

L2-Acquisition of English articles by Korean speakers*

Heejeong Ko, Tania Ionin, and Ken Wexler

ABSTRACT

In this paper, we investigate how L2-learners whose L1s lack articles acquire the semantics of articles, with special focus on article use by L1-Korean learners of L2-English. Based on our experimental studies, we argue that article choice in L2-acquisition reflects systematic access to universal semantic features: *definiteness*, *specificity*, and *partitivity*. It is shown that L2-learners associate *the* with [+specific] and [+partitive] features, which results in non-random error patterns: overuse of *the* with specific indefinites and partitive indefinites. Our findings provide further evidence that L2 learners' errors are traceable to parameter settings that are not necessarily instantiated in their L1 or L2 - but which are available through UG. The paper also presents evidence that the interlanguage grammar of L2-learners has important parallels to that of child L1-learners in the domain of article semantics, supporting our conclusion that L2-acquisition, like L1-acquisition, is guided by UG.

1. INTRODUCTION

The fact that primary linguistic data underdetermine unconscious knowledge of language has been considered strong evidence for postulating Universal Grammar (UG) (Chomsky 1965, 1986). While the argument was originally made for first language (L1) acquisition, it also holds for second language (L2) acquisition, with some caveats: if L2-learners' linguistic knowledge is not traceable to either transfer from the L1 or explicit instruction, this provides evidence for the guiding role of UG (for arguments of UG-access in L2-acquisition, see Schwartz and Sprouse 1994, 1996, among others). One way to show that L2-learners have

UG-access is to show that their interlanguage grammar reflects possible linguistic options (parameter values, semantic universals) that are not instantiated either in their L1 or in the target L2, but are instantiated in some other natural languages (see *Finer and Broselow 1986, Broselow and Finer 1991, Finer 1991, Schwartz and Sprouse 1996, Ionin 2003*, among others). If L2-learners' interlanguage grammar is found to instantiate a UG-option that L2-learners have no direct access to in either their L1 or their L2, this would strongly suggest that UG constrains the state of L2-learners grammar.

Further evidence for UG-access in L2-acquisition comes from parallel findings in L1 and L2 acquisition. Assuming that UG constitutes the initial state of L1-grammar, if similar patterns are observed in L1- and L2-acquisition, this provides evidence that UG constrains L2 interlanguage grammars as well (see *Flynn 1983, 1987, Thomas 1989, Jordens 1988, Schwartz 2003, Unsworth 2004, 2005, Flynn and Foley 2004*, among many others, for child-adult comparisons). While similarities between L1- and L2-acquisition can in principle be due to different factors, this becomes less likely if we control for such factors as L1-transfer. If L1-learners of English and L2-learners of English who are not subject to L1-transfer (due to absence of the relevant structure in the L1) show similar patterns of development, there is good reason to believe that the source is the same in both cases.

The major goal of this paper is to provide such evidence for UG access in L2-acquisition, with the focus on L2-acquisition of English articles by Korean speakers. Since Korean lacks an article system, it is unlikely that L1-transfer affects acquisition of English articles by Korean learners. Furthermore, the use of English articles is a subtle and complex phenomenon, and there is no obvious L2 input or formal instruction that can help L2-learners acquire the semantics of English articles (see *Ionin, Ko and Wexler 2004* for more discussion). Hence, investigation of the acquisition of English articles by Korean learners provides an excellent opportunity to examine the role of UG in L2 acquisition.

In what follows, we report our experimental studies (Ionin, Ko and Wexler 2004; Ko, Ionin and Wexler 2006, 2007), which show that article errors made by L2-learners are not random, but constrained by universal semantic features. Section 2 of this paper shows that L2-learners' article choice is affected by a semantic universal that is not instantiated by articles either in their L1s (Korean and Russian) or in their L2 (English), while being a UG-option instantiated in an unrelated natural language (Samoan). Evidence for this claim comes from our finding that L2-learners misuse *the* in specific indefinite contexts and misuse *a* in non-specific definite contexts, suggesting that the learners associate *the* with the [+specific] feature, and *a* with the [-specific] feature. Section 3 of this paper shows that adult L1-Korean learners of English make the same type of article errors as child L1-English learners. Evidence for this claim comes from our finding that adult Korean speakers overuse *the* with [+partitive] indefinites (which denote a member of a previously mentioned set), but not with [-partitive] indefinites, just like child L1-English learners (cf. Maratsos 1976, Wexler 2003). These findings support the view that UG constrains article (mis)use in L2 acquisition as in L1-acquisition, and that the L2 article errors are in traceable to universal semantic features. Section 3 furthermore shows that different semantic features ([+definite], [+specific], [+partitive]) operate independently in L2-acquisition, providing interesting implications for the discussion of semantic universals cross-linguistically.

2. THE ROLE OF SPECIFICITY IN THE L2-ACQUISITION OF ENGLISH ARTICLES

Our first series of studies of articles in L2-acquisition (Ionin, Ko and Wexler 2003, 2004) investigated how L1-Korean and L1-Russian learners of English are affected by the semantic concepts of *definiteness* and *specificity* in their acquisition of English articles. In this section, we discuss the nature of definiteness and specificity and summarize our most comprehensive study, Ionin et al. 2004, that tested the effects of definiteness and specificity in L2-English.

2.1. Theoretical background: definiteness and specificity

Informally, we treat *definiteness* as making reference to the common ground between speaker and hearer, and *specificity* as making reference to speaker knowledge only, as indicated in (1). On a more formal level, we adopt the Fregean analysis of definiteness as involving a presupposition of uniqueness (see Heim 1991; see also the formal entry in (20)), and specificity as corresponding to speaker intent to refer in the sense of Fodor and Sag (1982) – see Ionin (2003, 2006) for a semantic analysis of this type of specificity.

1. Definiteness and Specificity: informal definitions

If a Determiner Phrase (DP) of the form [D NP] is...

- a) [+definite], then the speaker assumes that the hearer shares the speaker's presupposition of the existence of a unique individual in the set denoted by the NP
- b) [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property

Our choice of these two semantic features for investigation stems from the finding that both features find morphological expression cross-linguistically, as described below.

