 transfer effect when it comes to English acquisition. Shin & Milroy's (1999) spontaneous and experimental work, for example, supports this view. In this study, Korean children did very poorly on articles and plural *-s* whereas they did well on possessives. Hakuta's (1976) longitudinal spontaneous work also supports this hypothesis. Out of three determiner-related morpheme acquisition orders, possessives come first, articles follow and last comes plural *-s*. Pak's (1987) acquisition order renders further support for the hypothesis in that this rank order of possessives, articles and plural *-s* is preserved. Johnson & Newport (1989) also support this hypothesis. Pronominalisation including possessives has fewer errors than articles and plural *-s*. All the above studies with different methodologies converge on the acquisition order with respect to English determiners.

H3. KE2 will mark demonstratives better than articles.

This hypothesis is strongly supported, as seen in Figures 1 and 2. This is one category where the Korean Experimental Group did better than the English Control Group. In fact, demonstratives turned out to be the best marked category among the five categories tested in the present study.

H4. KE2 will mark the regular plural-s better than articles.

This hypothesis was not supported at all. In fact, the results contradict it. Although the Korean plural marker *-tul* has a distinctive form, it has its constraints on its usage. It cannot be used with a specific numeral classifier. With unspecific quantifiers like *many*, *some*, and *a few*, it is optionally used. When Korean children begin to learn English as an L2, they seem to drop this plural marker. Although Korean has no distinctive articles, specificity and definiteness of an entity are marked by change of topic marker and nominative marker and also by the demonstrative *ku* for 'the'. Since entities are perceived as mass in Korean, Korean children may transfer this knowledge to the English determiner. Another explanation may come from the nature of L2 input. Overtly marked free morpheme, *a* and *the* with more consistent phonology may be more perceptually salient than allophonic plural *-s* marking as L2 natural order acquisition studies suggest. The other difference is that articles are free morphemes whereas plural *-s* is a bound morpheme. This may affect the performance of plural *-s* in the course of L2 learning. In fact, the free versus bound morpheme distinction is key in L2 morpheme development according to Zobl &

Liceras. Although the hypothesis is contradicted, the results do not go against the full transfer claim.

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Appendix: The Imitation Task

Practice sentence: I saw two policemen running after a bad boy in the street.

1. My class-teacher likes to watch us running around in the playground.
2. She wanted a young helper with computer skills in her office.
3. I can spend hours doing a jigsaw puzzle without getting bored.
4. He is eating his favourite honey nut cornflakes for breakfast.
5. My mummy does not like to do washing-up in the evening.
6. We are not going to pick strawberries because of the party.
7. She has finished her maths homework very quickly, hasn't she?
8. Strawberry ice cream, my mummy and I enjoy after dinner.
9. That computer, my teacher says is very very expensive.
10. This picture, the old man says his family would really love.
11. I have a pretty pencil sharpener that was made in England.
12. He told me the hotel where he stayed for summer holidays.
13. Which young girl is drawing a beautiful flower in her sketchbook?
14. Which history book did your class-teacher read in the reading-time?
15. Where did you see a big white motorcycle yesterday morning?