In English, the contrast between *the* and *a* corresponds to the definiteness distinction: the speaker can use a definite such as *the puppy* only if she has grounds for assuming that her hearer shares her knowledge that there is only one relevant puppy in the discourse. This can be achieved through previous mention, as in (2a) (there is only one puppy that was previously mentioned) or through modification, as in (2b) (where the hearer can easily accommodate the existence of one relevant puppy). Importantly, *the* marks the [+definite] feature rather than the [+specific] one: use of *the* in (2c) is infelicitous unless the speaker and hearer already share knowledge of some relevant puppy. It is not enough that the speaker has a particular

puppy in mind – i.e., use of *the* does not correspond to the [+specific] feature as defined in (1).¹ Rather, *the* encodes the [+definite] feature.

2. a) I saw a puppy. The puppy started barking.
- b) I saw the puppy that Peter got for his birthday.
- c) #I saw the puppy outside. *(ok if a puppy was previously mentioned)*

Conversely, use of *the* is felicitous in all definite environments, regardless of whether the conditions on specificity have been satisfied: for instance, in (3a), the speaker intends to refer to a specific individual (her best friend), but in (3b), she does not: only (3a) satisfies the conditions on specificity. However, *the* is used in both cases, marking the [+definite] feature: both cases in (3) satisfy the conditions on definiteness, since there is a unique winner in the common ground.

3. a) I want to talk to the winner of this race – she is my best friend.
- b) I want to talk to the winner of this race – whoever that is.

Thus, English articles encode definiteness rather than specificity. There is, however, evidence that other languages, notably Samoan, encode specificity in their article systems. The relevant data from Samoan are given in (4) and (5), from Mosel and Hovdhaugen (1992:259-262) (see Ionin et al. (2004), Ionin (2003, 2006) for more discussion).

In (4), the [+specific] article *le* indicates that the speaker has a specific referent in mind – whether the hearer shares knowledge of the referent is irrelevant. Thus, in (4a), *le* is translated as *a*, but in (4b), as *the*: only in (4b) does the hearer share knowledge of a unique man and woman (through previous mention). On the other hand, in (5), the non-specific article *se* indicates that the identity of the referent is unknown or irrelevant from the speaker's perspective. Again, whether the context is indefinite, as in (5a), or definite, as in (5b), is irrelevant for article use in Samoan.

4. a. [-definite, +specific]

‘O le ulugāli’i, fānau l̄=a lā tama ‘o le
 PRES ART couple give birth ART=Poss3.du. child PRES ART
teine ‘o Sina
 girl PRES Sina

“There was a couple who had a child, a girl called Sina.”

b. [+definite, +specific]

Māsani ‘o le tamāloa e usua’i=ina lava ia.....
 used PRES ART man GENR get up early=ES EMPH 3sg
’ae nonofo ‘o le fafine ma l̄=a=na tama i
 but stay(pl.) PRES ART woman andART=POSS=3.sg child LD
le fale
 ART house

“It was the man’s practice to get up early and... while the woman stayed at home with her child.”

5. a) [-definite, -specific]

“A lady asked us who our father was.”

b) [+definite, -specific]

Alui se tou aiga e moe. Pe se
 go LD ART(nsp.sg.) 2.pl. family GENR sleep. Q ART(nsp.sg.)
tama a ai!
 boy POSS who

“Go to your family – whoever that may be – and sleep! [I wonder] whose boy

you might be!” [said to a boy who is selling necklaces at night in front of a hotel]

The above discussion shows that the features [+definite] and [+specific] both receive morphological expression cross-linguistically. The [+definite] feature is expressed by *the* in English, while the [+specific] feature is expressed by *le* in Samoan. In English, *the* is used regardless of whether the context satisfies the conditions on specificity, and in Samoan, *le* is used regardless of whether the context satisfies the conditions on definiteness. This is represented pictorially in (6).

6. Article grouping cross-linguistically

a) Article grouping by definiteness

	+definite	-definite
+specific		
-specific		

b) Article grouping by specificity

	+definite	-definite
+specific		
-specific		

2.2. Hypothesis and predictions

Given the morphological expression of both definiteness and specificity in articles cross-linguistically, we asked how L2-learners whose L1s lack articles acquire the semantics of English articles.² Our focus is on L2-English learners whose native languages, Russian and Korean, lack articles, and who are therefore unlikely to be influenced by L1-transfer.³ How do these L2-learners know that an expression such as *the dog* refers to a unique dog whose existence is presupposed by both speaker and hearer (the definiteness analysis) as opposed to a unique dog known and relevant to the speaker alone (the specificity analysis)?

Our hypothesis is that, initially, L2-learners do not know this. In the absence of articles in their L1, L2-learners have no *a priori* reason to categorize English articles on the basis of

definiteness rather than specificity. We predict that they will go through a period of *fluctuation*, during which they go back and forth between dividing English articles on the basis of definiteness vs. on the basis of specificity, as formulated in (7) (based on Ionin et al. 2004):

7. The Fluctuation Hypothesis (FH) for L2-English article choice:

- 1) L2-learners have full access to the features that can underlie article choice cross-linguistically: the features [+definite] and [+specific].
- 2) L2-learners fluctuate between dividing English articles on the basis of definiteness vs. specificity, until the input leads them to choose the definiteness option.

According to the FH, L2-learners' interlanguage grammar is at all times constrained by the universal semantic features of definiteness and specificity. The learners essentially entertain multiple possible grammars (an English-like grammar and a Samoan-like grammar) at the same time. With sufficient input, learners should eventually be able to converge on the right option – i.e., to divide English articles on the basis of definiteness.⁴

Importantly, the FH predicts non-random article use: whether learners adopt the division (6a) or in (6b), they will use one article (*the*) in [+definite, +specific] contexts and a different article (*a*) in [-definite, -specific] contexts: there should be few or no errors in these two context types.⁵ On the other hand, fluctuation will result in interchangeable use of *the* vs. *a* in [+definite, -specific] as well as [-definite, +specific] contexts – contexts where the two options in (6) are in conflict. This prediction is captured in (8).⁶ The two cells in bold are where errors of article use are expected.

8. Predictions for article choice in L2-English

	+definite (target: <i>the</i>)	-definite (target: <i>a</i>)
+specific	correct use of <i>the</i>	overuse of <i>the</i>
-specific	overuse of <i>a</i>	correct use of <i>a</i>

2.3. Methods

As reported in Ionin et al. (2004), we tested the predictions in (8) in a formal written elicitation task with adult L1-Korean and L1-Russian learners of English (a supplementary written narrative task was administered as well; it is reported in Ionin, Ko and Wexler, in press). The choice of Korean and Russian as the languages of study was motivated by the fact that the two languages both lack articles and yet are typologically very different. Thus, similar patterns of article (mis)use among these two groups provide evidence that universal linguistic factors are at play, rather than L1-transfer.

2.3.1. Participants

The participants in this study were 40 adult L1-Korean and 30 adult L1-Russian learners of English who were living in the U.S. at the time of the study. All of the participants had arrived in the U.S. as adults, although many had studied English in childhood and/or adolescence in their home countries. We focus on those learners who placed as intermediate or advanced on the written portion of the Michigan test of L2-English proficiency (39 of the L1-Korean speakers and 26 of the L1-Russian speakers). The 39 Korean speakers were on average more proficient than the 26 Russian speakers on the Michigan test (average scores of 25.51 vs. 23.38 out of 30 maximum).

Fourteen adult native speakers of English were tested as well, as a control group.

2.3.2. Written elicitation task

In this task, the participants were presented with a series of dialogues between two people. The dialogues were in English. The target article (which is underlined in the examples below) was missing. The L2-learners' task was to choose one of the three options provided: *the*, *a*, or a dash (to represent that no article was needed). There were a total of 76 items, of which 32 are discussed here (see Ionin et al. 2004 for discussion of the other items). These 32 items break down into the four categories schematized in (8), with eight items per category. All four categories are exemplified below. In [+definite] contexts, the target article is *the*, and in [-definite] contexts, it is *a*. In [+specific] contexts, speaker knowledge of the referent was indicated, and in [-specific] contexts, it was absent and/or denied.

9. [+definite, +specific]

Kathy: My daughter Jeannie loves that new comic strip about Super Mouse.

Elise: Well, she is in luck! *Tomorrow, I'm having lunch with (a, the, --) creator of this comic strip – he is an old friend of mine.* So I can get his autograph for Jeannie!

10. [+definite, -specific]

Bill: I'm looking for Erik. Is he home?

Rick: Yes, but he's on the phone. It's an important business matter. *He is talking to (a, the, --) owner of his company!* I don't know who that person is – but I know that this conversation is important to Erik.

11. [-definite, +specific]

Meeting on a street

Roberta: Hi, William! It's nice to see you again. I didn't know that you were in Boston.

William: I am here for a week. *I am visiting (a, the, --) friend from college – his name is Sam Brown, and he lives in Cambridge now.*

12. [-definite, -specific]

Chris: I need to find your roommate Jonathan right away.

Clara: He is not here – he went to New York.

Chris: Really? In what part of New York is he staying?

Clara: I don't really know. *He is staying with (a, the, --) friend – but he didn't tell me who that is.* He didn't leave me any phone number or address.

2.4. Results and discussion

The 14 control native English speakers performed as expected, supplying *the* in the [+definite] contexts and *a* in the [-definite] contexts reported above. The results of the Korean and Russian speakers are given in (13) and (14), respectively. Only percentages of *the* and *a* are reported. The remaining percentage points out of 100 correspond to article omission, which was very low.

13. Results of the L1-Korean participants (N=39)

	[+definite]		[-definite]	
[+specific]	88% the	4% a	22% the	77% a
[-specific]	80% the	14% a	4% the	93% a

14. Results of the L1-Russian participants (N=26)

	[+definite]		[-definite]	
[+specific]	79% the	8% a	36% the	54% a
[-specific]	57% the	33% a	7% the	84% a

As these tables show, both groups of learners made the majority of their errors in [-definite, +specific] and [+definite, -specific] contexts, as predicted. The Korean speakers are overall more accurate than the Russian speakers, an effect that may be due to their higher overall L2-proficiency. The patterns of the two groups are quite similar, however.

The results of statistical tests are reported in (15). Both specificity and definiteness had significant effects on article use, with no interactions except in the case of *the* use in the L1-Korean group. This interaction stems from the fact that for this group, the difference in *the* use between [+specific] and [-specific] definites was smaller than that between [+specific] and [-specific] indefinites; however, both differences were significant ($p < .001$) (as were the differences in *the* use between each definite category and each indefinite category). Notably, no interaction was found when use of *a* was measured.

15. Effects of definiteness and specificity: results of repeated-measures ANOVAs

L1-Russian speakers	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 25) = 61***	F(1, 25) = 57***
Specificity	F(1, 25) = 21***	F(1, 25) = 25***
Definiteness * Specificity	F(1, 25) = 1.66	F(1, 25) = 1.04
L1-Korean speakers	use of <i>the</i>	use of <i>a</i>
Definiteness	F(1, 38) = 406***	F(1, 38) = 501***
Specificity	F(1, 38) = 29***	F(1, 38) = 27***
Definiteness * Specificity	F(1, 38) = 4.9*	F(1, 38) = 1.95

* $p < .05$

** $p < .01$

*** $p < .001$

To summarize, then, both L1-Russian and L1-Korean learners of English exhibited the predicted fluctuation between definiteness and specificity, making errors of article misuse primarily in those contexts where the two semantic features are in conflict.

Thus, we see that L2-English learners whose L1s lack articles access the universal semantic features of their specificity. The parallel findings from Korean and Russian speakers suggest that this effect is independent of the L1. In our next series of studies, discussed in the following section, we asked whether definiteness and specificity are the only semantic universals underlying L2-article choice, or whether another semantic factor, namely *partitivity*, is also at work. We turn to this next.

3. THE ROLE OF PARTITIVITY IN THE L2-ACQUISITION OF ENGLISH ARTICLES

Our next series of studies of articles in L2-acquisition (Ko, Ionin, and Wexler 2006, 2007) concerns how L1-Korean learners of English are affected by semantic concepts other than specificity and definiteness in their article use. We furthermore ask whether the patterns L2-English article use are parallel to those of child L1-English. In particular, we discuss how the semantic notion of *partitivity* affects L1-acquisition of English articles, and present our recent study (Ko et al. 2006), which tested the effect of partitivity in adult L2-English.

3.1. Acquisition of articles by child L1 learners: the effect of partitivity

Acquisition of articles has attracted a great deal of attention in the L1 literature. Many studies on L1 acquisition have shown that child learners make errors in article usage (Brown 1973; Warden 1974; Maratsos 1976; Karmiloff-Smith 1979; Emslie and Stevenson 1981, Zheler & Brewer 1982; Schafer & de Villiers 2000; Matthewson, Bryant & Roeper 2001; Schaeffer & Matthewson 2005). In particular, it has been observed that children misuse *the*

with indefinite DPs in the context of discourse set membership. We term such DPs *partitive* and informally define them as follows:

16. If a DP is [+partitive], it denotes an individual that is a member of a set introduced by previous discourse (cf. Enç 1991, Diesing 1992).⁷

For instance, English acquiring children overuse *the* in place of *a* in the partitive context in (17) (Maratsos 1976: 51). The target response to the context in (17) is *a girl* or *a boy* (or *one of the girls/boys*), which denotes a member of the set introduced in the previous discourse. A definite response is infelicitous since there is no unique girl or boy under discussion. Interestingly, however, four-year-old children often overused *the* in partitive contexts like (17).

17. Once there was a lady. She had lots of girls and boys, about four girls and three boys. One of them started laughing and giggling. Let' see. Who was laughing and giggling like that? - Children's response: The boy (or: The girl)

In contrast, children were quite accurate in supplying *a* in non-partitive indefinite contexts such as (18) (see Maratsos 1976: 53 for the full context and discussions).

18. A man went to a jungle or forest, because he wanted to see a lion or zebra. He looked all over, to see if he could find a lion or zebra. He looked and looked. Who came running at the man? - Children's response: A lion (or A zebra)

Though the previous studies on children's article choice agree on the fact that children overuse *the* in place of *a*, it has been much debated which component of language knowledge is responsible for this error.

One influential type of analysis argues that children overuse *the* in partitive contexts due to a *lack of pragmatic knowledge*. Specifically, based on Piaget's (1955) claim that children are egocentric, it was argued that children use *the* when they have one salient referent in mind, ignoring the state of the listener's knowledge (e.g. Maratsos 1974, 1976, Warden 1974, 1976). In a similar vein, Karmiloff-Smith (1979) argues that children use *the* as a deictic expression, and the definite article points to an object under the child's focus of attention. Schaeffer and Matthewson (2005) extend the egocentric account and claim that children use *the* when they want to assert the existence of a DP: on this analysis, children assume that the hearer shares their knowledge of the salient referent, not realizing that speakers and hearers may have different assumptions.⁸

A different line of approach to the error in (17), on the other hand, argues that English acquiring children overuse *the* due to a *lack of semantic knowledge*. In particular, children's lexical entry for *the* carries a presupposition of existence, but it lacks the presupposition of "uniqueness" (maximality) (Wexler 2003) Under this approach, the lexical entry for children's *the* (19) is crucially different from adults' lexical entry for *the* (20) in that children's *the* lacks the *Maximality Presupposition* (for a different linguistic approach to child article errors, see Matthewson, Bryant and Roeper 2001).

19. Children's lexical entry for *the* (Wexler 2003)

[*the* x] P expresses that proposition which is:

- true at an index *i*, if there is **an x** at *i*, and it is P at *i*
- false at an index *i*, if there is **an x** at *i*, and there is no *x* such that *x* is P at *i*
- truth-valueless at an index *i*, if there is no *x* at *i*

20. Adults' lexical entry for *the* (based on Heim 1991)

[*the* x] P expresses that proposition which is:

- true at an index *i*, if there is **exactly one x** at *i*, and it is *P* at *i*
- false at an index *i*, if there is **exactly one x** at *i*, and it is not *P* at *i*
- truth-valueless at an index *i*, if there isn't exactly one *x* at *i*

Note that under the definition of children's *the* in (19), [*the x*] essentially means [*one of the x*] – that is, it can correspond to the [+partitive] reading of an indefinite DP, as defined in (16). Hence, it is predicted that children overuse *the* in the partitive context (17). On the other hand, in non-partitive contexts like (18), where the indefinite DP does not belong to the set introduced in the previous discourse, there is no presupposition of existence for the relevant DP. Thus, it is expected that children would correctly use *a* in (18).

3.2. Research Question and Hypothesis

Given that the effect of partitivity is operative in L1-acquisition of articles, we questioned how partitivity affects acquisition of articles by adult L2-learners. Especially, we asked whether adult L2-learners would show the same type of article errors as child L1-learners when their native language, Korean, lacks an article system – in the case where direct L1-transfer effects are not expected.

In fact, the answers to the above research question should differ depending on one's view of the source of article errors in child English. On the pragmatic approach to article misuse, children misuse *the* because they are egocentric and may ignore the hearer's knowledge. It is then predicted that adult L2-learners who have full-fledged pragmatic knowledge would not make the same type of article errors as children (see Unsworth 2005 for similar arguments on the acquisition of scrambling in Dutch).

In contrast, on the linguistic approach to article misuse, we expect that L1 and L2 learners may make the same type of the error. In particular, on this view, article errors in child English

are not due to concurrent cognitive development. Rather, the errors originate from incomplete semantic knowledge of the lexical entry for *the*. If partitivity is a semantic feature that may be encoded as *the* in early development of English, the effect of partitivity may be observable both in adult L2 and child L1 interlanguage grammar.

In our study (Ko et al. 2006), we hypothesized that the latter view is correct. In particular, we hypothesized that partitivity should be operative in adult L2-acquisition as well as in child L1-acquisition,⁹ and that partitivity, as a universal semantic feature, should be accessible to L2-learners on a par with definiteness and specificity (the findings of our previous studies – see Section 2).

Under this hypothesis, we predict that L2-learners would overuse *the* in place of *a* in [+partitive] contexts, but not in [-partitive] contexts, unless other factors, such as specificity, triggers overuse of *the*. More specifically, given that [+partitive] feature may be encoded as *the* in L2-English independently of specificity, we predict that L2-learners may overuse *the* when at least one of partitivity or specificity is present in the context (i.e., [+partitive, +specific], [+partitive, -specific], and [-partitive, +specific] contexts). Crucially, however, we predict that L2-learners would not overuse *the* in [-partitive, -specific] contexts where there is no semantic trigger for overuse of *the*. The prediction is summarized pictorially in (21).¹⁰

21. Predictions for article choice in L2-English when partitivity effects are considered:

Indefinites (target <i>a</i>)	+partitive	-partitive
+specific	Overuse of <i>the</i>	Overuse of <i>the</i>
-specific	Overuse of <i>the</i>	Correct use of <i>a</i>

3.3. Methods

As reported in Ko et al. (2006), we tested the predictions in (21) in a formal written elicitation task with adult L1-Korean learners of English.¹¹ In this study, Korean was selected as a language of the study for two reasons. One is to avoid L1-transfer effects, as before. Since Korean lacks an article system, article errors by L1-Korean learners of L2-English are not likely to be due to direct L1-transfer effects. The other is to tie the current results with our previous studies on specificity. Since we established the effect of specificity with Korean speakers (Ionin et al. 2004), we aimed to test the relationship between specificity and partitivity in the same L2 group.

3.3.1. Participants

The participants in this study were 20 adult L1-Korean learners of L2-English. All the learners had received English instruction before arriving to the U.S. However, intensive exposure to English did not begin for the learners until arrival in the U.S., and all of the L2-learners arrived in the U.S. as late adolescents or adults. The participants were primarily international students and their spouses, as well as foreign workers and their spouses.

The learners' L2-proficiency was measured by the Michigan test. Sixteen L2-learners were advanced, and four learners were intermediate. The test was piloted with six native speakers of English, who performed as expected.

3.3.2. Written elicitation task

The task was a forced choice elicitation test. The subjects were presented with English dialogues and asked to choose an article for the target sentence in each dialogue on the basis of the context. The choices of *the*, *a*, and dash (no article) were provided.

The stimuli consisted of 80 English dialogues, falling into 20 context types, 4 items per context type. 10 context types targeted *a*, and 10 context types targeted *the*. The items were

arranged into two pseudo-randomized test orders, each of which was given to 10 subjects. The stimuli were designed to test the main effect of partitivity in L2 acquisition of English articles, but we also investigated how partitivity interacts with other semantic factors such as scope and specificity. In this paper, we report only the results relevant to the relationship between partitivity and specificity (for discussion of scope and partitivity, see Ko et al. 2007, which shows that the effect of partitivity is observed regardless of scope).

The items in (22-24) represent indefinite contexts we employed to test the main effect of partitivity (in wide scope contexts).¹² Note that [+partitive] contexts were sub-divided into two types: explicit partitive context (22) (*five puppies – a puppy*) and implicit partitive context (23) (*a team – a player*). The previous L1-literature discussed above has observed overuse of *the* in explicit partitive contexts. However, it has not tested whether overuse of *the* extends to DPs in implicit partitive contexts. In our study, we aimed to test the effects of both explicit and implicit partitivity on article usage.

In explicit partitive contexts, both morphology (e.g., the form *puppies*, with plural marking) and semantics indicate a set membership relation between a DP in the previous discourse and the target DP. In implicit partitive contexts, on the other hand, there is no morphological indication of set membership. Hence, if we observe overuse of *the* in both explicit and implicit partitive contexts, this would strongly indicate that the effect of partitivity is semantic, rather than a reflex of plural morphology in English.

22. [+partitive: explicit partitive]¹³

Robert: He [Aaron] went to our local pet shop. This pet shop had five puppies and seven kittens, and Aaron loved all of them. But he could get only one! [...] Well, it was difficult for him to make up his mind. But finally, he got (a, the, --) puppy.

Aaron went home really happy!

23. [+partitive: implicit partitive]

Jane: Your friend Lucy looks really excited. What's going on?

Mary: She went to the airport to see her mother off, and ran into the Boston Red Sox team. She was very lucky – she got an autograph from (a, the, --) player.

24. [-partitive]

Robert: Well, he (Joey) was a bit depressed the last few days. So, his parents decided to get him a pet. So last week, he went to our local pet shop.

Elissa: Oh, so did he buy some animal there?

Robert: No, he did not like the puppies in the pet shop, in fact. But then he was walking home, and he found (a, the, --) kitten in the street!

The items in (25-27) represent four indefinite contexts designed to test the possible interaction of partitivity and specificity. If both semantic features are independently accessible to L2- learners, we expect that L2-learners will overuse *the* in [+partitive] and [+specific] contexts such as (25), (26), and (27). Crucially, however, learners will not overuse *the* in [-partitive, -specific] contexts such as (28).

25. [+partitive, +specific]

Molly: So what did your guest Mr. Svenson do over the weekend?

Jamie: Well, he went to see our local softball team play. He had a good time. Afterwards, he met (a, the, --) player – she was very nice and friendly.

26. [+partitive, -specific]

Ben: I just saw Tom, and he looked really excited. Do you know why?

Melissa: Yes – he was able to see the Boston Red Sox team while they were

practicing. And he is a huge fan! He even got a signature from (a, the, --) player – I have no idea which one. Tom was really excited!

27. [-partitive, +specific]

Helen: I'm very sorry, but she doesn't have time to talk right now. She is meeting with (a, the --) very important client from Seattle. He is quite rich, and she really wants to get his business for our company! She'll call you back later.

28. [-partitive, -specific]

Wife: That's not like Peter at all – he almost never uses the phone.

Husband: But this time, he is talking to (a, the --) girl – I have no idea who it is, but it's an important conversation to Peter.

3.4. Results

The table in (29) reports the results for the stimuli exemplified in (22-24), which tested the main effect of partitivity. As the table shows, L2-learners overused *the* with explicit (34.5%) and implicit partitive indefinites (30%) more than with non-partitive indefinites (6.25%), as predicted. Article omission was quite low across contexts (0% - 10%).

29. The effects of partitivity (mean%: overuse of *the* with indefinites)

indefinite contexts	(incorrect) use of <i>the</i>	(correct) use of <i>a</i>	article omission
explicit partitive	34.75%	59.0%	6.25%
implicit partitive	30%	59.75%	10.25%
non-partitive	6.25%	89.75%	4%

Planned comparison analysis on the data in (29) shows that learners overused *the* with partitive indefinites significantly more than with non-partitive indefinites. This holds for explicit partitive vs. non-partitive indefinites [$F(1,16) = 23.2, p < .0001$], and for implicit partitive vs. non-partitive indefinites [$F(1,16) = 17.6, p = .001$]. Crucially, there was no significant difference between explicit and implicit partitive contexts in use of *the* [$F(1,16) = .588, p = .454$]. This indicates that both explicit and implicit partitivity triggers overuse of *the*, which in turn suggests that partitivity is a semantic effect rather than a reflex of plural morphology in English.

The table in (30) describes the results for the stimuli exemplified in (25-28), which tested the effects of partitivity and specificity together. As the table shows, L2-learners overused *the* with indefinites most often (38.75%) when the feature values of partitivity and specificity are both positive. When one of the feature values of partitivity and specificity is positive, we still found overuse of *the* with indefinites: 16.25% overuse of *the* [+partitive, -specific] contexts, and 30% overuse of *the* with [-partitive, +specific] contexts. When the feature values of partitivity and specificity are both negative, overuse of *the* is rarely found (3.75%).

30. The effects of partitivity and specificity (mean%)

indefinite contexts		(incorrect) use of <i>the</i>	(correct) use of <i>a</i>	article omission
[+partitive]	[+specific]	38.75%	58.75%	2.5%
	[-specific]	16.25%	78.75%	5%
[-partitive]	[+specific]	30%	68.75%	1.25%
	[-specific]	3.75%	93.75%	2.5%

Repeated measures ANOVAs on *the* use on the data in (30) show that learners overuse *the* with partitive indefinites significantly more than with non-partitive indefinites [$F(1,16)=10.50$, $p=.005$]. Learners also overuse *the* in specific contexts significantly more than in non-specific contexts [$F(1,16)=12.72$, $p=.003$]. Crucially, there was no significant interaction between partitivity and specificity [$F(1,16)=.17$, $p=.684$]. There were no other main effects (e.g. no significant main effect of proficiency [$F(1,16)=3.61$, $p=.223$]).

Overall, our data show that partitivity induces overuse of *the* with indefinites in L2-English as in L1-English, independently of specificity. The fact that both explicit and implicit partitive contexts yield overuse of *the* in L2-English confirms our hypothesis that partitivity is a semantic factor rather than a reflex of English plural morphology. Given that adult L2-learners have full pragmatic knowledge (i.e. are not egocentric in the sense of Piaget), the current findings provide further support for the view that overuse of *the* by learners is due to semantic factors, rather than to a pragmatic/cognitive deficit (per Wexler 2003, contra Maratsos 1976).

4. CONCLUSION

In this paper, we have argued that the acquisition of articles by L2-English learners is affected by the universal semantic features of *definiteness*, *specificity*, and *partitivity*. In particular, we have shown that L2-learners associate *the* with [+specific] and [+partitive] features, which results in overuse of *the* with specific indefinites and partitive indefinites. Crucially, however, when there is no semantic trigger for use of *the*, L2-learners do not misuse *the* with indefinite DPs.

The present findings provide further support for the view that L2 learners' errors reflect systematic access to semantic universals which are not necessarily lexically instantiated in their L1 or their L2 – but which are available through UG. Our findings also provide

evidence that the interlanguage grammar of L2-learners bears important similarities to that of L1-learners in the domain of article semantics.

There are many issues left open, however. In order to investigate whether there exist exact parallels between L2 and L1 learners' article misuse, it is necessary to test child L1 learners with on the effects of *specificity as speaker intent to refer* (which is different from simple existential assertion/wide scope; cf. Matthewson et al 2001, Schaffer and Mattethewson 2005; see Ionin et al. 2004 for more discussion). It is also necessary to test L1-learners and L2-learners with similar experimental techniques, on both specificity and partitivity, in order to ensure that the effects are indeed similar. Furthermore, in this paper, we have seen that L2-learners overuse *the* in both explicit and implicit partitive contexts. Our findings points to a new research question concerning whether child L1 learners would overuse *the* in implicit partitive contexts as well.

It also remains open whether language groups other than L1-Korean speakers would show the effects of the semantic factors under discussion. We already know that L1-Russian speakers show effects of specificity (see Section 2). Given our hypothesis that partitivity is also universally available to L2-learners, we expect that other article-less L1-groups would show the same types of article errors with respect to partitivity (see Kaneko 1996, Ko, Perovic, Ionin, and Wexler (in prep.) for some evidence).¹⁴

Finally, since Korean lacks articles or direct parallels to articles, we abstracted away from the issue of direct L1-transfer here. It is important, however, to ask what factors guide L2-acquisition of English articles in the presence of articles in the learners' L1. The question of which mechanism causes learners to finally choose one semantic option (definiteness, in English) over the others also remains unresolved at this point. We hope that the studies reported here provide the necessary background for future research examining these important issues.

5. REFERENCES

- Brown, Roger. 1973. *A First Language: The Early Stage*. Cambridge, MA: Harvard University Press.
- Broselow, Ellen and Daniel Finer. 1991. Parameter setting in second language phonology and syntax. *Second Language Research* 7, 35-59.
- Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1986. *Knowledge of language: its nature, origin, and use*. New York: Praeger.
- Diesing, Molly. 1992. *Indefinites*. Cambridge, MA: MIT Press.
- Emslie, H.C. and R. I. Stevenson. 1981. Pre-school children's use of the articles in definite and indefinite referring expressions. *Journal of Child Language* 8: 313-328.
- Enç, Mürvet. 1991. The semantics of specificity. *Linguistic Inquiry*, 22, 1-25.
- Finer, Daniel. 1991 Binding Parameters in Second Language Acquisition, in L. Eubank, ed., *Point Counterpoint: Universal Grammar in Second Language Acquisition*, John Benjamins, Amsterdam, 351-373.
- Finer, Daniel and Ellen Broselow. 1986 Second Language Acquisition of Reflexive-Binding, in S. Berman, J-W. Choe and J. McDonough, eds., *Proceedings of the 16th Meeting of the North East Linguistic Society*, University Of Massachusetts, Graduate Linguistics Student Association, Amherst, MA, 154-168.
- Flynn, Suzanne. 1983. A study of the effects of principal branching direction in second language acquisition: The generalization of a parameter of universal grammar from first to second language acquisition. Ph.D. dissertation, Cornell University.
- Flynn, Suzanne. 1987. A parameter-setting model of L2 acquisition. Reidel.

- Flynn, Suzanne and Claire Foley. 2004. On the developmental primacy of free relatives. In Aniko Csirmaz, Andrea Gualmini, and Andrew Nevins (eds.), *Plato's Problem: Papers on Language Acquisition*. MIT Working Papers in Linguistics 48, Department of Linguistics, MIT, Cambridge, MA, 59-69.
- Fodor, Janet and Ivan Sag. 1982. Referential and quantificational indefinites. *Linguistics and Philosophy*, 5, 355–398.
- Heim, Irene. 1991. Articles and definiteness. Published in German as “Artikel und Definitheit,” in A. v. Stechow and D. Wunderlich (eds.), *Semantics: An international handbook of contemporary research*. Berlin: de Gruyter.
- Ionin, Tania. 2003. *Article Semantics in Second Language Acquisition*, Doctoral dissertation, MIT, Cambridge, Mass.
- Ionin, Tania. 2006. *This is definitely specific: specificity and definiteness in article systems*. *Natural Language Semantics*, 14, 175-234.
- Ionin, Tania, Heejeong Ko, and Ken Wexler. 2003. Specificity as a grammatical notion: Evidence from L2-English use, in G. Garding and M. Tsujimura, *Proceedings of West Coast Conference on Formal Linguistics 22 (WCCFL 22)*, Cascadilla Press, Somerville, pp. 245-258.
- Ionin, Tania, Heejeong Ko and Ken Wexler. 2004. Article semantics in L2-acquisition: the role of specificity. *Language Acquisition* 12: 3-69.
- Ionin, Tania, Heejeong Ko and Ken Wexler. in press. The Role of Semantic Features in the Acquisition of English Articles by Russian and Korean speakers, in J. M. Liceras et al. (eds.), *The Role of Formal Features in Second Language Acquisition*, Second language research acquisition series (Theoretical and Methodological Issues), Lawrence Erlbaum Associates.

Ionin, Tania, Maria Luisa Zubizarreta and Salvador Bautista Maldonado. in press. Sources of linguistic knowledge in the second language acquisition of English articles. To appear in a special issue of *Lingua*.

Jordens, P. 1988. The acquisition of word order in Dutch and German as L1 and L2. *Second Language Research* 4:41-65.

Kaneko, Yumina. 1996. Knowledge of the English article system in second language learning: To “the” or not to “the”. Undergraduate thesis, Smith College.

Karmiloff-Smith, Annette. 1979. *A Functional Approach to Child Language*. Cambridge, UK: Cambridge University Press.

Ko, Heejeong, Tania Ionin, and Ken Wexler. 2006. Adult L2-learners lack *the* Maximality presupposition, too!. *Proceedings of GALANA 1*, MIT Working Papers in Linguistics.

Ko, Heejeong, Tania Ionin, and Ken Wexler. 2007. Parallels between L2 and L1 acquisition of article semantics, Ms. Seoul National University, University of Illinois at Urbana-Champaign, and MIT.

Ko, Heejeong, Alex Perovic, Tania Ionin, and Ken Wexler. in prep. Semantic Universals and Variation in L2 Article Choice, Ms, Seoul National University, University of Illinois at Urbana-Champaign, and MIT.

Maratsos, Michael P. 1974. Preschool children’s use of definite and indefinite articles. *Child Development* 45 (2): 446-455.

Maratsos, Michael P. 1976. *The Use of Definite and Indefinite Reference in Young Children*. Cambridge, UK: Cambridge University Press.

Matthewson, Lisa, Tim Bryant and Tom Roeper. 2001. A Salish stage in the acquisition of English determiners: Unfamiliar ‘definites’. In *The Proceedings of SULA: The Semantics of Under-Represented Languages in the Americas*, University Of Massachusetts Occasional Papers In Linguistics 25.

to appear in *Handbook of East Asian Psycholinguistics: Korean*, Cambridge University Press

Mosel, Ulrike and Even Hovdhaugen. 1992. *Samoan reference grammar*. Oslo: Scandinavian University Press.

Piaget, Jean. 1955. *The Language and Thought of the Child*. Cleveland: Meridian Books. The World Publishing Co.

Schaeffer, J. and L. Matthewson (2005). Grammar and pragmatics in the acquisition of article system. *Natural Language and Linguistic Theory* 23 (1): 53-101.

Schafer, Robin and Jill de Villiers. 2000. Imagining articles: What *a* and *the* can tell us about the emergence of DP. In S.C. Howell, S.A. Fish and T. Keith-Lucas (eds.), *Proceedings of the 24th BUCLD*, Somerville, MA: Cascadilla Press.

Schwartz, Bonnie D. and Rex A. Sprouse. 1994. Word order and nominative case in nonnative language acquisition: A longitudinal study of (L1 Turkish) German interlanguage. In Teun Hoekstra and Bonnie D. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar: Papers in Honor of Kenneth Wexler from the 1991 GLOW Workshops*. Amsterdam: John Benjamins, 317-368.

Schwartz, Bonnie D. and Rex A. Sprouse. 1996. L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research*, 12, 40-72.

Schwartz, Bonnie D. 2003. Child L2-acquisition: Paving the way. In B. Beachley, A. Brown and F. Conlin (eds.), *Proceedings of the 27th BUCLD*, Somerville, MA: Cascadilla Press, pp. 26-50.

Thomas, Margaret. 1989. The acquisition of English articles by first- and second language learners. *Applied Psycholinguistics*, 10, 335-355.

Unsworth, Sharon. 2004. Child L1, child L2, and adult L2 acquisition: Differences and similarities. In A. Brugos, L. Micciulla, and C. Smith (eds.), *Proceedings of the 28th BUCLD*, Somerville, MA: Cascadilla Press, pp. 633-644.

Unsworth, Sharon. 2005. *Child L2, Adult L2, Child L1: Differences and Similarities*. A study on the acquisition of direct object scrambling in Dutch. PhD thesis, Utrecht University.

Warden, David A. 1974. *An Experimental Investigation into the Child's Developing Use of Definite and Indefinite Referential Speech*. Doctoral dissertation, University of London.

Warden, David A. 1976. The Influence of contexts on children's use of identifying expressions and references. *Br. J. Psychol.* 67 (1): 101-112.

Wexler, Ken. 2003. Maximal trouble. Paper presented at the CUNY Human Sentence Processing Conference. MIT. [In press as "Maximal trouble: cues don't explain learning", in E. Gibson and N. Pearlmuter (eds.), *The Processing and Acquisition of Reference*, Cambridge, MA: MIT Press].

Zheler, Annette. M. and William F. Brewer (1982). Sequence and principles in article system use: An examination of *a*, *the*, and *null* acquisition. *Child Development* 53: 1268-1274.

* We would like to thank Suzanne Flynn, Andrea Gualmini, Irene Heim, Philippe Schlenker, Carson Schütze, and William Snyder for helpful discussion concerning the various parts of this paper. Thanks to the members of the Wexler Lab and to the participants of BUCLD 28, BUCLD 29, WCCFL 22, JKL 13, GALA 2003, and GALANA 2004, where parts of this paper were presented.

¹ In Ionin et al. (2004), we show that colloquial/spoken English does have a lexical item corresponding to the [+specific] feature, namely the indefinite referential use of *this* (as in *I saw this really cute puppy outside!*). See Ionin (2003, 2006) for a detailed semantic analysis of this lexical item. The existence of referential indefinite *this* is not relevant for the present paper, which focuses on the acquisition of *the* and *a*.

² A separate question is how L2-English learners whose L1 has articles acquire the semantics of English articles. See Ionin, Zubizarreta and Bautista Maldonado (in press) for evidence that L1-transfer is operative in this scenario.

³ Russian and Korean have no articles, and no way of obligatorily marking either definiteness or specificity, so no direct L1-transfer is expected. See Ionin (2003, Ch. 3) for more discussion of the nominal systems of Russian and Korean, and evidence that they do not directly encode either definiteness or specificity.

⁴ The question of what constitutes “sufficient input” is addressed in Ionin et al. (2004), where we show that individual contexts of *the* use are frequently both [+definite] and [+specific], resulting in ambiguous input. In that paper, we suggest that in order to choose the “English” option in (6), L2-learners would need to generalize across multiple instances of article use. For the sake of space, we do not address the question of input in the present paper. Our focus here is on describing the *state* of L2-learners’ grammar, rather than on the *process* by which L2-English learners achieve target-like article use.

⁵ Unless of course an independent factor leads to article misuse in such contexts. As described in section 3 of this paper, one such factor is partitivity. The test items reported in the present section, however, did not involve partitivity.

⁶ These predictions are for singular contexts only. See Ionin et al. (2003) for parallel predictions for plural contexts.

⁷ Enç (1991), among others, uses the term *specific* for DPs that we are calling *partitive*. We are reserving the term *specific* for DPs involving *specificity as speaker intent to refer*, as defined in (1). It is important to note that the terms *partitivity* and *specificity*, as we are using them, denote quite different semantic concepts: set membership on the one hand, and speaker intent on the other. Diesing’s (1992) discussion is about *presuppositional* indefinites more broadly, of which partitive indefinites are a subtype.

⁸ Schaeffer and Matthewson’s contexts for *the* overuse are different from those of Maratsos 1976, and do not involve partitivity. See Ionin et al. (2004), Ko et al. (2007) for discussion of the Matthewson and Schaeffer’s findings for L1-acquisition in light of our findings for L2-acquisition.

⁹ L1-transfer from a language with articles may cause L2-learners to differ from children. But our focus is on L2-learners with an L1 which lacks articles. See notes 2 and 3 for relevant discussions.

¹⁰ Note that these predictions concern indefinites only. We do not discuss definites in this section – for how definites behave with respect to partitivity, see Ko et al. 2007.

¹¹ An additional 20 L1-Korean L2-English learners (plus 4 native English speakers) took a different version of the test, in which the choice of articles was not provided, and the learners had to fill in the blank with the

right article. The main effect of partitivity was present in both test types, but there were some other differences, in particular with respect to specificity, which require further investigation. (See Ko, Ionin & Wexler 2007 for the results of the fill-in-the-blank test).

¹² We also tested the effect of partitivity in narrow scope contexts, where the partitive DP scopes under an intensional operator. We found a significant main effect of partitivity in narrow scope contexts as well as wide scope contexts. In both cases, [+partitive] contexts exhibited significantly more overuse of *the* than [-partitive] contexts. See Ko et al. (2006, 2007) for detailed discussion.

¹³ In some of the example items given in this section, only the relevant portion of the dialogue is included, for reasons of space.

¹⁴ Our ongoing study on the acquisition of articles by L1-Serbo-Croatian learners of English suggests that the partitivity effect is not limited to Korean speakers (Ko, Perovic, Ionin and Wexler, in prep.). Some evidence of *the* overuse in explicit partitive contexts also exists for L1-Japanese L2-English learners (Kaneko 1996).